PHASE I ENVIRONMENTAL SITE ASSESSMENT

LG ENERGY SOLUTIONS EXPANSION
875 AND 901 E. 48TH STREET
HOLLAND, ALLEGAN COUNTY, MICHIGAN

ECS PROJECT A118-0001



FEBRUARY 26, 2022

Prepared for:

ALLEGAN COUNTY
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ALLEGAN, MI 49010
ATTN: DAN WEDGE

Submitted by:

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ecS
environmental consulting solutions

February 26, 2022 ECS Project A118-0001

Allegan County
3283 122nd Avenue
Allegan, MI 49010
Attn: Dan Wedge

RE: Phase I Environmental Site Assessment
LG Energy Solutions Expansion
875 and 901 E. 48th Street
Holland, Allegan County, Michigan

Dear Mr. Wedge:

Environmental Consulting Solutions, LLC (ECS) has completed a Phase I Environmental Site Assessment (ESA) of the property located at 875 and 901 E. 48th Street in Holland, Allegan County, Michigan. The results of the Phase I ESA are presented in the attached Report.

We are pleased to provide this service and hope that we can be of service in the future. Should you have any questions or require further information, please do not hesitate to call us at (248) 763-3639.

Respectfully submitted,
Environmental Consulting Solutions, LLC

Julie Pratt

Julie Anna Pratt
Senior Project Professional

Andrew T. Fong

President

Enclosures

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EXECUTIVE SUMMARY

Environmental Consulting Solutions, LLC (ECS) was retained by Allegan County, to perform a Phase I Environmental Site Assessment (ESA) of the LG Energy Solutions Expansion property (subject property) located at 875 and 901 48th Street in Holland, Allegan County, Michigan. The subject property location is presented in Figure 1. The Phase I ESA was performed in general accordance with All Appropriate Inquiry (AAI) and the American Society for Testing Materials (ASTM) Designation E 1527-13 guidelines for Phase I ESAs, except as noted under the Limitations and Exceptions.

Purpose:

The Phase I ESA was conducted in support of Community Development Block Grant (CDBG) Funding associated with proposed site development and was intended to identify the actual or potential existence of ASTM Recognized Environmental Conditions (RECs) at the subject property. The Report was prepared for use by Allegan County and the Michigan Economic Development Corporation (MEDC) who may rely upon the findings of the Report.

As defined in the ASTM Designation E 1527-13, the term *Recognized Environmental Condition* means, "…"the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

ECS endeavored to perform All Appropriate Inquiries (40 CFR 312 and industry standards) in allowing a user to satisfy the requirements to qualify for one of the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability, as documented in 40 CFR Part 300. Performance of this Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the subject property.

Scope of Work:

The Phase I ESA is a compilation of information obtained from, but not limited to, a site reconnaissance, a review of available municipal information, inquiry into the current and past uses of the subject property, historical aerial photographs, historical topographic maps, address cross index directories, Sanborn fire insurance maps, interviews with knowledgeable parties and a review of environmental databases of regulated properties.

General Site Information:

The subject property is an irregular shaped property (~120 acres) located on the north side of 48th Street, to the east of Waverly Road in Holland, Allegan County, Michigan. The subject property is comprised of two parcels of land, both currently owned by Compact Power Inc. The east parcel is vacant land and the west parcel is developed with the LG Energy Solutions industrial/manufacturing complex. Site operations include manufacturing lithium-ion battery components for electric vehicles.

The existing LG Energy Solutions plant was constructed circa 2011 with subsequent expansions and renovations. The proposed development includes construction of several buildings in aggregate sum of 1.4 million square feet, situated on the north portion of the west parcel and across the east parcel.

The subject property details as obtained from Holland Assessing Department and Client provided documentation are summarized in the following table:

Parcel	Address	Owner	Details
53-02-03-300-018	875 E. 48th Street	Compact Power, Inc.	~80 acres, ~638,633 ft^2 main building gross area with additional outbuildings
53-02-03-300-019	901 E. 48th Street		~40 acres, vacant land

Historical documentation indicates the subject property was mostly agricultural land, with a small homestead near the southwest portion of the subject property as early as circa 1929 (topographic maps and aerial photographs). The subject property was redeveloped for its current use as an industrial/manufacturing building circa 2010, with subsequent additions and renovations.

The subject property was identified in the EDR database search. The subject property was listed as LG Chem Michigan, Inc. and Compact Power, Inc, and was listed in numerous governmental databases: TSCA, ICIS, FINDS, ECHO, US AIRS, SPILLS and AST. Most of these listings are administrative in nature. No references to any spills, releases or violations were noted in the listings, with the exception of the SPILLS listing. According to the report, there was a fire in activated carbon scrubber tower. The fire department came and flushed it out and the water and carbon went into the drains that are connected to the retention ponds. The spill occurred in June 2012. No additional details were provided.

Two additional addresses were identified as corresponding to the subject property. The address of 859 E. 48th Street was listed as an Inventory and BEA site, with a BEA submitted in 2010. The listing identifies Arsenic in one soil sample and bis(2-ethylhexyl)phthalate in one groundwater sample above Residential Cleanup Criteria. The address of 1 LG Way was listed in numerous databases including TRIS, FINDS, ECHO, RCRA-LQG, SPILLS, NPDES, and WDS. Some of these listings were administrative in nature. The RCRA-LQG listing identified numerous hazardous waste materials associated with site operations. No violations were noted. The SPILLS listing identified a pipe from inside the building to the outside, with a spot visible on the concrete where some acetone spilled out circa 2011. No further details were provided.

Site observations confirmed the use, storage and handling of chemicals associated with industrial manufacturing. In general, there are four main processes in the plant the use chemicals: anode and cathode mixing, n-methyl pyrrolidone (NMP) recycling, electrolyte addition and solvent based cleaning. The interior housekeeping was exceptional, with heavily controlled processes. There was no evidence of spills or leaks noted in any of the storage areas, utility areas, mechanical rooms situated throughout the building. Interior storage was noted in various areas throughout the main building associated with manufacturing processes. Numerous drums, totes and tanks were noted. Interior storage of non-hazardous and hazardous materials, including drums, totes and tanks, is also located within the hazardous materials storage building located north of the main building.

Bulk exterior storage of materials was noted in the tank farm area northeast of the building. This area is also equipped with secondary containment in the event of a spill or release.

Chemicals used in the manufacturing process are summarized in the Spill Prevention Pollution Plan and Pollution Incident Prevention Plan that cover chemical management, routes of possible spills and spill prevention measures.

With respect to potential impact from adjoining or nearby properties, ECS evaluated the information provided in the governmental databases, in addition to reviewing available FOIA documentation requested from EGLE. Based on the information provided, the potential for negative impact to the subject property from offsite sources appears minimal.

Conclusions:

In the professional opinion of ECS, appropriate inquiry has been made into the current and past uses of the subject property consistent with good commercial and customary practice in an effort to minimize liability.

ECS has performed a Phase I ESA in conformance with the scope and limitations of AAI and ASTM E 1527-13 of the subject property located at 875 and 901 E. 48th Street in Holland Township, Allegan County, Michigan. Any exceptions to, or deletions from, this practice are described in Section 11.2 of this Report.

This assessment has revealed no evidence of RECs in connection with the subject property, with the exception of the following:

- The subject property is a "facility" with a BEA report prepared and submitted in 2010 at the time of purchase. Arsenic in one soil sample and bis(2-ethylhexyl)phthalate in one groundwater sample above Residential Cleanup Criteria.

The following items were also identified that warrant further discussion.

- A release of acetone was noted in the EDR Radius Map Report circa 2011. The SPILLS listing identified a pipe from inside the building to the outside, with a spot visible on the concrete where some acetone spilled out. No additional details were provided with respect to the extent of impact, if any.
- According to the EDR Radius Map Report, there was a fire in activated carbon scrubber tower. The fire department came out and flushed it out and the water and carbon went into the drains that are connected to the retention ponds. The spill occurred in June 2012. No additional details were provided with respect to extent of impact, if any.

Recommendations:

No further assessment appears warranted with respect the "facility" listing. Previous Phase II ESA activities were conducted at the time of property purchase in 2010. The Arsenic and bis(2-ethylhexyl)phthalate detected do not present unacceptable human exposures to current or proposed site use.

Additional discussion is warranted to further address the extent of impact, if any, from the two SPILLS listings.

LIMITATIONS AND EXCEPTIONS

This report was prepared for, and can be relied upon by, those authorized parties who have been specifically identified herein. Other use or reliance, implied or otherwise, by any other party is strictly prohibited unless authorized and acknowledged by ECS in writing.

Performance of this Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the subject property. ECS has used and incorporated information provided by private organizations and individuals, as well as municipal, state and federal agencies. However, the Phase I ESA scope of work does not include the independent verification or confirmation of the reliability of this information.

This report is intended to serve only as an indicator of the potential for environmental impairment arising from readily discoverable, improper chemical, waste management and/or disposal activities conducted at the subject property or in the immediate vicinity of the subject property. Regardless of the findings stated in this report, ECS is not responsible for consequences or conditions arising from facts that were concealed, withheld, not fully disclosed, or not readily accessible at the time the assessment was conducted.

Given the availability of data, probable future adjustments in industry standards, the limited scope of a due diligence investigations, the future inclusion of new contaminated sites to agency databases, and the further development of information resources, the resulting environmental liability disposition of the subject property is subject to change with time and this Phase I ESA does not guarantee a zero-risk level of environmental impairment liability.

The Executive Summary to the Phase I ESA is intended to be used as an overview of the complete Report findings. The Executive Summary is not intended to be used as a stand-alone document. Interpretation of the conclusions and recommendations should be based on the Report in its entirety. The Phase I ESA report does not represent a legal opinion. Legal opinions regarding potential environmental liability issues as they relate to the subject property and the Phase I ESA should be obtained from a qualified attorney.

1.0 INTRODUCTION

Environmental Consulting Solutions, LLC (ECS) was retained by Allegan County, to perform a Phase I Environmental Site Assessment (ESA) of the LG Energy Solutions Expansion property (subject property) located at 875 and 901 48th Street in Holland, Allegan County, Michigan. The subject property location is presented in Figure 1. The Phase I ESA was performed in general accordance with All Appropriate Inquiry (AAI) and the American Society for Testing Materials (ASTM) Designation E 1527-13 guidelines for Phase I ESAs, except as noted under the Limitations and Exceptions.

1.1 ASSESSMENT OBJECTIVES

The objective of the Phase I ESA is to identify recognized environmental conditions associated with the current and historical uses of a property and identify potential indicators of environmental concern which would suggest the need for additional investigation.

This Phase I ESA study was conducted in general accordance with the scope and limitations recommended by the American Society for Testing and Materials (ASTM) in their document E 1527-13, titled: "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process"*. In addition, ECS acts in accordance with the United States Environmental Protection Agency's (USEPA) rule identifying federal standards and processes for conducting All Appropriate Inquiry (AAI) codified in Federal Regulation - *40 Code of Federal Regulations (CFR) Part 312 - Standards and Practices for All Appropriate Inquiries*.

According to Section 1.1 of the cited standard, "...the purpose of this practice... is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products". As such, this practice is intended to permit a user to satisfy due diligence requirements to qualify for the innocent landowner defense to CERCLA liability; that is, the practices that constitute "all appropriate inquiry into the previous ownership and use of the property consistent with good commercial or customary practice" as defined in 42 USC § 9601(35)(B).

The Phase I ESA was conducted in support of CDBG Funding associated with proposed site development.

1.2 PHASE I ESA SCOPE OF WORK

The Scope of Services for conducting a Phase I ESA outlined in ASTM practice E 1527-13 and EPA's standards for AAI outlined in *40 CFR Part 312* typically includes the following four components: a site walk-through and visual survey of the subject property*;* a review of pertinent records for evidence of present or historical use of the subject property and adjacent properties; interviews with current owners or operators and local government officials; and evaluation of information collected and development of a report.

In order to fulfill the objectives of this Phase I ESA and meet or exceed due diligence requirements, the following tasks were completed:

- A visual survey of the subject property to identify areas of potential environmental concern. Color photographs were taken to document conditions of the subject property at the time of the site reconnaissance.
- A visual observation of neighboring properties or facilities from the subject property or public access areas to assess whether surface conditions on these properties may have adverse environmental impact on the subject property.
- Historical land use review of the subject property back to 1940 or the first developed use, whichever occurred earlier.
- Collection and review of existing published information relating to general geology, hydrogeology, and topographical information for the subject property.
- A regulatory agency file search to identify federal and state listed sites of known or potential environmental concern located within the minimum search distances from the Site as specified in ASTM E 1527-13 and EPA's All Appropriate Inquiry codified in federal regulation - *40 CFR, Part 312*.
- Interviews with the site owner, the owner's representative(s), representatives of the state, county, and local regulatory agencies, or other persons with knowledge of the site.
- Evaluation of compiled information and preparation of a report.

The scope of work does not fulfill the requirements for a regulatory compliance audit, nor does it guarantee a zero-risk level of environmental impairment liability.

This Phase I ESA does not purport to address safety concerns, if any, at the Site. It also does not establish appropriate safety and health practices, or determine the applicability of health and safety regulatory limitations at the subject property.

1.3 PHASE I ESA SIGNIFICANT ASSUMPTIONS

ECS has used and incorporated information provided by private organizations and individuals, as well as municipal, state and federal agencies. However, the Phase I ESA scope of work does not include the independent verification or confirmation of the reliability of this information.

1.4 RELIANCE STATEMENT

ECS realizes that the Report was prepared for use by Allegan County and the Michigan Economic Development Corporation (MEDC). The named parties may rely upon the findings of the Report.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 SUBJECT PROPERTY LOCATION AND LEGAL DESCRIPTION

The subject property is an irregular shaped property (~120 acres) located on the north side of 48th Street, to the east of Waverly Road in Holland, Allegan County, Michigan. The subject property is comprised of two parcels of land, both currently owned by Compact Power Inc. The east parcel is vacant land and the west parcel is developed with the LG Energy Solutions industrial/manufacturing complex.

Site operations include manufacturing lithium-ion battery components for electric vehicles. Parking areas are currently situated across the southern portion of the west parcel. Retention ponds are situated to the east of the main building.

The subject property details as obtained from Holland Assessing Department and Client provided documentation are summarized in the following table:

Parcel	Address	Owner	Details
53-02-03-300-018	875 E. 48th Street	Compact Power, Inc.	~80 acres, ~638,633 ft^2 main building gross area with additional outbuildings
53-02-03-300-019	901 E. 48th Street		~40 acres, vacant land

The following table provides legal descriptions for the subject property parcels as obtained from Allegan County:

Parcel ID # 53-02-03-300-018
BEGINNING AT THE SOUTH ¼ CORNER OF SECTION 3; THENCE NORTH 88° 56′ 10″ WEST 1599.61′ FEET ALONG THE SOUTH LINE OF THE SOUTHWEST ¼ THENCE NORTH 34° 42′ 33″ WEST 176.72 FEET THENCE SOUTH 55° 17′ 27″ WEST 100.00 FEET THENCE NORTH 34° 42′ 33″ WEST 659.32 FEET ALONG EASTERLY LINE OF THE C&O RAILROAD THENCE NORTHWESTERLY 275.95 FEET ON A 5679.65 FOOT RADIUS NON-TANGENTIAL CURVE TO THE RIGHT, THE CHORD OF WHICH BEARS NORTH 33° 24′ 23″ WEST 275.93 FEET TO THE SOUTH LINE OF SOUTH WAVERLY INDUSTRIAL PLAT THENCE SOUTH 88° 44′ 02″ EAST 953.04 FEET TO THE SOUTHEAST CORNER OF SAID PLAT THENCE NORTH 01° 25′ 40″ WEST 1006.27 FEET ALONG THE EAST LINE OF SAID PLAT THENCE SOUTH 88° 44′ 02″ EAST 1636.04 FEET THENCE SOUTH 01° 34′ 56″ WEST 1845.42 FEET THENCE NORTH 88° 25′ 01″ WEST 203.00 FEET TO THE POINT OF BEGINNING. SURVEY: 80.01 ACRES OF LAND. SEC 3 T4N R15W SPLIT ON 06/01/2010 FROM 03-02-03-300-015, 03-02-03-300-017 AND PART OF ANNEXED PARCELS FROM FILLMORE TWP: 03-06-003-027-10 AND 03-06-003-020-00 (PT); TAX MAP: 79.84 AC
Parcel ID # 53-02-03-300-019
COM AT THE SOUTH ¼ CORNER OF SECTION 3; THENCE SOUTH 88° 25′ 01″ EAST 203.00 FEET ALONG THE SOUTH LINE OF THE SOUTHEAST ¼ TO THE POINT OF BEGINNING THENCE NORTH 01° 34′ 56″ EAST 1845.42 FEET THENCE SOUTH 88° 44′ 02″ EAST 555.63 FEET THENCE SOUTH 01° 31′ 09″ EAST 529.30 FEET THENCE SOUTH 88° 34′ 20″ EAST 764.68 FEET THENCE SOUTH 08° 30′ 38″ WEST 406.93 FEET THENCE SOUTH 48° 49′ 05″ WEST 296.89 FEET THENCE SOUTH 01° 33′ 18″ EAST 414.58 FEET THENCE NORTH 88° 25′ 01″ WEST 365 FEET THENCE SOUTH 01° 33′ 18″ EAST 303.00 FEET TO THE SOUTH LINE OF THE SOUTHEAST ¼ THENCE NORTH 88° 25′ 01″ WEST 756.15 FEET ALONG SAID SOUTH LINE TO THE POINT OF BEGINNING. SURVEY: 40.23 ACRES OF LAND. SEC 3 T4N R15W SPLIT ON 06/01/2010 FROM 03-02-03-300-015, 03-02-03-300-017 AND PART OF ANNEXED PARCELS FROM FILLMORE TWP: 03-06-003-027-10 AND 03-06-003-020-00 (PT); TAX MAP: 40.22 AC

Refer to Figure 2 for an Aerial Site Map depicting additional details regarding subject property location.

2.2 SUBJECT PROPERTY AND VICINITY CHARACTERISTICS

Based on review of records and visual observations at the time of the site reconnaissance, the subject property consists of a developed industrial/manufacturing complex with a main plant building, several outbuildings, vehicle parking areas, truck loading/unloading, storm water retention ponds and vacant land. The surrounding properties include mixed use residential and commercial/industrial use.

2.3 CURRENT SUBJECT PROPERTY USE

The east parcel is vacant land and the west parcel is developed with the LG Energy Solutions industrial/ manufacturing complex. Site operations include manufacturing lithium-ion battery components for electric vehicles.

2.4 DESCRIPTION AND CONDITION OF STRUCTURES AND OTHER SUBJECT PROPERTY IMPROVEMENTS

The subject property is developed with an 638,633 ft^2 industrial manufacturing building that was constructed circa 2011 with subsequent additions and renovations. The building is equipped with a wide range of state of the art manufacturing equipment. The building is slab on grade construction; no basements were identified during the site reconnaissance. Some evidence of sub-grade pits were noted, but were observed to facilitate physical access, with no evidence of chemical containment.

The hazardous materials storage building and safety building are located to the north and northwest of the main building, respectively, and are both approximately 6,700 ft^2 in floor area. The general storage building is approximately 7,335 ft^2 and also located north of the main building. The security building is approximately 862 ft^2 and situated south of the main building regulating vehicle access from 48th Street. The out buildings are slab on grade construction.

In addition to the industrial/manufacturing building, the subject property is developed with vehicle parking areas, loading/unloading areas, and a storm water retention system.

Overall condition of the structure and other property improvements is excellent. The property is well maintained and is relatively new with respect to industrial development.

2.5 CURRENT USES OF ADJACENT PROPERTIES

A summary of current uses of adjoining properties relative to the subject property is listed below:

	Adjoining Properties
North	Vacant land, followed by residential/farmsteads.
South	48th Street, followed by vacant land and residential/farmsteads.
East	Vacant land, followed by residential/farmsteads.
West	Commercial/industrial properties.

ECS observed the adjacent properties from the subject property or public access areas, as accessible. Based upon observations made at the time of ECS's site reconnaissance, the current uses of adjoining properties are not of environmental concern in relation to the subject property. The western adjoining properties were commercial/industrial in nature, however, no obvious evidence of exterior chemical storage or obvious environmental concerns were noted.

3.0 USER/CLIENT PROVIDED INFORMATION

Consistent with the requirement of AAI and ASTM E1527-13, ECS provided the user(s) of the Phase I ESA with a questionnaire regarding their specific knowledge of subject property environmental conditions. Mr. Joseph Morgan, representing LG Energy Solutions, completed the User/Client Questionnaire.

3.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

ECS was not provided any information pertaining to environmental liens or activity and land use limitations associated with the subject property.

ECS obtained a copy of the current Michigan Department of Environment, Great Lakes and Energy (EGLE) Remediation and Redevelopment Division *Perfected Lien List*. The subject property was not identified. This list does not include any lien(s) that may have been perfected by another EGLE Division or other entity.

ECS also evaluated the EGLE online Environmental Mapper for additional details regarding activity and use limitations in the area. The subject property was not identified as having land use restrictions.

3.2 TITLE RECORDS

Title records were not provided.

3.3 USER SPECIALIZED KNOWLEDGE

Mr. Morgan indicated that LG Energy Solutions has produced lithium ion batteries on the site since 2010. Their engineers and staff are fully aware and knowledgeable in the materials, chemicals and processes involved in the battery production process. ECS was not provided with any other User specialized knowledge.

3.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

ECS was not provided with any commonly known or reasonable ascertainable information regarding the subject property.

3.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

ECS was not provided with information pertaining to a valuation reduction of the subject property for environmental issues.

3.6 REASON FOR PERFORMING THE PHASE I ESA

The Phase I ESA was conducted to provide a viable Phase I ESA associated with CDBG funding requirements.

3.7 OTHER USER INFORMATION

Mr. Morgan indicated that there were no obvious indicators that point to the presence or likely presence of releases at the subject property. No other information regarding possible environmental conditions at the subject property was provided by the User/Client.

4.0 PREVIOUS REPORTS

Previous environmental reports were not provided. Additional reports associated with proposed site development were provided by Allegan County, including but not limited to permitting, wetlands determination, and a previous environmental assessment associated with federal funding. These documents did not contain information specific to environmental concerns on the subject property.

5.0 ENVIRONMENTAL REGULATORY RECORDS SEARCH

As part of the current study, readily available regulatory database information was reviewed to assess the possible risk for environmental liabilities from regulatory action, hazardous material spills, or documented hazardous waste disposal at the subject property or surrounding properties located within ASTM-specified search distances and the search distances specified in EPA's standards for AAI.

5.1 STANDARD ENVIRONMENTAL DATABASE SEARCH REPORT

Environmental Data Resources Inc. (EDR) was retained to perform a regulatory agency database search to evaluate the possible presence of federal and state listed sites of known or potential environmental concern that may be located within the recommended minimum search distances from the subject property as specified in ASTM E 1527-13 and EPA's final rule for AAI.

A list of the federal and state databases researched by EDR for the current study, including a brief description of each database searched and their respective search distance radius is presented Appendix C, EDR Radius Map™ Report.

5.1.1 SITE SUMMARY

The subject property was identified in the EDR database search. The subject property was listed as LG Chem Michigan, Inc. and Compact Power, Inc, and was listed on the following databases:

- TSCA: 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.

- ICIS: Integrated Compliance Information System - The 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.

- FINDS: Facility Index System/Facility Registry System – FINDS is a central and common inventory of facilities monitored or regulated by the EPA.

- ECHO: Enforcement and Compliance History Information. Compliance and enforcement database for EPA regulated facilities.

- US AIRS: Aerometric Information Retrieval System - contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies.

- SPILLS - Environmental pollution emergencies reported to the Department of Environmental Quality such as tanker accidents, pipeline breaks, and release of reportable quantities of hazardous substances.

- AIRS: Aerometric Information Retrieval System – permit and emissions inventory data.

- AST: Above Ground Storage Tanks – Registered ASTs.

The above database listings are mostly administrative in nature. No references to any spills, releases or violations were noted in the listings, with the exception of the SPILLS listing. According to the report, there was a fire in activated carbon scrubber tower. The fire department came and flushed it out with water, and the water and carbon went into the drains that are connected to the retention ponds. The spill occurred in June 2012. No additional details were provided.

In addition, two additional addresses were identified as corresponding to the subject property. The address of 859 E. 48th Street was listed as an Inventory and BEA site. Further evaluation of the listing indicates that this corresponds to the subject property, with a BEA submitted in 2010. The listing identifies Arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater. The address of 1 LG Way was listed in numerous databases including TRIS (Toxics Release Inventory System), FINDS, ECHO, RCRA-LQG (Resource Conservation and Recovery Act – Large Quantity Generator), SPILLS, NPDES (National Pollutant Discharge Elimination System), and WDS (Waste Data System). Some of these listings were administrative in nature. The RCRA-LQG listing identified numerous hazardous waste materials associated with site operations. No violations were noted. The SPILLS listing identified a pipe from inside the building to the outside, with a spot visible on the concrete where some acetone spilled out circa 2011. No further details were provided.

5.1.2 SURROUNDING PROPERTY SUMMARY

A total of 63 separate listings (some properties listed multiple times) were identified in the environmental records on the database report. Eleven of those listings were identified as the subject property address, with the remaining listings identified as nearby properties within the ASTM search distances.

ECS utilized the EDR Lightbox online resource to further evaluate the database listings and confirm the actual distance from the subject property using Google Maps and Lightbox tools. One listing, the Donnelly Corp., was plotted at the southeast border of the subject property. However, visual observations and online research confirmed this location is incorrect and is not located in proximity to the subject property.

The remaining database listings appear to be located to the west and north west of the subject property. The following listings were further evaluated based on actual boundary to boundary distance from the subject property.

SITE NAME	ADDRESS	DATABASES	Direction
Venttis Technologies	1261 S. Waverly	RCRA-VSQG	West of railroad
	NAICS Code 541712, R&D in physical engineering and life sciences. No violations.		
GLW Finishing, LLC and KC Industries	741 Waverly Ct.	US Brownfields, RCRA NonGen/NLR, US AIRS, FINDS, Inventory, AIRS, BEA and WDS	Northwest ~500 feet
	NAICS Code 337211, Wood Office Furniture Manufacturing. Wet coat finishing operations listed. Violations noted in 2009. BEA completed in 2018		
760 E. 40th Street	760 E. 40th	Inventory, BEA	Northwest ~200 feet
	BEA submitted 2016. Historical RECs identify the site as a closed LUST site when two USTs (gasoline & diesel) were removed in 1989		
USF Holland-HO	750 E. 40th	LUST, UST Inventory	Northwest ~573 feet
	Release reported in 1989, LUST closed status in 1991. USTs removed.		

The listing of the adjoining Venttis Technologies property does not appear to present a concern to the subject property. No violations, spills or releases were noted associated with the adjoining site use. The remaining three listings identified in the previous table have documented releases and subsurface contamination reported based on type of database.

5.1.3 ORPHAN SITES

An orphan site is a property that has been identified by EDR as a site within a zip code that has insufficient address information available to accurately plot the property on their map. A review of the EDR Radius Map™ Report indicates that one orphan site was identified during their regulatory database search. The listing had limited information, located on 48th street in the CDL database. CDL (National clandestine laboratory register) is associated with clandestine drub lab locations, where law enforcement reports finding chemicals or drugs.

5.2 MUNICIPAL RECORDS

Historic records for the subject property address were requested from the Holland municipal offices and provided to ECS. A records request was submitted to the City Clerk requesting available documentation from the Assessing, Building and Fire Departments. As of the date of this report, Fire Department records were not yet received.

The following items were noted in the documentation obtained from the Assessing and Building Departments:

- Compact Power, Inc. purchased both parcels from the City of Holland in May 2010.
- The main building was constructed circa 2011 on the west parcel, with subsequent additions and remodeling.
- The east parcel remains vacant land. Permits were pulled for this parcel associated with west parcel development.
- Numerous plans and permits associated with construction, renovations and additions.

- Aerial photographs document the majority of both parcels as vacant agricultural land, with the exception of a small farmstead near the southwest corner of the west parcel.
- A geotechnical study dated January 2010 identified soil conditions consisted primarily of clayey soils with varying amounts of sand and gravel.

A review of the numerous records did not identify any obvious environmental concerns, such as underground storage tanks, septic system, or spills or releases to the environment. A copy of selected portions of the Holland municipal records is included in Appendix D.

5.3 STATE/FEDERAL INFORMATION

The subject property was identified in the EDR Radius Report in several databases. ECS submitted a FOIA request to EGLE to obtain available documentation for the subject property. The BEA report submitted in 2010 was provided to ECS for review. The following items were noted:

- Only the 875 Holland parcel was identified as a "facility".
- Historic records indicated the site was undeveloped agricultural land since at least 1932. Prior to 1932, a residential dwelling and associate outbuildings were constructed on the southwest portion of the site which were demolished circa 1995.
- The Phase I ESA conducted in 2009 prior to purchase identified RECs associated with potential offsite properties.
- Numerous metals were detected in soil samples analyzed; only Arsenic exceeded Generic Residential Cleanup Criteria (GRCC).
- One PNA compound, bis(2-ethylhexyl)phthalate, was detected in one groundwater sample at a concentration greater than the GRCC.
- Evidence of oil/gas production well was located near the southwest portion of the site. The well as noted to be a dry well; no petroleum was identified at the location. An oil/gas well was also identified northeast of the property. The oil/gas wells were not identified as RECs.

Based on the information presented in the BEA, evidence of limited contamination was documented to qualify the subject property as a "facility". Comparison of the arsenic and bis(2-ethylhexyl)phthalate concentrations to their respective applicable non-residential cleanup criteria indicates no exceedances are noted and no potential unacceptable exposures were identified.

With respect to the nearby properties previously identified as sites of contamination, ECS submitted a FOIA request for records. As of the date of this report, a response is pending for the 750 and 760 E. 40th Street addresses. However, based on the information in the governmental database report listings and dates of historic RECs and releases (circa 1980's and 1990's), the Phase II ESA conducted on the subject property in 2010 evaluated for potential migration of contamination from these offsite sources.

Records were available for the 741 Waverly Ct. address. A BEA was prepared in May 2018. The report identified the historic use of the property for wood finishing operations since 1996 as a REC. In addition, potential for migration of the contamination onto the property from an offsite source was listed as a REC. The Phase II conducted included six soil borings to collect soil and/or groundwater samples for analysis for VOCs, PNAs, and 10 Michigan Metals. VOCs and PNAs were not detected in the soil samples

analyzed. Metals (being naturally occurring) were detected in the soil samples; Arsenic was detected at a "facility" concentration. With respect to groundwater, PNAs and metals were not detected. One VOC compound, tetrachloroethene was detected at a concentration of 2.7 ppb, less than the Part 201 GRCC published at that time.

ECS further evaluated the tetrachloroethene results by comparing the 2.7 ppb concentration to the current EGLE recommended Volatilization to Indoor Air Pathway (VIAP) Screening Levels published in September 2020. The Residential shallow (10 feet or less) screening level of 1.5 ppb was exceeded. However, the non-residential screening level of 35 ppb (5 feet or less) was not exceeded. Based on the distance from the subject property and contaminant concentrations observed, the potential for negative impact to the subject property is minimal.

Refer to **Appendix E** for copies of selected FOIA documentation.

5.4 TITLE RECORDS AND ENVIRONMENTAL LIENS

No land title records were provided to ECS for review.

ECS obtained a copy of the current EGLE Remediation and Redevelopment Division *Perfected Lien List*. The subject property was not identified. This list does not include any lien(s) that may have been perfected by another EGLE Division or other entity.

ECS also evaluated the EGLE online Environmental Mapper for additional details regarding activity and use limitations in the area. The subject property was not identified having activity or land use limitations.

6.0 HISTORICAL SITE USE REVIEW

Historical usage of the subject property and adjoining properties was referenced through reasonably ascertainable records which may have included, but were not necessarily limited to, municipal information, aerial photographs, historic fire insurance maps (when available), city directories, interviews with persons knowledgeable of subject property conditions, and previous site assessments. See Section 13.0 for references for the records that were reviewed.

6.1 AERIAL PHOTOGRAPHS

Aerial photographs of the subject property and surrounding area, provided by Environmental Data Resources, Inc. (EDR) were reviewed. In addition, current aerial photographs were reviewed through Google Maps (google.com/maps) and Allegan County GIS. The aerial photographs depicted the following:

1938-1967: The subject property is mostly agricultural land. A homestead/farm is located at the southwest portion of the subject property. Adjoining land is agricultural with some homesteads.

1975: The subject property is similar to previous photographs. Only partial coverage is available.

1981-1986: The subject property remains mostly agricultural land with the homestead at the southwest portion. Some non-residential development is noted northwest of the subject property along 40th Street to the north.

1997: The quality of the photograph is poor; the site appears similar, with increased developed to the northwest and southwest.

2006-2009: The subject property is vacant land. Additional commercial/industrial development is noted to the northwest and southwest.

2012-2016: The subject property is developed with the LG Energy Solutions buildings and adjoining parking areas. The stormwater detention ponds are present east of the building and at the southeast corner of the east parcel. The north portion of the west parcel and portions of the east parcel have some land clearing, likely associated with site development.

Except as discussed above, the scale and resolution of the aerial photographs limited observation of special site features, such as relief, areas of staining, soil disturbances or areas of outdoor storage.

The subject property was mostly agricultural with a homestead/farm prior to development of the existing structures circa 2010. Based on the historical review, there were no indications of the presence of on-site agricultural chemical mixing areas, bulk storage areas or evidence that chemical dumping or improper storage has occurred.

Copies of the aerial photographs are presented in Appendix F.

6.2 HISTORICAL TOPOGRAPHIC MAPS

Historical topographic maps of the subject property and surrounding area were provided by EDR. The topographic maps depicted the following:

1929-1932: The subject property is located in a rural area in Allegan County. A small structure is noted at the southwest portion of the property. A surface water drain parallels the eastern boundary. A railroad parallels the western boundary.

1972-1980: The subject property is mostly vacant land with small structures/out buildings near the southwest portion and to the east. The site elevation was noted at 700 feet above mean sea level, and slightly sloping to the southeast. The Overisel Oil Field is noted approximately one mile to the north/northeast.

2014-2019: The most recent topographic maps don't depict any buildings or structures. The adjoining surface water along the eastern boundary is the N. B. Macatawa River.

No indications of obvious RECs were identified on the historical topographic maps reviewed. Copies of the historical topographic maps in presented in Appendix G.

6.3 SANBORN FIRE INSURANCE MAPS

ECS contracted EDR to perform a search for Sanborn maps for the subject property. EDR provided a search report noting the subject property was unmapped property. A copy of the Sanborn Report documenting no coverage is provided in Appendix H.

6.4 CITY DIRECTORIES

Historical city address directories of the subject property and surrounding area, provided by EDR, in five year intervals from 1961 to 2017 were reviewed. Addresses were evaluated along E. 48th Street and 146th Avenue. Based on the limited information available in the City Directory resources, no obvious RECs were noted. A copy of the City Directories is provided in Appendix I.

6.5 HISTORICAL USE SUMMARY

The historical use of the subject property was determined during the review of the historical resources outlined above. No other historical resources were readily available or were deemed necessary to determine the prior use of the subject property.

Historical documentation indicates the subject property was mostly agricultural land, with a small homestead near the southwest portion of the subject property as early as circa 1929 (topographic maps and aerial photographs). The subject property was redeveloped for its current use as an industrial/manufacturing building circa 2010, with subsequent additions and renovations.

7.0 PHYSICAL SETTING

7.1 SITE LOCATION

The subject property is an irregular shaped property consisting of two adjoining parcels of land located on the north side of E. 48th Street in Holland, Allegan County, Michigan. The subject property is located across the southeast and southwest quarters of Section 03, T04N R15W. See Figure 1 for the Site Location Map.

7.2 TOPOGRAPHY

Based on the site reconnaissance and review of the USGS Holland East, Michigan Topographic Maps, the topography of the area is slightly sloping, with a mild downward topographic gradient to the southeast. The subject property elevation ranges from approximately 700 feet above mean sea level (AMSL) to 650 feet AMSL at the eastern boundary near the adjoining river. Visual observations identified the developed portion of the subject property as fairly level, with no obvious significant changes in elevation.

7.3 GEOLOGY

The Quaternary Geology obtained through EGLE GeoWebFace online resources indicated the surficial geology in the vicinity of the subject property consisted of fine-textured glacial till. The Bedrock Geology was identified as Coldwater Shale and the Marshall Formation.

7.4 DRAINAGE PATTERNS

Based on the USGS Holland East, MI Topographic Maps, and the EDR Radius Map report Geocheck physical setting, the drainage in the area surrounding the subject property was primarily to the east/southeast. Based on a review of historical topographic maps, the Macatawa River adjoins a portion of the east property boundary. Surface water is also directed towards retention basins on site.

7.5 LOCAL GROUNDWATER FLOW

Generally, groundwater flow direction would be expected to be consistent with surface water flow and local topography and dependent upon seasonal variation in precipitation. Therefore, it is likely that the groundwater flow direction in the area of the subject property will be toward the east/southeast.

8.0 SITE AND AREA RECONNAISSANCE

The site reconnaissance was performed on February 14, 2022, by Ms. Julie Pratt of ECS. See Appendix A for the Site Photographs obtained during the visual reconnaissance and Figure 2 for the Aerial Site Map.

8.1 METHODOLOGY AND LIMITING CONDITIONS

The subject property and adjoining properties were visually observed for visible evidence of ASTM RECs in an effort to determine if a release of petroleum or other hazardous materials has occurred to the subject property surface, soil, surface water or groundwater. Indications of RECs may include, but are not limited to, evidence of buried or discarded drums or containers, stained, discolored or disturbed soils, stressed vegetation, evidence of pipes or other objects protruding from the ground, and evidence of aboveground and underground storage tanks.

The site reconnaissance was conducted in a manner that allowed for visual observations and of identification of site features, including site structures, open areas, site boundaries, and adjoining properties. No limitations were encountered during the site reconnaissance with the exception of the following:

- Limited access to the undeveloped portions of the subject property due to winter weather conditions.
- Snow cover and ice limiting observations on the ground surface.
- Interior photographs were limited for proprietary reasons.
- Interior access was limited due to active production activities.

8.2 GENERAL SITE INFORMATION

The east parcel is vacant land and the west parcel is developed with the LG Energy Solutions industrial/manufacturing complex. Site operations include manufacturing lithium-ion battery components for electric vehicles. Site operations associated with cell assembly include the electrode process, activation process and assembly process.

In addition to the large industrial manufacturing building and associated outbuildings, the subject property is developed with vehicle parking areas, truck loading/unloading areas, as well as surface water detention ponds. The subject property is accessible from 48th Street. The Site is presented in Figure 2, Aerial Site Map, which depicts the general features observed at the Site.

8.3 SITE BUILDINGS

The subject property is developed with an 638,633 ft^2 industrial manufacturing building that was constructed circa 2011 with subsequent additions and renovations. The building is equipped with a wide range of state of the art manufacturing equipment. The building is slab on grade construction; no basements or sub-grade components were identified during the site reconnaissance. Some evidence of sub-grade pits were noted, but were observed to facilitate physical access, with no evidence of chemical storage.

The hazardous materials storage building and safety building are located to the north and northwest of the main building, respectively, and are both approximately 6,700 ft^2 in floor area. The general storage building is approximately 7,335 ft^2 and also located north of the main building. The security building is approximately 862 ft^2 and situated south of the main building regulating vehicle access from 48th Street. The out buildings are slab on grade construction.

8.4 OUTDOOR OBSERVATIONS

Paved parking areas are situated to the south of the main building, accessible from E. 48th Street. A vehicle access drive extends around the building perimeter. A construction staging area was noted east of the building on the west parcel. Detention ponds are situated to the east of the building. The north portion of the west parcel and the eastern parcel was observed to be vacant and snow covered.

Main truck access is provided from E. 48th Street to the south. Exterior storage and delivery areas are located to the north and east of the main building.

8.5 CHEMICAL USE AND STORAGE

The current site operations did identify the use, storage and/or handling of petroleum products and other chemicals. In general, there are four main processes in the plant the use chemicals: anode and cathode mixing, n-methyl pyrrolidone (NMP) recycling, electrolyte addition and solvent based cleaning. During the process to mix the anode and cathode slurries, various dry powders are combined with liquids to create the slurries. The NMP used in the cathode slurry is reclaimed during a solvent recovery process and is reused. Electrolyte is added to the cells in the assembly process. Acetone and isopropyl alcohol are used to clean the facility.

The interior housekeeping was exceptional, with heavily controlled processes. There was no evidence of spills or leaks noted in any of the storage areas, utility areas, mechanical rooms situated throughout the building.

Interior storage was noted in various areas throughout the main building associated with manufacturing processes. Numerous drums, totes and tanks were noted.

Interior storage of non-hazardous and hazardous materials, including drums, totes and tanks, is also located within the hazardous materials storage building located north of the building.

Bulk exterior storage of materials was noted in the tank farm area northeast of the building. This area is also equipped with secondary containment in the event of a spill or release.

Chemicals used in the manufacturing process are summarized in the Spill Prevention Control and Countermeasures and Pollution Incident Prevention Plan (SPCC-PIPP) that cover chemical management, routes of possible spills and spill prevention measures. A copy of selected portions of the plan is included as an attachment in Appendix B. The following tables were copied from the SPCC-PIPP that provide a summary of onsite chemical storage.

Equipment Name	Chemical Name	Quantity	Remarks
Activated Carbon Filter Unit	Carbon	3575 lbs.	Outside north of safety building
Hazardous Materials Storage	Waste & Chemicals	10,000 gal	Electrolyte Waste, NMP, Other
West Emergency Generator	Diesel	100 gal	1stFloor Zone 1A
NMP Storage Tank	NMP	700 gal	3rdFloor Zone 5A
Activated Carbon Filter Unit	Carbon	10,000 lbs.	Outside North of Electrode Zone 5A
Hot Oil Boiler	Heat Transfer Oil	18,000 gal max	1stFloor Zone 5A –Room 1509
Activated Carbon Filter Unit	Carbon	7,400 lbs.	Outside Assembly Zone 2B
East Emergency Generator	Diesel	100 gal	Zone 4
SRP System	NMP	23,550 gal	In tank farm to the East Zone 4
2 NMP Storage Tanks	NMP	11,800 gal ea.	In tank farm to the East Zone 4
Acetone Storage Tank	Acetone	13,209 gal	In tank farm to the East Zone 4
Nitrogen Storage Tank	Nitrogen	11,000 gal	In tank farm to the East Zone 4
Activated Carbon Filter Unit	Carbon	3183 lbs.	Outside to the north of Zone 3
Electrolyte Storage	Electrolyte	115 gal	Assembly Production Zone 2A; 1stFloor
Electrolyte Storage	Electrolyte	110 gal	Assembly Production Zone 2A; 1stFloor
Fire Suppression Pump	Diesel	288 gal	West of the general storage warehouse
Wind Tunnel Emergency Generator	Diesel	358 gal	South of the fire brigade room entrance

8.6 SOLID WASTE DISPOSAL

No obvious evidence of burying or landfilling of waste was observed.

8.7 STORAGE TANK SYSTEMS

The subject property was visually observed for signs of current or former underground storage tanks (USTs) and aboveground storage tanks (ASTs). Typical indicators of USTs include pump islands, fill or vent piping, excavations, patches in pavement, etc. Evidence of a UST was noted on the subject property; the tank is empty and is intended for use in the event of emergency containment of leaks/spilled materials.

Bulk exterior storage of materials was noted in the tank farm area northeast of the building. This area is also equipped with secondary containment in the event of a spill or release.

8.8 PITS, PONDS, AND LAGOONS

Detention ponds are located east of the building and near the southeast corner of the subject property. Vegetation surrounds the ponds.

8.9 VEGETATION

No evidence of any stressed vegetation or areas of staining/discoloration were noted. The subject property was completely covered with snow and ice.

8.10 UTILITIES, WELLS AND SEPTICS

No obvious visual indications of drinking water wells or septic systems were noted at the subject property. Utilities identified at the subject property include municipal water and sewer service, natural gas, and electric service.

8.11 OIL AND GAS WELLS OR PIPELINES

No indication of oil and gas well or pipeline activity was found on the subject property.

ECS evaluated the EGLE GeoWebFace online resource to evaluate for oil and gas wells. One plugged well was identified near the southwest corner of the west parcel. This well log information was provided in the previously Phase I ESA conducted at the time Compact Power purchased the property; the well was identified as a dry well. No evidence of petroleum indicator parameters was noted during the Phase II ESA conducted on the subject property. In addition, no evidence of oil/gas wells was noted on any of the aerial photographs reviewed.

8.12 SUSPECTED POLYCHLORINATED BIPHENYL-CONTAINING EQUIPMENT

The subject property was observed for suspected polychlorinated biphenyl (PCB) containing equipment, such as electrical transformers and capacitors. Numerous transformers and electrical equipment are located across the subject property. Based on the date of site development, it is not likely PCB containing equipment is used on site. The SPCC plan indicates transformers are dry.

8.13 AREA RECONNAISSANCE

A limited visual reconnaissance of the adjoining and nearby properties was performed. The reconnaissance was limited to observation of areas visible from the subject property or areas of public access. A summary of current uses of adjoining properties relative to the subject property is listed below:

	Adjoining Properties
North	Vacant land, followed by residential/farmsteads.
South	48th Street, followed by vacant land and residential/farmsteads.
East	Vacant land, followed by residential/farmsteads.
West	Commercial/industrial properties.

ECS observed the adjacent properties from the subject property or public access areas, as accessible. Based upon observations made at the time of ECS's site reconnaissance, the current uses of adjoining properties are not of environmental concern in relation to the subject property. The western adjoining properties were commercial/industrial in nature, however, no obvious evidence of exterior chemical storage or obvious environmental concerns were noted.

9.0 OWNER/OCCUPANT INTERVIEWS

During the site reconnaissance, Mr. Joseph Morgan, Senior Manager Facilities and SHE, representing the current operator, provided information regarding the subject property.

9.1 INTERVIEW WITH SITE OWNER

Mr. Morgan was not aware of any potential environmental concerns associated with the subject property.

9.2 INTERVIEW WITH SITE OPERATOR/OCCUPANT

Mr. Morgan provided information pertaining to utilities at the subject property. Water and sanitary service are municipal sourced. Storm water is managed with an onsite storm water retention system. Semco is the gas utility provider, Holland BPW is the electric utility provider.

9.3 INTERVIEW WITH SITE MANAGER/OTHER

Ms. Shellie Ritsema, Environmental and Sustainability Assistant Manager, also provided information for the subject property. A copy of the SPCC/PIP Plan was provided for reference.

9.4 INTERVIEWS WITH STATE LOCAL AND GOVERNMENT OFFICIALS

As previously discussed in Sections 5.2 through 5.4, Holland had limited records pertaining to the subject property. No other interviews with state or local governmental officials was conducted.

10.0 ASSESSMENT OF POTENTIAL VAPOR ENCROACHMENT CONDITIONS (VECs)

ECS completed a Tier I and non-invasive Tier II Vapor Encroachment Screen (VES) of the subject property. The Tier I and non-invasive Tier II VES was conducted in general accordance with the guidelines established by the American Society for Testing and Materials (ASTM) in the Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions Designation E 2600-10 (ASTM Standard Practice E 2600-10).

The purpose of the VES was to determine if potential Vapor Encroachment Concerns (pVECs) or Vapor Encroachment Concerns (VECs) exist in association with the subject property. ASTM's Standard Practice E 2600-10 defines the term VEC as the presence or likely presence of any contaminant of concern (COC) in the indoor air environment of existing or planned structures on a property caused by the release of vapor from contaminated soil or groundwater either on the property or within close proximity to the property, at a concentration that presents or may present an unacceptable health risk to occupants.

A VEC can be further defined as any COC within 100 feet for soil impacts or ground water impacts of an existing/planned structure or to the target property boundary if there are no planned structures.

The scope of this Tier I VES included a review of the geologic, hydrologic, hydrogeologic, topographic maps, aerial photography, city directories and a review of regulatory databases and other pertinent data obtained during the preparation of the Phase I.

The Tier II component of this VES included the use of professional judgment for additional nearby properties outside of the scope of a typical Phase I records review. No subsurface investigation of the property was undertaken as part of this Tier I and non-invasive Tier II VES.

Based on the findings summarized in the governmental database review, and distances from the subject property, the potential for vapor intrusion from an offsite source is minimal. The historic RECs and releases from the nearby 750 and 760 E. 40th Street listings were assessed during the 2010 Phase II ESA conducted on the subject property. In addition, the FOIA file review of the nearby 741 Waverly Ct. BEA site identified tetrachloroethene at a distance of greater than 500 feet from the subject property. The concentrations observed were at levels significantly less than the non-residential VIAP.

Based on a review of the chemicals identified at "facility" concentrations, during previous assessment at the subject property, Arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater are not volatile compounds.

11.0 NON-SCOPE CONSIDERATIONS

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, lead based paint, radon, water infiltration, mold and wetlands. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, they are considered non-scope issues.

12.0 ASTM DATA FAILURE AND DEVIATIONS

12.1 DATA FAILURE

No data failures as defined in ASTM E 1527-13 were encountered during the completion of the Phase I ESA. No limitations were noted during the site reconnaissance, with the exception of the following:

- Limited access to the undeveloped portions of the property due to winter weather conditions.
- Snow cover and ice limiting observations on the ground surface.
- Interior photographs were limited for proprietary reasons.
- Interior access was limited due to active production activities.

12.2 DEVIATIONS

No deviations to the stated scope of work, Section 1.2, were identified during the completion of the Phase I ESA.

13.0 CONCLUSIONS AND RECOMMENDATIONS

13.1 CONCLUSIONS

In the professional opinion of ECS, appropriate inquiry has been made into the current and past uses of the subject property consistent with good commercial and customary practice in an effort to minimize liability.

ECS has performed a Phase I ESA in conformance with the scope and limitations of AAI and ASTM E 1527-13 of the subject property located at 875 and 901 E. 48th Street in Holland, Allegan County, Michigan. Any exceptions to, or deletions from, this practice are described in Section 11.2 of this Report.

The subject property is an irregular shaped property (~120 acres) located on the north side of 48th Street, to the east of Waverly Road in Holland, Allegan County, Michigan. The subject property is comprised of two parcels of land, both currently owned by Compact Power Inc. The east parcel is vacant land and the west parcel is developed with the LG Energy Solutions industrial/manufacturing complex. Site operations include manufacturing lithium-ion battery components for electric vehicles.

The existing LG Energy Solutions plant was constructed circa 2011 with subsequent expansions and renovations. The proposed development includes construction of several buildings in aggregate sum of 1.4 million square feet, situated on the north portion of the west parcel and across the east parcel.

The subject property details as obtained from Holland Assessing Department and Client provided documentation are summarized in the following table:

Parcel	Address	Owner	Details
53-02-03-300-018	875 E. 48th Street	Compact Power, Inc.	~80 acres, ~638,633 ft^2 main building gross area with additional outbuildings
53-02-03-300-019	901 E. 48th Street		~40 acres, vacant land

Historical documentation indicates the subject property was mostly agricultural land, with a small homestead near the southwest portion of the subject property as early as circa 1929 (topographic maps and aerial photographs). The subject property was redeveloped for its current use as an industrial/manufacturing building circa 2010, with subsequent additions and renovations.

The subject property was identified in the EDR database search. The subject property was listed as LG Chem Michigan, Inc. and Compact Power, Inc, and was listed in numerous governmental databases: TSCA, ICIS, FINDS, ECHO, US AIRS, SPILLS and AST. Most of these listings are administrative in nature. No references to any spills, releases or violations were noted in the listings, with the exception of the SPILLS listing. According to the report, there was a fire in activated carbon scrubber tower. The fire department came and flushed it out and the water and carbon went into the drains that are connected to the retention ponds. The spill occurred in June 2012. No additional details were provided.

Two additional addresses were identified as corresponding to the subject property. The address of 859 E. 48th Street was listed as an Inventory and BEA site, with a BEA submitted in 2010. The listing identifies Arsenic in one soil sample and bis(2-ethylhexyl)phthalate in one groundwater sample above Residential Cleanup Criteria. The address of 1 LG Way was listed in numerous databases including TRIS, FINDS, ECHO, RCRA-LQG, SPILLS, NPDES, and WDS. Some of these listings were administrative in nature. The RCRA-LQG listing identified numerous hazardous waste materials associated with site operations. No violations were noted. The SPILLS listing identified a pipe from inside the building to the outside, with a spot visible on the concrete where some acetone spilled out circa 2011. No further details were provided.

Site observations confirmed the use, storage and handling of chemicals associated with industrial manufacturing. In general, there are four main processes in the plant the use chemicals: anode and cathode mixing, n-methyl pyrrolidone (NMP) recycling, electrolyte addition and solvent based cleaning. The interior housekeeping was exceptional, with heavily controlled processes. There was no evidence of spills or leaks noted in any of the storage areas, utility areas, mechanical rooms situated throughout the building. Interior storage was noted in various areas throughout the main building associated with manufacturing processes. Numerous drums, totes and tanks were noted. Interior storage of non-hazardous and hazardous materials, including drums, totes and tanks, is also located within the hazardous materials storage building located north of the main building.

Bulk exterior storage of materials was noted in the tank farm area northeast of the building. This area is also equipped with secondary containment in the event of a spill or release.

Chemicals used in the manufacturing process are summarized in the Spill Prevention Pollution Plan and Pollution Incident Prevention Plan that cover chemical management, routes of possible spills and spill prevention measures.

With respect to potential impact from adjoining or nearby properties, ECS evaluated the information provided in the governmental databases, in addition to reviewing available FOIA documentation requested from EGLE. Based on the information provided, the potential for negative impact to the subject property from offsite sources appears minimal.

This assessment has revealed no evidence of RECs in connection with the subject property, with the exception of the following:

- The subject property is a "facility" with a BEA report prepared and submitted in 2010 at the time of purchase. Arsenic in one soil sample and bis(2-ethylhexyl)phthalate in one groundwater sample above Residential Cleanup Criteria.

The following items were also identified that warrant further discussion.

- A release of acetone was noted in the EDR Radius Map Report circa 2011. The SPILLS listing identified a pipe from inside the building to the outside, with a spot visible on the concrete where some acetone spilled out. No additional details were provided with respect to the extent of impact, if any.

- According to the EDR Radius Map Report, there was a fire in activated carbon scrubber tower. The fire department came out and flushed it out and the water and carbon went into the drains that are connected to the retention ponds. The spill occurred in June 2012. No additional details were provided with respect to extent of impact, if any.

13.2 RECOMMENDATIONS

No further assessment appears warranted with respect the "facility" listing. Previous Phase II ESA activities were conducted at the time of property purchase in 2010. The Arsenic and bis(2-ethylhexyl)phthalate detected do not present unacceptable human exposures to current or proposed site use.

Additional discussion is warranted to further address the extent of impact, if any, from the two SPILLS listings.

14.0 REFERENCES

ASTM Standard E1527-13, 2033, " Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM International, West Conshohocken, PA, 2013, DOI: 10.1520/E1527, www.astm.org.

Code of Federal Regulations. "National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR, Part 300), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)", July 2003.

Environmental Data Resources (EDR), Inc. "EDR-Radius Map™ February 2022.
---. *EDR Aerial Photo Decade Package*
---. *EDR Historical Topographic Map Report*
---. *Certified Sanborn® Map Report*
---. *EDR City Directory Image Report*

Michigan Legislature. "Natural Resources and Environmental Protection Act (Act 451), Environmental Remediation (Part 201)", 1994.

State of Michigan. Department of Environment, Great Lakes and Energy, GeoWebFace and Environmental Mapper online resources.

15.0 QUALIFICATIONS AND ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312 and we have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the Subject Property. We have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

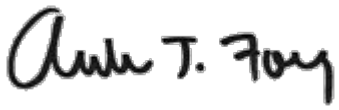
The Phase I ESA Site reconnaissance was performed by Ms. Julie Pratt and this Phase I ESA was written by Ms. Julie Pratt. Mr. Andrew Foerg, provided oversight and report review. Ms. Pratt has over 25 years of experience performing Phase I ESAs. Mr. Foerg has over 30 years of experience performing Phase I ESAs.

All work associated with the research and development of this report was performed by qualified personnel and was performed in general accordance with ASTM E 1527-13 and EPA's standards for AAI described in *40 CFR Part 312*.

All of which is respectfully submitted,

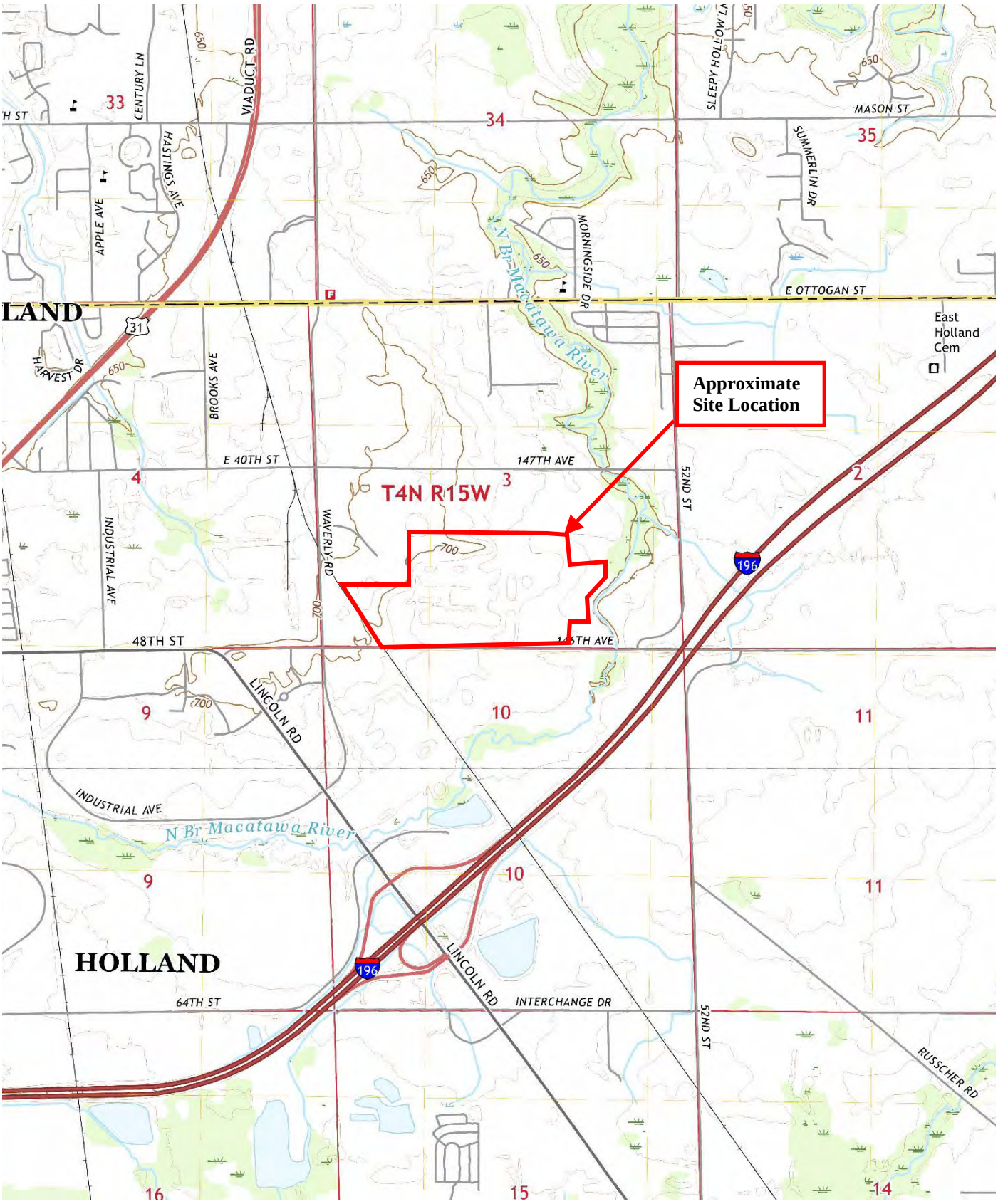


Julie Anna Pratt
Senior Project Professional



Andrew J. Foerg, CPG
President

Enclosures



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Figure 1: Site Location Map

LG Energy Solutions Expansion

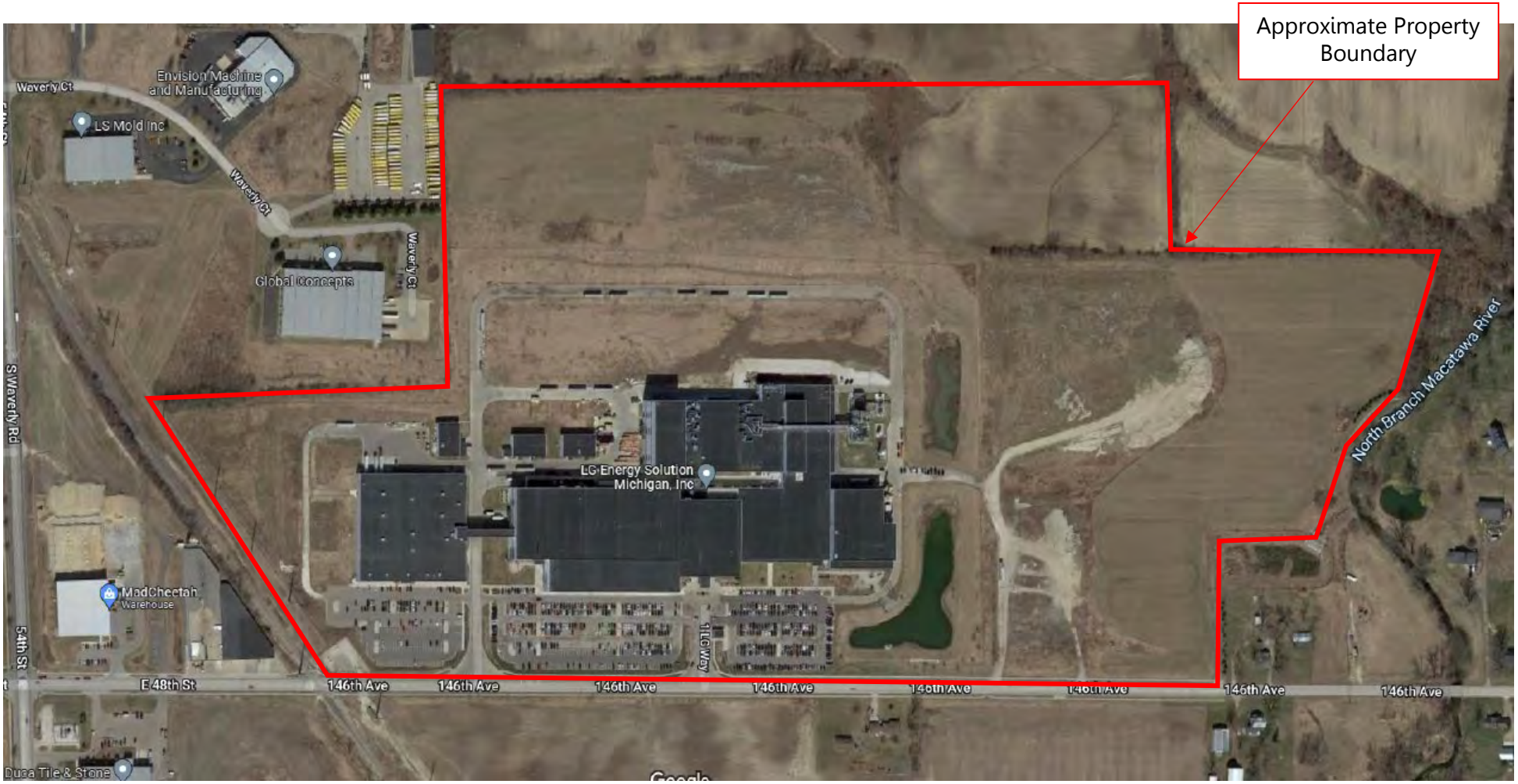
875 and 901 E. 48th Street, Holland, MI

ECS Project A118-0001

Source: Holland East, 2019 USGS Map

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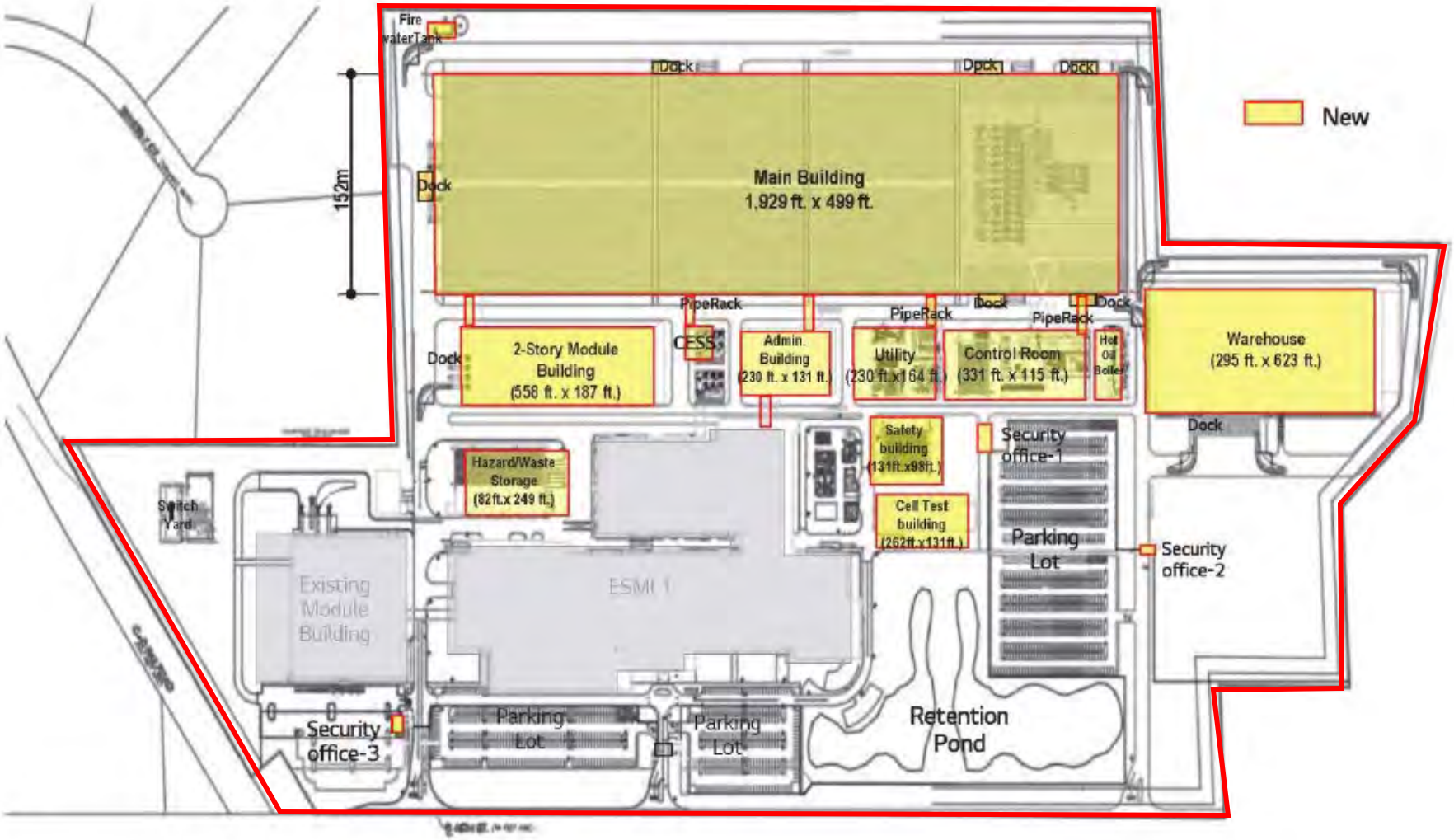
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Approximate Property Boundary

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Figure 2: Aerial Site Map
LG Energy Solutions Expansion
875 and 901 E. 48th Street, Holland, MI
ECS Project A118-0001
Source: Allegan County GIS Maps

N
NT



Legend

Approximate Property Boundary

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Figure 3: Proposed Site Plans
LG Energy Solutions Expansion
875 and 901 E. 48th Street, Holland, MI
ECS Project A118-0001
Source: Allegan County Contract #1375-22

N
NT

APPENDIX A

Site Photographs



Photograph 1: Near the southeast corner of the building looking west.



Photograph 2: Looking north along east building elevation.



Photograph 3: View across southwest parking area, looking east towards the security building.



Photograph 4: View looking towards the southwest portion of the property.



Photograph 5: View near northeast corner of the building.



Photograph 6: SRP system, near the northeast corner of the building.



Photograph 7: Looking west along the north building elevation.



Photograph 8: CO_2 and Activated Carbon Filter Unit, north side of the building.



Photograph 9: Vent pipe and access cover for empty UST (used for emergency containment).



Photograph 10: View looking south, towards the north building elevation.



Photograph 11: View looking west towards the hazardous material storage building and general storage warehouse.



Photograph 12: South side of hazardous materials building.



Photograph 13: SRP system and storage tanks northeast of the building.



Photograph 14: View from SRP storage area looking south.



Photograph 15: Nitrogen storage tank.



Photograph 16: View looking across the north portion of the west parcel.



Photograph 17: View looking towards the south portion of the west parcel.



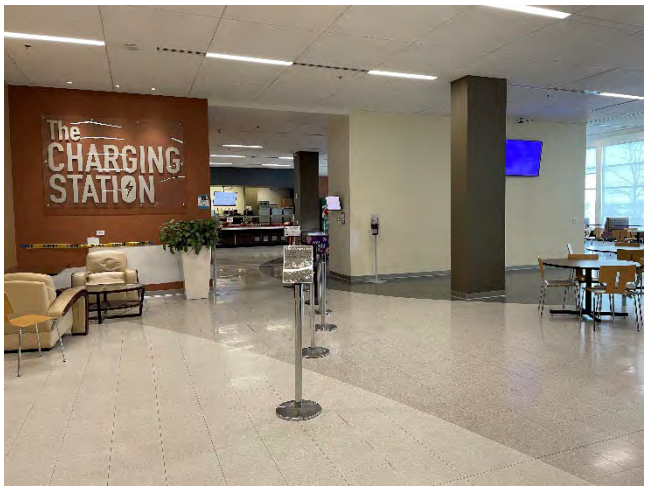
Photograph 18: View looking across the south portion of the east parcel.



Photograph 19: View looking east across the east parcel.



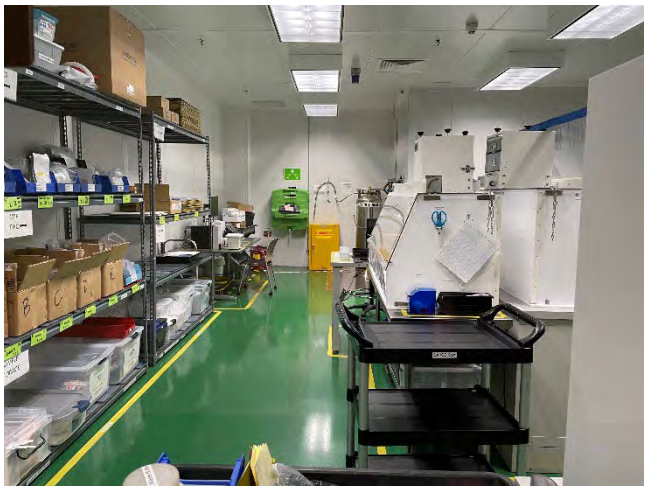
Photograph 20: View looking across the southeast portion of the east parcel.



Photograph 21: Interior view, main building.



Photograph 22: Interior view, main building.



Photograph 23: Interior view, main building.



Photograph 24: Interior view, main building.



Photograph 25: Interior view, hazardous materials storage building.



Photograph 26: Interior view, hazardous materials storage building.



Photograph 27: Interior view, hazardous materials storage building.

APPENDIX B

Questionnaires and Client Provided Documentation

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USER/CLIENT QUESTIONNAIRE
Phase I Environmental Site Assessment

Project Name: LG Energy Solution Expansion (Project Staircase) Date: February 8, 2022

Contact Name: Joseph Morgan (LG Energy Solution) Phone: 616-745-4173

Company: LG Energy Solution Fax: 616-494-7102

Relationship to Site: Senior Manager Facilities & SHE Email: jmorgan@lgensol.com

This questionnaire outlines personal knowledge of the interviewee. The questionnaire is to be answered to the best of the interviewee's knowledge, and is considered a true and accurate account of that personal knowledge. The questionnaire refers to current and historical information regarding the property, and will be included within the Phase I ESA report.

General Site Information

Type of Property: **Industrial** Commercial Residential Other

Size of Property: 120 Acres Size of building(s): 700,000 sq. ft.

Site Address: 875 East 48th St., Holland, MI (Main Building)

799 East 48th St., Holland, MI (Pack Plant Building)

Occupied by: LG Energy Solution

Owned by: LG Energy Solution

Current Operations/Site Use: Production of Lithium Ion Batteries

Proposed Operations/Site Use: Production of Lithium Ion Batteries

Current/Former Site Contacts (which may have knowledge of Site History):

Name	Title	Years at Site/ With Company	Phone No.
Ghafari	Matt Kraft	2010 -2020	31-441-3000
Rossetti	Greg Sweeney	2009	248262-8300
Atwell-Hicks LLC	Tom Covert Aaron Boone & Bobbi Roberson	2009- 2010	734-994-4000
Prein & Newhof	Christopher Cruickshank	2020	616-364-8491

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 must conduct the following inquiries required by 40 C.F.R. §§ 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

1. Environmental liens that are filed or recorded against the subject property

Did a search of land title records identify any environmental liens filed or recorded against the subject property under federal, tribal, state, or local law?

____Yes __X__No

If yes, explain:

2. Activity and use limitations that are in place on the subject property or that have been filed or recorded against the subject property

Are you aware of any activity and/or use limitations (AULs), 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 against the subject property under federal, tribal, state or local law?

____Yes __X_No

If yes, explain:

NO liens or objection have been files against LG Energy Solution on the site.

3. Specialized Knowledge or Experience of Subject Property

Do you have any specialized knowledge or experience related to the *subject property*? For example, are you involved in the same line of business as the current or former *occupants* of the *subject property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

___X__Yes ____No

If yes, explain: LG Energy Solution has produced lithium ion batteries on the site since 2010. Our engineers and staff are fully aware and knowledgeable in the materials, chemicals and processes involved in the battery production process.

4. Specialized Knowledge or Experience of Adjoining Properties

Do you have any specialized knowledge or experience related to *the adjoining properties*? For example, are you involved in the same line of business as the current or former occupants of the *adjoining properties* so that you would have specialized knowledge or the chemicals and processes used by this type of business?

_____Yes __X__No

If yes, explain:_____

_____

_____

5. Relationship of the purchase price to the fair market value of the subject property if it were not contaminated

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

__X__Yes _____No

If you conclude there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the Site?

__X__Yes_____No

If yes, explain: The property occupied by LG Energy Solution was purchased in 2010. A facility for production of lithium ion batteries already exist on a portion of the site_____

_____

_____

6. Commonly Known/Reasonably Ascertainable Information about the subject property

Are you aware of commonly known or reasonably ascertainable information about the *Subject Property* that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

Do you know the past uses of the Site? ____X_Yes _____No

If yes, explain: Environmental & Wetland Studies, etc. were performed in 2009 leading up to the purchase of property & existing plant construction. _____

_____

Do you know of specific chemicals that are present or once were present at the Site?__X_Yes _____No

If yes, explain: We are aware of the chemicals used in our battery production process that are in & around the facility._____

_____

Do you know of spills or other chemical releases that have taken place at the Site? __ Yes __X__No

If yes, explain:_____

Do you know of any environmental cleanups that have taken place at the Site? ____Yes _X___No

If yes, explain:

_____

7. The degree of obviousness of the presence or likely presence of contamination at the subject property, and the ability to detect the contamination by appropriate investigation

Based on your knowledge and experience related to the Site, are there any obvious indicators that point to the presence or likely presence of releases at the Site?

_____Yes __X___No

If yes, explain:_____

_____

_____

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OWNER/OCCUPANT QUESTIONNAIRE
Phase I Environmental Site Assessment

Site Name	LG Energy Solution Plant Expansion (Project Staircase)	Project #	
Contact Name	Joseph Morgan	Date	2-11-22
Company	LG Energy Solution	Phone	616-745-4173
Relationship to Site	Manager: Facilities & SHE	Email	jmorgan@lgensol.com

Instructions

This questionnaire outlines personal knowledge of the owner and/or occupant(s) (interviewee) of the subject property. The questionnaire is to be answered to the best of the interviewee's knowledge, and is considered a true and accurate account of that personal knowledge. The questionnaire refers to current and historical information regarding the property, and may be included within the Phase I ESA report.

Answer all questions and fill in all blanks or circle the answers as indicated. Any additional information that may not be covered in this questionnaire may be included on additional pages and attached.

Questions should be asked of the following persons:
- ❑ current owner of the property;
- ❑ any non-residential occupant of the property;
- ❑ any other occupant likely to be using, treating, generating, storing or disposing of hazardous substances or petroleum products on or from the subject property.

GENERAL INFORMATION

Please complete the following tables with historical owners and occupants (from current to past).

Ownership History: Current LG Energy Solution property was purchased from below Grantors per Deeds on record

Owner	Year(s) of Ownership
PHC, LLC … APPROX. 68 Acres	Owned to 5/21/2010
City of Holland (Rabbers) … APPROX. 41 Acres	Owned to 5/20/2010
City of Holland (Welscott) … APPROX. 10 Acres	Owned to 5/20/2010

Occupant History: LG Energy Solution of MI Inc

Name	Type of Business	Year(s) of Occupancy
LG Energy Solution of MI Inc	Lithium Ion Battery	11

	Question	Owner	Occupant	Comments
1	Is the *property* currently used for an industrial use?	Yes	Yes	Lithium Ion battery production NOTE: LG Energy Solution is BOTH Owner & Occupant of the Property
2	Is any *adjoining property* currently used for an industrial use?	No	No	Previous studies & reports have not indicated such usage
3	Was the *property* previously used for an industrial use in the past?	No	No	
4	Was any *adjoining property* previously used for an industrial use in the past?	No	No	
5	Is the *property* currently used or formerly used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	No	No	Previous studies & reports have not indicated such usage
6	Is any *adjoining property* currently used or formerly used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	No	Unknown	Previous studies & reports have not indicated such usage
7	Are there currently, or have there been previously, any damaged or discarded automobile or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	No	No	Previous studies & reports have not indicated such materials have contaminated the site
8	Are there currently, or have there been previously, any industrial *drums* (typically 55 gal [208 L]) or sacks of chemicals located on the property or at the facility?	Yes	Yes	We do use "drums" of electrolyte & "sacks" of chemicals in lithium ion battery production
9	Has *fill dirt* been brought onto the property that originated from a contaminated site or that is of an unknown origin?	No	No	Previous studies & reports have not indicated such material has contaminated the site
10	Is there currently, or have there been previously, any stained soil on the *property*?	No	No	Previous studies & reports have not indicated such material has contaminated the site
11	Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	No	No	Previous studies & reports have not indicated such storage has contaminated the site
12	Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe	No	No	Previous studies & reports have not indicated such materials have contaminated the site

	protruding from the ground on the *property* adjacent to any structure located on the *property*?			
	Question	**Owner**	**Occupant**	**Comments**
13	Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	No	No	Previous studies & reports have not indicated such materials have contaminated the site
14	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 guidelines applicable to the water system or has the well been designated contaminated by any government environmental/ health agency?	No	No	Previous studies & reports have not indicated such materials have contaminated the site
15	Do you have any knowledge of *environmental liens* or governmental notification relating to the past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?	No	No	
16	Has you been informed of the past or current existence of *hazardous substances* or petroleum *products* or environmental violations with respect to the *property* or any facility located on the *property*?	No	No	Previous studies & reports have not indicated such materials have contaminated the site
17	Do you have any knowledge of any environmental site assessment of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	No	No	Previous studies & reports have not indicated such materials have contaminated the site
18	Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?	No	No	
19	Does the *property* discharge wastewater on or adjacent to the *property* other than stormwater into a sanitary sewer system?	No	No	
20	Have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	No	No	Previous studies & reports have not indicated such materials have been dumped at the site
21	Is there a transformer, capacitor, or any	No	No	Previous studies & reports have

	hydraulic equipment for which there are any records indicating the presence of PCB's on the *property*?			not indicated such materials have contaminated the site

UTILITIES

Potable water supply source: __X__Municipal ____On-Site Well ____Other

Sanitary sewer service: __X__Municipal ____On-Site Septic ____Other

Storm sewer service: ____Municipal Separate Storm Sewers __X__On-Site Storm Water Retention

____Municipal combined sanitary/storm sewer system ____Other

Heat Source: __X__Natural Gas ____Electric ____Heating Oil

Name of Natural Gas Utility: Semco

Name of Electric Utility: Holland BPW

Name of Oil Supplier: N/A

NON SCOPE CONSIDERATIONS

Asbestos

Has Site had an asbestos survey? _____**Yes** __X___No *If yes, please provide a copy.*

Radon:

Has a radon gas survey been conducted at the Site? _____**Yes** __X___No *If yes, please provide a copy.*

Wetlands:

Has a wetland survey been conducted at the Site? __X___**Yes** _____No *If yes, please provide a copy.*

ENVIRONMENTAL CONCERNS

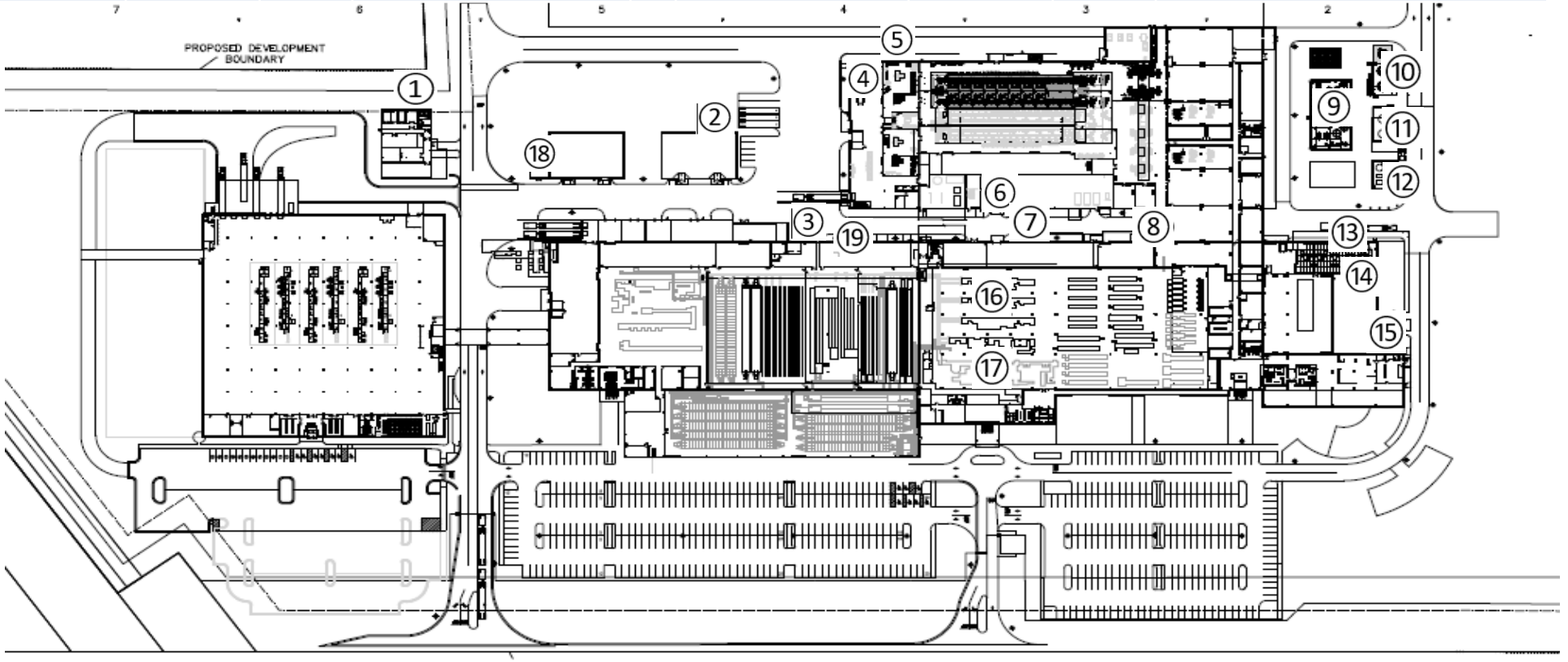
Has the Site had any of the following?
(Please check a box "H" for historically, "C" for currently, "U" for unknown, or "NA" for not applicable)

	H	C	U	NA	Date(s)
Inspections/Assessments	X	X			**YES**: We have had and continue to have Inspections & Assessments
Citations/Violations	X				**10/26/18**
Spills/Releases					**NO** Historic or Current Spills
Third Party Complaints					**NO** Historic or Current Complaints

If yes to any of the above, please provide detailed information and previously generated reports.

LG Energy Solution Michigan, Inc. Updated: 01/26/22

	Equipment Name	Chemical Name	Quantity	Remarks		Equipment Name	Chemical Name	Quantity	Remarks
1	Activated Carbon Filter Unit	Carbon	3575 lbs.	Outside North of Safety Building	10	2 NMP Storage Tanks	NMP	11,800 gal ea.	In tank farm to the East Zone 4
2	Hazardous Materials Storage	Waste & Chemicals	10,000 gal	Electrolyte Waste, NMP, Other	11	Acetone Storage Tank	Acetone	13,209 gal	In tank farm to the East Zone 4
3	West Emergency Generator	Diesel	100 gal	1st Floor Zone 1A	12	Nitrogen Storage Tank	Nitrogen	11,000 gal	In tank farm to the East Zone 4
4	NMP Storage Tank	NMP	700 gal	3rd Floor Zone 5A	13	Activated Carbon Filter Unit	Carbon	3183 lbs.	Outside to the North of Zone 3
5	Activated Carbon Filter Unit	Carbon	10,000 lbs.	Outside North of Electrode Zone 5A	14	Acetone Storage Tank-SRS	Acetone	792 gal	OUT OF SERVICE – material removed – tank inside of SRS room
6	Hot Oil Boiler	Heat Transfer Oil	18,000 gal max	1st Floor Zone 5A – Room 1509	15	Hot Oil Boiler	Heat Transfer Oil	0	Zone 3 - Decommissioned
7	Activated Carbon Filter Unit	Carbon	7400 lbs.	Outside Assembly Zone 2B	16	Electrolyte Storage	Electrolyte	115 gal	Assembly Production, Zone 2A; 1st Floor
8	East Emergency Generator	Diesel	100 gal	Zone 4	17	Electrolyte Storage	Electrolyte	110 gal	Assembly Production Zone 2A; 1st Floor
9	SRP System	NMP	23,550 gal	In tank farm to the East Zone 4	18	Fire Suppression Pump	Diesel	288 gal	West of the General Storage Warehouse
					19	Wind Tunnel Emergency Generator	Diesel	358 gal	South of the Fire Brigade room entrance



EMERGENCY PROCEDURES

In the event of a fire, explosion, chemical spill, or any other unplanned release of chemical materials, the following steps should be completed by the person discovering the spill and/or the facility emergency coordinator(s). The emergency coordinator or alternate are authorized to commit the necessary resources in the event of an emergency and at least one coordinator is always on-site or on-call and can reach the facility on short notice during an emergency. The order that the steps are followed may change depending on the type of incident.

INCIDENT/SPILL RESPONSE TASKS

Hazardous Material Incident Procedures

Hazardous material incidents can occur anywhere. Sites located near major transportation routes, or in areas with other facilities using chemicals, should be aware of the possibility of a hazardous material incident and have provisions in place for protecting people at the site. Depending upon the size and location of the incident and the direction of the plume either evacuation or in-place sheltering could be used. The incident could be a transportation accident, explosion, fire, or release of toxic materials causing environmental contamination. These incidents could cause injury or death without adequate warning and protective measures. A large incident could disrupt operations for several days or more, resulting in significant economic loss at some sites.
Organizations using, storing, transporting, or producing hazardous materials may have certain requirements to follow during a release or spill. These sites may choose to add those specific procedures for an onsite hazardous material incident to this plan.

Notification and Warning:

Notification of a hazardous material incident occurring onsite that may affect LG CMI is received by the computer monitored by the Security Personnel.

Security to notify the Site Emergency Coordinator

General Response:

The Director or site Emergency Coordinator will fully activate the ECC to monitor conditions and determine appropriate response actions.
If conditions warrant, precautionary protective action, including protective sheltering and /or evacuation, may be initiated. The Director shall determine the protective actions.
Protective sheltering generally involves staying indoors, shutting all doors and windows, and shutting off the ventilation system(s).

If a precautionary evacuation is warranted, personnel should report to the assembly area located in the safe Zone

Unit Emergency Coordinators will check their work areas to ensure that all persons have taken the appropriate action.

Unit Emergency Coordinators will account for their personnel at the assembly area and report this information to the Site Emergency Coordinator.

Personnel should remain at the assembly area for further instructions.

Staff will be recalled by a telephone call from their supervisor when conditions permit.

Director Checklist:

Evacuate to the ECC if conditions allow.

If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram and help establish an alternate ECC

Determine the extent of the hazardous material incident.

Determine what staff and personnel should do during interim period.

Authorize the use of organization resource by S.E.T. and local response teams.

Site Emergency Coordinator Checklist:

Activate the ECC to monitor conditions and determine appropriate response activities.

Activate the Site Emergency Plan. Ensure that the onsite warning system is activated if the situation warrants.

Ensure that protective action instructions are disseminated to personnel. If protective sheltering is warranted, ensure that all doors and windows are closed, the ventilation system is turned off, and all personnel remain indoors until it is safe to go outside.

If necessary, evacuate to the offsite evacuation assembly area and establish an alternate ECC there.

If necessary, coordinate with maintenance personnel, utility companies, and the fire department in shutting down other utility lines or systems that might present an additional hazard (i.e., gas main).

Electric Company: BPW Amy Yost.....(616) 355-1500

Gas Company: Semco Energy..... (616) 392-8060

Water Department: BPW Amy Yost.....(616) 355-1500

Fire Department: Waverly Station..... (616) 355-1025

Augment personnel and resources as necessary.

Recall evacuated personnel when the hazardous material incident has been abated or when conditions permit safe re-entry onto the site.

Dispatch personnel to inspect the site for damage.

Coordinate utility star-up procedure with maintenance personnel, utility companies and the fire department.

Unit Emergency Coordinator Checklist:

Notify persons of the protective actions they are to take. Check work areas to ensure that everyone has received instruction.
Ensure vital records are preserved.
Coordinate unit shut -down procedures as necessary.
If protective sheltering is recommended direct personnel to close all windows and doors and to remain indoors until it is safe to go outside.
If evacuation is recommended, direct persons to the offsite assembly area.
Account for unit personnel at the assembly area.
As conditions permit, inspect work area for damage and report this information to the Site Emergency Coordinator in the ECC.
Coordinate unit start-up procedures as necessary.

Emergency Communications Coordinator Checklist:

Report to the ECC and maintain a primary and alternate communications system between the ECC, the various work units onsite, and FEMA.
Notify ECC staff as Necessary. As conditions permit, collect and compile damage information.
Activate the onsite warning and instructional system as necessary.
If necessary, evacuate to the offsite assembly area and report to the alternate ECC established there.
Notify key officials as necessary.
Log messages received by and dispatched from the ECC.
Establish communications links between the ECC and Media Center (if activated).

Emergency Assessment Coordinator Checklist:

Report to the ECC and maintain a written record of all events that occur during the incident, including actions taken, decisions made and by whom, personnel involved, costs incurred, etc.
If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram then report to the alternate ECC.
As conditions permit, collect and compile damage information.
Report verified damage information to the local emergency management jurisdiction and to the Emergency Information Coordinator for release to the media.
Prepare and after-action report.

Emergency Information Coordinator Checklist:

Evacuate to the ECC if conditions allow.
If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram then report to the alternate ECC
Obtain verified information about the fire damage
Prepare and issue new releases to the media.
Establish a Media Center (as necessary).
Conduct media tours of the fire or explosion scene (if possible, and permitted)

Prepare Offsite assembly area (as necessary)

Emergency Medical Coordinator Checklist:

Report to the ECC.
If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram then report to the alternate ECC. Ensure that emergency medical care is provided to injured persons.
Coordinate offsite medical assistance, ambulance calling/pickup, etc
Collect and compile any tornado related health/medical information for the Emergency Assessment Coordinator

Emergency Maintenance Coordinator Checklist:

1. Report to the ECC to coordinate emergency maintenance functions.
Shut down the ventilation system and other utility lines or systems as necessary.
If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram then report to the alternate ECC
Erect Barricades and other traffic/access control devices and assist with traffic control as necessary.
As conditions permit, inspect the site for damage and provide re-entry recommendations. Note: Local fire officials will make the final determination as to whether or not the site is safe to re-enter.
Provide emergency repair services as necessary.
Assist with debris clearance and site cleanup as necessary.
Provide emergency repair services as necessary.
Assist with site cleanup as necessary.
Replenish, repair, or replace emergency equipment (including fire extinguishers) as necessary.

Emergency Security Coordinator Checklist:

Report to the ECC to coordinate emergency security functions.
If necessary, evacuate to the evacuation assembly area identified on the Site map Diagram then report to the alternate ECC.
Direct fire personnel to the fire scene.
Control the movement of people and vehicles at the site.
Maintain access lanes for emergency vehicles and personnel.
Prevent unauthorized entry into the hazardous area, ECC and Media Center (if established).
Assist with the care and handling of injured persons as necessary
Direct media representative to the Media Center, if established.

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PLAN REVIEW AND UPDATE RECORD

Table 1 Plan Review and Update Record

Date	By	Representing	Revision
June 2011	Atwell LLC	Atwell LLC	Initial SPCC/PIPP Development
	Jeff Byxbe	LG Chem Michigan Inc., Holland, Michigan	
April 2012	Jeff Byxbe	LG Chem Michigan Inc., Holland, Michigan	Update of Initial SPCC/PIPP plans.
	Mike Winchester	ERM, Inc. Holland, Michigan	
05/20/19	Ralph Severns	LG Chem, Michigan Inc. Holland, michigan	Review of Draft and Update for PE to sign off

SPCC PLAN PROFESSIONAL ENGINEER CERTIFICATION

Per Section 112.6(b)(4), this certification covers the environmental equivalence claims employed in this plan that regularly scheduled visual only inspections meet the integrity testing requirements of Section 112.8(c)(6) for the oil containers and systems under the standards for Environmental Equivalence (see Sections 9.1 and 9.2).

I hereby certify that:

- I am familiar with the provisions of 40 CFR Part 112;
- I, or an Agent of mine, has visited and examined the facility;
- That the alternative method of environmental equivalence in accordance with Section 112.7(a)(2) is consistent with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part.

Engineer: Ronald R. Vriesman, P.E. Seal

Signature: _____

Registration Number: _____

State of Registration: Michigan

Date of Certification: _____

SPCC/PIPP MANAGEMENT APPROVAL STATEMENT

LG Chem Michigan Inc. are committed to the prevention of discharges of oil to navigable waters or the environment, and maintains the highest standards for spill prevention control and countermeasures through periodic review, updating, and implementation of this Spill Prevention, Control, and Countermeasure (SPCC) Plan. LG Chem Michigan Inc. will provide the manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.

Authorized Facility Representative: Ralph Severns, Senior Environmental Specialist

Signature

29 MAY 19

Date

SPCC PLAN REVIEW AND EVALUATION

In accordance with 40 CFR 112.5, a review and evaluation of this SPCC Plan is conducted at least once every five (5) years. As a result of this review and evaluation, LG Chem Michigan Inc. will amend the SPCC Plan within six (6) months of the review to include more effective prevention and control technology if the technology has been field-proven at the time of the review and will significantly reduce the likelihood of a discharge as described in 40 CFR 112.1(b) from the facility.

Amendment of the SPCC Plan is also required following any changes in the facility design, construction, operation, or maintenance that materially affect the facility's potential for a discharge as described in 40 CFR 112.1(b). Examples of changes that may affect the facility's discharge potential include: commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures.

LG Chem Michigan Inc.'s Senior Environmental Specialist, who is accountable for discharge prevention and reports to company

management, shall certify all technical amendments of the SPCC Plan within six (6) months of either the plan review or facility change that prompted the plan amendment; unless the facility change requiring the technical amendment modified the facility in such a manner that the facility no longer meets the Tier II Qualified Facility criteria, or the technical amendment involves a claim of environmental equivalence under Section 112.7(a)(2) and/or 112.7(d). In these instances, the plan, or the environmental equivalence claims, must be certified by a Registered Professional Engineer.

Table 2 *SPCC and PIPP Plan Review and Evaluation*

Review Date	Signature	**Five (5) Year for SPCC and Three (3) Year for PIPP, Review and Evaluation Statement**
		I have completed a review and evaluation of the SPCC and PIPP Plans and <u>will</u> or <u>will not</u> (circle one) amend the Plans as a result.
		I have completed a review and evaluation of the SPCC and PIPP Plans and <u>will</u> or <u>will not</u> (circle one) amend the Plans as a result.
		I have completed a review and evaluation of the SPCC and PIPP Plans and <u>will</u> or <u>will not</u> (circle one) amend the Plans as a result.
		I have completed a review and evaluation of the SPCC and PIPP Plans and <u>will</u> or <u>will not</u> (circle one) amend the Plans as a result.
		I have completed a review and evaluation of the SPCC and PIPP Plans and <u>will</u> or <u>will not</u> (circle one) amend the Plans as a result.

1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) and the Michigan Department of Environmental Quality (MDEQ) require that most enterprises which handle hazardous chemicals have protocols on file indicating what measures will be taken to prevent pollution of natural resources of the State during normal operations and in the event of an emergency. The EPA and the MDEQ have various requirements for these protocols depending on the materials used, stored, or generated by the facility.

The following is a Spill Prevention, Control, and Countermeasure (SPCC) Plan and Pollution Incident Prevention Plan (PIPP) for the LG Chem Michigan Inc., Holland, Michigan facility. Descriptions of these plans are detailed below. This plan has taken into account oils and polluting materials handled at LG Chem Michigan Inc and foreseeable emergencies that may occur as a result of these operations.

1.1 SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

A **Spill Prevention, Control, and Countermeasures (SPCC) Plan** is required at non-transportation related facilities which, due to their location, could reasonably be expected to discharge oil in quantities that may be harmful into or upon the navigable waters of the U.S. or adjoining shorelines, and store or use oil in quantities in excess of 1,320 gallons in above ground containers or equipment.

An inventory of all aboveground oil storage and handling capacity was performed at LG Chem Michigan Inc. and the total on-site oil handling capacity (excluding containers or equipment less than 55 gallons) is greater than 1,320 gallons in aggregate. The nearby South Branch of the Macatawa River provides a reasonable route for oils to be discharged into or upon navigable waters or adjoining shorelines of the United States.

This SPCC Plan has been prepared in accordance with good engineering practices. In complying with the applicable requirements of the SPCC regulations, a deviation was employed in this plan for regularly scheduled integrity testing of the oil ASTs under the standards for Environmental Equivalence (see Sections 9.1 and 9.2).

A complete copy of this SPCC Plan will be maintained at the facility (hard and electronic copy) and available to the Regional Administrator for on-site review during normal working hours. A SPCC Completeness Checklist, included in Appendix A, provides a cross-reference for locating each required element within the SPCC. Where a required element is not applicable to the facility, the "Not Applicable" column has been marked on the checklist.

1.2 *POLLUTION INCIDENT PREVENTION PLAN*

A **Pollution Incident Prevention Plan (PIPP)** is required at facilities which, due to their location, could discharge oil/salt/polluting materials to surface or groundwaters of the state, and which exceed one of the following threshold management quantities (TMQ):

1. Oil in quantities in excess of 1,320 gallons in aboveground tanks/containers;

2. Oil in a single aboveground tank/container exceeding 660 gallons; or

3. Michigan polluting materials in excess of 440 pounds stored outdoors and/or 2,200 pounds stored indoors in a discrete location.

An inventory of LG Chem Michigan Inc.'s aboveground oil/salt/polluting material storage capacity and discrete storage locations was performed and the total on-site capacity (excluding containers less than 10 gallons or 100 pounds in size) is greater than applicable TMQs. The nearby South Branch of the Macatawa River provides a reasonable route for chemicals to be discharged into surface waters of the state.

All incoming materials are tracked by the purchasing department. They are responsible for ordering chemical materials as needed. All purchased chemical materials are available through the computerized purchase records.

Daily inventorying of LG Chem Michigan Inc.'s materials is completed by staff working in the areas that utilize the chemical. When materials get to a prescribed level, staff will notify purchasing who will then order more.

LG Chem Michigan Inc shall evaluate this PIPP every 3 years or after any release that requires implementation of the plan, whichever is more frequent. LG Chem Michigan Inc shall update the plan when facility

personnel, processes, or procedures identified in the plan change, or as otherwise necessary to maintain compliance with this rule. Upon preparation of an updated plan, LG Chem Michigan Inc shall re-notify the MDEQ and re-certify compliance.

A PIPP Completeness Checklist, included in Appendix A, provides a cross-reference for locating each required element within the PIPP. Where a required element is not applicable to the facility, an indication of "NA" has been included on the checklist.

1.3 *OFF-SITE PLAN DISTRIBUTION LIST*

This plan has been filed with, and all changes should be submitted to, the following:

Name:	ERM, Inc. 3352 128th Avenue Holland, Michigan 49424-9263
Contact:	Mike Winchester, CHMM
Phone Number:	(616) 738-7352
Mobile:	(616) 795-8490

Additionally, changes should be filed with the emergency response agencies listed in Section 6.4

1.4 *ON-SITE PLAN LOCATION SUMMARY*

This SPCC/PIPP plan is on file at the following LG Chem Michigan Inc locations:

LG Chem Michigan Inc. – Senior Environmental Specialist

Name:	Ralph Severns
Office:	(616) 494-7275
Mobile:	(269) 804-9226

One hard copy and an electronic copy for LG Chem Michigan Inc.'s intranet system.

2.0 COMPANY BACKGROUND

2.1 GENERAL

Facility Name:	LG Chem Michigan Inc. 1 LG Way Holland, Michigan 49423 Telephone: (616) 494-7100 Facsimile: (616) 494-7102
Corporate Office:	LG Chem Ltd. Seoul, South Korea
Spill Prevention Coordinator:	Sarah Kim, Environmental, Health, Safety Specialist Telephone: (616) 546-2764 Mobile: (859) 200-7123
SIC Code:	3691 (Storage Battery Industries)
NAICS:	335911 (Storage Battery Manufacturing)

LG Chem Michigan Inc. is located at 1 LG Way (875 East 48th Street), Holland, Michigan (Figure 1 - Appendix B). The facility is situated east of the intersection of Waverly and 48th Street on the south side of Holland, Michigan; the facility was constructed in 2010/2011.

LG Chem Michigan Inc. manufactures lithium ion storage batteries for the automotive industry. The site is presently accessed by three driveways from the south off 48th Street. The site consists of four separate parcels comprising approximately 120-acres and has approximately 737,000 square feet of building. There are presently 841 employees working at the site and the facility operates 8-12 hours per day, 5 days per week, with demand based overtime on Saturdays and Sundays.

The topography of the site is relatively flat with a slight downward slope from the northwest to the southeast. The storm water from the site is collected in two interconnected storm water retention ponds located on the east side of the property (Figures 2 and 3 in Appendix B). The storm water retention ponds discharge to the municipal storm sewer system on the south side of the property adjacent to 48th Avenue. An underground

system drains storm water east to the North Branch of the Macatawa River which eventually ends up in Lake Macatawa and Lake Michigan.

2.2 *ACCESS*

The property contains three access roads. Motor vehicles (employees and visitors) can access the site from 48th Street (south side of the property) through the main entrance. Delivery trucks are required to use the west entrance. Construction contractor's temporary offices and equipment are located on the east portion of the property which can be accessed by an east drive. See Appendix B for a site location map and site figure.

2.3 *SECURITY*

LG Chem Michigan Inc maintains on-site security through an outside security company. The security company (DK Security of Kentwood, Michigan) maintains two staff onsite 24 hour per day, 7 days per week. The main entrance has a guard building that monitors site access by employees, visitors and delivery personnel that enter and leave the property.

All doors and entrance in the building are card access only. All lobbies and entrances have "Speed Gates" to limit access to the building.

The company has an established alarm system throughout the facility. The alarm system includes a fire alarm, sprinkler alarm, and smoke detectors. The alarm system is maintained by an outside contractor (Riverside Integrated System).

The entire site is fenced and secured with the exception of the west side of the property where the contractor construction trailers are located. Both the main entrance and the west entrance are gated and monitored by security staff.

2.4 *SITE DRAINAGE*

The topography of the site consists of a higher elevation on the west side and slopes downward toward the east. The relief in topography is about 40 feet from west to east. A facility drainage map detailing the topography and site lay out is provided in Figure 3 (Appendix B).

3.0 *OIL AND POLLUTING MATERIAL STORAGE*

Oils and polluting materials are stored at various indoor and outdoor locations at LG Chem Michigan Inc. both in bulk storage containers, drums, and in "in-process" machinery. Safety Data Sheets (SDS) for chemicals utilized at the plant are maintained electronically on the shared Production Folder, Compliance throughout the facility. SDS are available on-line via 3E access for employees.

The primary oil/polluting material storage locations include:

1. 4 - Hot Oil Boilers located in the Mixer Room area and east of the SRS area.

2. 2 - Diesel Fuel tanks associated with the East and West Emergency Generators.

3. 1 - Diesel Fuel tank located in the Pump House, located on the west side of the Pallet Storage Building.

4. Acetone is stored onsite in two containers. The main storage tank is located outside on the east side of the building. The second acetone storage tank is located inside the building on the second floor of the SRS area. Both tanks are secondarily contained. (tanks are empty as SRS process is idled.)

5. Electrolyte (proprietary formula) is stored in the hazardous waste building in stainless steel drums and is used in the assembly area.

6. Other chemicals used onsite:

   Bulk Chemicals: NMP and Nitrogen

   Other materials for manufacturing include: Aluminum, plastic, copper foil, and Anodes/Cathodes containing copper and nickel.

7. All transformers onsite are dry.

More detailed descriptions of the above listed primary oil/polluting material storage areas are provided below. Table 3 includes information

on the storage area locations and descriptions of the applicable secondary containment measures, spill routes, estimated rates of flow, and potential spill volumes.

3.1 *HOT OIL BOILERS*

Facility operations use Hot Oil Boiler systems in two areas of the plant: SRS and Electrode Processing. The Hot Oil Boilers heat oil to a specific temperature and convey the heated oil to curing ovens. The curing ovens heat and set up the material used to make the batteries. The boiler areas contain storage tanks, pumps, piping and curing ovens. The SRS area has a floor drain that connects to an underground collection pipe used to capture any released materials in the area. The Electrode Processing area has a below grade area with coated concrete side walls to contain the oil in this area. All piping is located inside the building and uses the building structure as containment.

3.2 *DIESEL FUEL USED FOR THE EMERGENCY FIRE PROTECTION SYSTEM*

The Pump Room is located on the west side of the property in a separate building and contains a 125-gallon diesel fuel tank used to fuel the diesel engine for the emergency fire protection system. The tank is elevated on legs within a containment system underneath. The tank is located inside a building on the east side of the General Storage Building that has a concrete floor and block walls.

3.3 *EAST AND WEST EMERGENCY GENERATOR UNITS*

The facility has two emergency generator units used to supply electricity to the facility. The units are located on the north side of the main building, near the roadway between the buildings. Each unit has a 100-gallon storage tank for Number 2 diesel. The diesel fuel tank system is a double walled system and is located on the bottom of the unit. The systems have a detector in the second tank used to shut the system down if a release of fuel is detected. Due to the units locations they are monitored on a daily basis by staff working in the areas as well as during quarterly storm water site inspections. LG Chem conducts monthly polluting material site inspections that are documented and maintained in the environmental files.

3.4 *ACETONE STORAGE TANKS*

Site operations use acetone as part of the manufacturing process. The acetone AST is stored outside in a secondary containment system on the east side of the building. The acetone is brought into the building through underground piping. The acetone is collected inside the building in a 3000 liter/792 gallon storage tank. From the inside storage tank the acetone is used in manufacturing operations. All storage tanks and piping are secondarily contained. The tanks and piping are inspected monthly and documented. The outside storage tank contents are monitored by a visual gauge while the inside tank is weighed by a Metler Scale and monitored by production staff.

3.5 *ELECTRODE AREA*

The electrode area uses chemical materials that are proprietary to the company. Raw materials are received and mixed to formulate anodes and cathodes for manufacturing. The anode and cathode slurry is applied to metal surfaces. The coated metals are then sent through ovens to cure the material. From the ovens the material is collected on rolls then further processed and sent to the assembly area for cell manufacturing.

3.6 *ELECROLYTE INJECTION AREA*

The electrolyte (EVP3 and EVPS) is received in 200 kg (440 pound) drums from Korea. The drums are stored onsite in the secondarily contained hazardous waste building. The drums are moved from the hazardous waste storage building to the assembly area for use. The drums are connected to the manufacturing process and the electrolyte is conveyed into the process equipment for application. The manufacturing area maintains 10 drums at a time. The storage building area is secondarily contained. The assembly area is also is contained by the building floor.

Table 3 Regulated Oil/Polluting Material Storage Summary

Tank/Container Description	Location	Tank/Container, Contents/ Capacity	Type/ Material of Construction	Potential Type of Failure	Potential Spill Quantity (volume/rate)	Potential Spill Pathway	Preventative Equipment, Containment Controls	Containment System Size and Capacity
Hot Oil Boiler	SRS Department	3963 gallons	Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the containment system and or building floor	Containment system and or building coated floor	Building floor area 1,873 square feet
Hot Oil Boiler	Electrode Processing Area	2378 gallons	Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the containment system and or building floor	Containment system and or building coated floor	Building floor area 7,216 square feet
Diesel Fuel	Pump House	125 gallons	Painted Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the containment system	Containment system and or building coated floor	40 cubic feet or 299 gallons. Floor area of Pump House is 101 cubic feet and 760 gallons.
Diesel Fuel	East Emergency Generator	100 gallons	Painted Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the second tank of the double walled system	Double walled tank with release detection system	7.33'x3.625'x1.166'= 31 cubic feet or 231 gallons
Diesel Fuel	West Emergency Generator	100 Gallons	Painted Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the second tank of the double walled system	Double walled tank with release detection system	7.33'x3.625'x1.166'= 31 cubic feet or 231 gallons

Acetone	East Side of Facility Outdoors and in the SRS Dept.	13,209 and 792 gallons ASTs	Steel Tank Outside and Inside Painted Steel	Over fill, pipe break or tank failure	1 to 5 gallons per minute to release of the entire system	To the containment system and or building floor	Containment system and or building coated floor. The outside tank has overfill protection.	Outside containment 3,378 cubic feet or 28,259 gallons. Inside storage tank containment 272 square feet or 2034 gallons.
Electrode Material	Second floor (west end) of the Electrode area.	Miscellaneous chemical materials to create anodes and cathodes.	NA	Container breaking and release of the entire contents	Release of the entire container	To the containment system and or building floor	Containment system and or building coated floor	Building floor areas, Stock area 4,455 square feet and Mix Room area 3,465 square feet.
Electrolyte Material	First floor of the assembly area and the chemical storage building.	55 gallon, 200 KG drums	Stainless steel drums.	Container breaking and release of the entire contents	Release of the entire container	To the containment system and or building floor	Containment system and or building coated floor	Building floor area 46,282 square feet.

3.7 *ADDITIONAL FEATURES OR EQUIPMENT NOT YET FULLY OPERATIONAL*

The following implementation schedule has been prepared for additional equipment that must be installed or procedures that must be developed to ensure conformance with the requirements of 40 CFR 112 and the Part 5 Rules:

None

4.0 CHEMICAL HANDLING PRACTICES

4.1 RAW CHEMICAL HANDLING

The probability of a major spill at LG Chem Michigan Inc. is remote; however, if a spill were to occur, the most likely cause would be a punctured/leaky container/tank, a broken hose or line, or overfilling of a storage tank. Other possible causes of a release could be an explosion, fire, or a natural disaster such as a tornado.

Under no circumstances are employees to discharge manufacturing chemicals or waste materials to the wash sinks or into the restroom facilities. The drains located in these areas lead to the sanitary sewer. In addition, no employee should discharge manufacturing chemicals or waste materials to the storm sewer. The possibility does exist that an accidental spill may occur and oil/polluting materials may enter the sanitary or storm sewer system undetected.

Any undetected and unreported spills could be harmful to the employees of the facility, the local wastewater treatment plant, or the surface and groundwaters of the State. Employees are to immediately notify their Supervisor if a spill is observed. The Supervisor will then contact facility Emergency Coordinator(s) **(refer to Section 5.0, EMERGENCY PROCEDURES)** who will manage containment of the spill and make the proper notifications.

4.2 TANKER TRUCK LOADING/UNLOADING PROCEDURES

Tanker trucks are utilized at LG Chem Michigan Inc. for loading and unloading bulk materials such as oil, diesel fuel, acetone and NMP. As part of LG Chem's pollution prevention program, the company requires bulk chemical suppliers to review and follow these procedures. This is accomplished by LG Chem forwarding the procedures with a cover letter (Appendix I) to the supplier for their review and acknowledgment.

The loading/unloading procedures will be followed by LG Chem staff and their vendors. LG Chem staff will assists and oversee any chemical/polluting material deliveries to assure compliance with company policies and procedures.

5.0 EMERGENCY PROCEDURES

In the event of a fire, explosion, chemical spill, or any other unplanned release of chemical materials, the following steps should be completed by the person discovering the spill and/or the facility Emergency Coordinator(s) (EC). The EC are authorized to commit the necessary resources in the event of an emergency and at least one coordinator is always on-site or on-call and can reach the facility on short notice during an emergency. The order that the steps are followed may change depending on the type of incident.

5.1 INCIDENT/SPILL RESPONSE TASKS

Table 4 *Incident/Spill Response Tasks*

Type of Incident	Response Procedures
1) All Incidents	Notify a facility emergency coordinator: 1. Jason Allen, Safety Health And Environmental Manager Office: (616) 546-7207 Mobile: (616) 820-4985 2. Environmental Response Team Members See list provided in Appendix H
2) Building Evacuation	Once the alarm and strobe light system has been activated, Supervisors will instruct employees to evacuate the building (Excerpted from: "E0SF005_Emergency Action_November.4_2011"): *ALL* 1. Evacuate to designated area 2. Ensure your supervisor is aware you are safely out of the building 3. Await further instruction *SUPERVISORS* 1. Evacuate to designated area 2. Take attendance of employees 3. Communicate via two-way radios if employees are

Type of Incident	Response Procedures
	missing 4. Await ALL CLEAR from Emergency Coordinator or Fire Department before reentering *SAFETY COMMITTEE* 1. Meet in Security Building 2. Distribute two-way radios 3. Report to designated area *P.M. VOLUNTEERS* 1. Report to designated area (assignments forthcoming) 2. Verifiers communicate findings to dispatcher in PM room 3. Dispatcher communicates to Emergency Coordinator *EMERGENCY COORDINATOR* 1. Report to Security Building 2. Communicate with PM Dispatcher 3. Communicate with supervisors 4. Communicate with Holland Fire Department 5. Provide ALL CLEAR Activate the building alarm system for an evacuation and place call to the EC and describe the situation, if possible
3) First-aid emergency	• Do not move injured or ill person; make them comfortable • Supervisor to contact first aid trained employee • Employees will follow the Incident Response Procedures • Supervisor/EC will arrange for staff to meet emergency unit and lead them to accident scene • Medical Responders to take control when arrive on-site
4) Small, easily controlled fire	Notify EC(s). All staff will be trained to combat small fires with extinguishers until the City/Township Fire Department arrives (fire department to be called by EC).
5) Large fires	Leave the area. Use extinguishers for escape. Activate fire alarm system. Notify EC(s). EC(s) to contact City/Township Fire Department and call for a building evacuation.

Type of Incident	Response Procedures
	EC(s) assigns individuals from the ECT to wait at the facility entrance and other strategic locations to direct emergency response agencies.
6) Small, easily controlled spill (non-hazardous spill less than 55 gallons)	Notify Shift Supervisor and EC(s).
	Appropriately trained personnel isolate area and approach with caution and safety.
	Identify chemical.
	Review MSDS of product(s) spilled for safety precautions and particular clean-up methods. Don appropriate personal protective equipment (PPE), if necessary.
	Stop leak (containers) by tilting container on its side with hole facing upwards. Clean area surrounding hole thoroughly and patch with available repair kits. Use overpack container for secondary containment.
	Take measures to contain spill using sand or inert absorbent material. Block floor/sewer drains.
	Recover spilled material using vacuums, pumps, inert absorbent, etc. Place spilled chemical in structurally sound, leak proof, and chemically resistant drum(s).
	For acid/battery fluid spills, avoid direct contact with skin. If contact is made with the skin/eyes, flush area immediately with facility eyewash/safety showers.
	Decontaminate affected spill area and emergency response equipment to the extent necessary prior to resuming operations.
	Emergency coordinator(s) coordinate short-term storage and disposal of clean-up materials
	Emergency coordinator(s) document spill on Spill or Release Report Form (Appendix C).
	EC(s) determine if spill is reportable to local, State, and/or Federal authorities (see Section 6.0).
7) Large spill (hazardous spill or spill greater than 55 gallons)	Leave the area. Activate evacuation system. Notify EC(s).
	EC(s) contact the designated spill response contractor(s) and or emergency response agencies (Section 7.2)
	EC(s) assess release and possible hazards to human health and/or the environment.
	Take all reasonable measures to stop spread of release (e.g., place absorbents/containment booms in open drains (if safe) to prevent spill from reaching downstream surface waters, etc.).
	EC(s) determine if spill has entered storm sewer system, sanitary sewer system, or surface waters.
	Decontaminate affected spill area and emergency response equipment to the extent necessary prior to resuming operations.
	EC(s) coordinate short-term storage and disposal of clean-up materials

Type of Incident	Response Procedures
	EC(s) document spill on Spill or Release Report Form (Appendix C).
	EC(s) determine if spill is reportable to local, State, and/or Federal authorities (see Section 6.0).

5.2 *PROCEDURES FOR RECOVERED MATERIAL DISPOSAL*

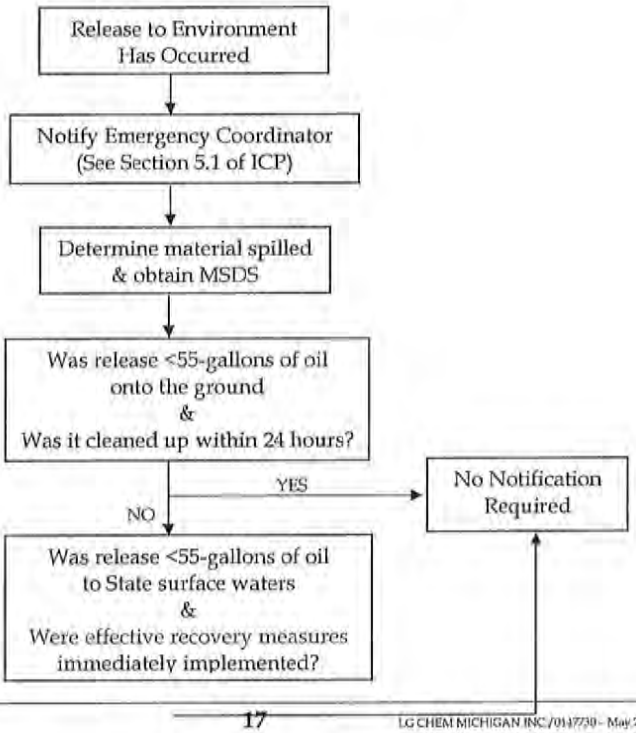
All recovered material will be evaluated for potentially meeting the definition of a hazardous or liquid industrial waste. Emergency response contractors and the EC(s) will make the decision on how to dispose of the recovered materials. No employee shall place recovered materials in any dumpster without full approval of the EC(s). Manifests must be used for liquid industrial wastes and for hazardous wastes transportation and disposal. The designated disposal facility must have prior authorization to accept the waste before the shipment is initiated.

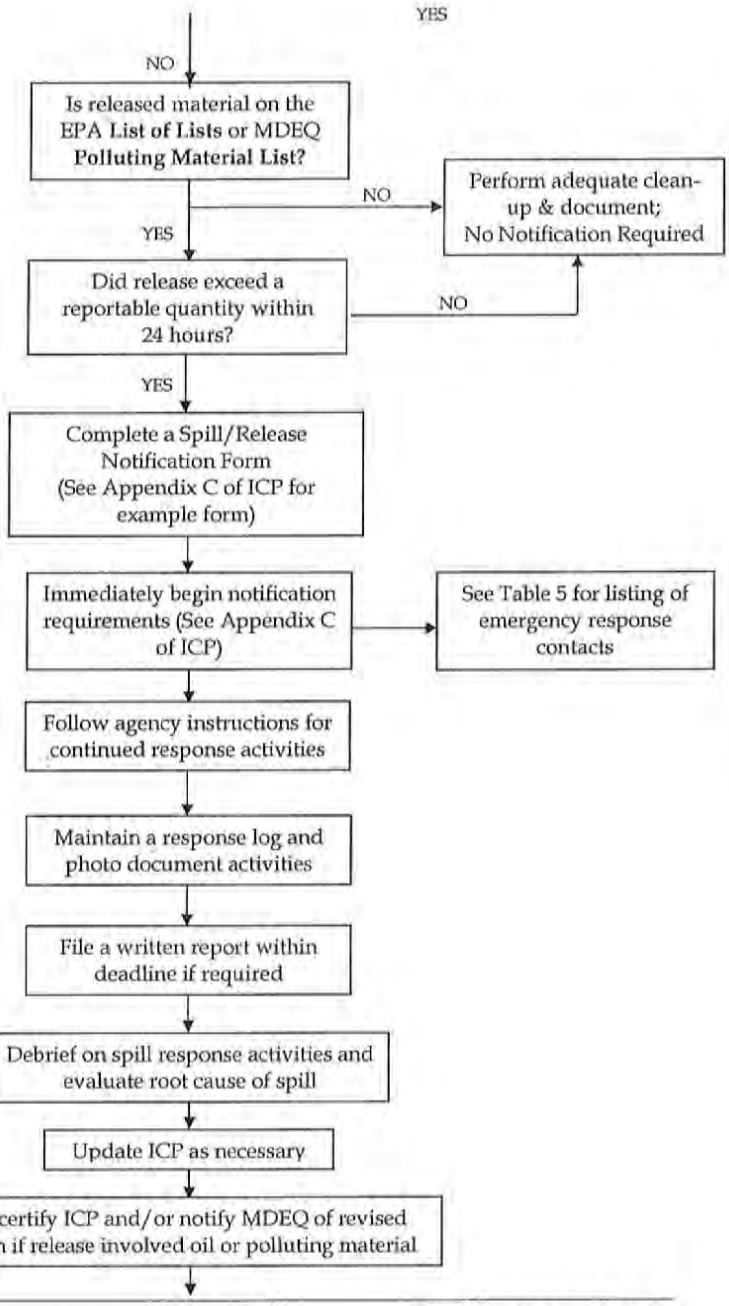
6.0 *PROCEDURES FOR OFF-SITE EMERGENCY NOTIFICATIONS*

Under certain circumstances, various local, State, and Federal regulations require reporting of spills to specified agencies. A summary of these notification requirements is condensed in the MDEQ's "Release Notification Requirements in Michigan" table, located in Appendix C or http://www.michigan.gov/documents/deq/deq-op2ca-sara-releasenotificationrequirements_273699_7.pdf. Off-site emergency notification will only be done when deemed necessary by one of the facility emergency coordinators.

The following is a generalized process for determining when regulatory agency notification and follow-up reporting may be required. More detailed notification requirements are summarized in Appendix C.

RELEASE REPORTING DECISION TREE SCHEMATIC




YES
NO
Is released material on the EPA List of Lists or MDEQ Polluting Material List?
NO
Perform adequate clean-up & document; No Notification Required
YES
Did release exceed a reportable quantity within 24 hours?
NO
YES
Complete a Spill/Release Notification Form (See Appendix C of ICP for example form)
Immediately begin notification requirements (See Appendix C of ICP)
See Table 5 for listing of emergency response contacts
Follow agency instructions for continued response activities
Maintain a response log and photo document activities
File a written report within deadline if required
Debrief on spill response activities and evaluate root cause of spill
Update ICP as necessary
Recertify ICP and/or notify MDEQ of revised plan if release involved oil or polluting material

Conduct follow-up training

The following is a generalized procedure for determining if a regulated chemical is involved in a spill, if the spill constitutes a reportable quantity, if a "release" occurred, and how to provide appropriate initial notification with a written follow-up report. Note that at times an oil release can be reportable under the Federal regulations while not being reportable under the Michigan state regulations. This is due to several exemptions to the definition of "release" under the Michigan Part 5 PIPP Rules, as detailed below.

6.1 *DEFINITION OF A "RELEASE"*

In general "release" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a hazardous substance into the environment, or the abandonment or discarding of barrels, containers, and other closed receptacles containing a hazardous substance.

Federally, the Discharge of Oil regulation (40 CFR part 110) requires reporting to the National Response Center (NRC) when a release of oil occurs that can "violates state water quality standards, causes a film or sheen upon or discoloration of the surface of water or adjoining shorelines, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." Under this regulation, reporting oil discharges does not depend on the specific amount of oil discharged, but instead can be triggered by the presence of a visible sheen created by the discharged oil or the other criteria described above.

At the state level, a spill or release that needs to be reported to the MDEQ under Michigan's Part 5 PIPP Rules is generally defined as a loss that exceeds the threshold reporting quantity (TRQ) for releases of polluting materials (including oils). "Threshold reporting quantity" means any of the following:

i. For releases of oil to the surface of the ground, 50 pounds.

ii. For releases of oil to the waters of the state, any quantity that causes unnatural turbidity, color, visible sheens, oil films, foams, solids, or deposits in the receiving water body.

iii. For release of salt to the surface of the ground, or waters of the state, 50 pounds in solid form, unless the use is authorized by the department for deicing purposes, or 50 gallons in liquid form, unless authorized by the department as a dust suppressant or deicing agent or permitted under Part 31 of the act.

iv. For releases of all other polluting materials, the quantity specified in Table 1 in R 324.2009, or any quantity that causes unnatural turbidity, color, visible sheens, oil films, foams, solids, or deposits in the receiving water body.

Note, that for the purposes of Michigan's Part 5 PIPP Rules, the definition of "release" does not include any of the following exemptions:

i. Spilling, leaking, or discharging less than 1000 gallons of a polluting material into a secondary containment structure that complies with these rules, if recovery of the material spilled, leaked, or discharged is initiated within 24 hours of detection, is completed as soon as practicable, but not more than 72 hours after detection, and if no polluting materials are released directly or indirectly to any public sewer system or to the surface waters or groundwaters of this state.

ii. Spilling, leaking, or discharging less than 55 gallons of oil to the ground surface, if the spill, leak, or discharge is detected and the oil recovered within 24 hours of the spill, leak, or discharge, and if oil is not released directly or indirectly to any public sewer system or to the surface waters or groundwaters of this state.

iii. Spilling, leaking, or discharging less than 55 gallons of oil to the surface waters of this state, if effective recovery measures are implemented in response to the spill, leak, or discharge immediately upon detection.

iv. Releases of air contaminants as defined in Section 5501(a) of the act.

v. Permitted releases as defined in Section 20101(1)(aa) of the act.

6.2 *DETERMINING IF A REGULATED CHEMICAL IS INVOLVED IN A SPILL*

If a spill has occurred at the facility, the Emergency Coordinator(s) should obtain a copy of the most current product MSDS or waste characterization. Each chemical constituent that appears on the MSDS/characterization

should be compared to the EPA's document titled "List of Lists" and to MDEQ's table of "Polluting Materials." The Michigan Polluting Materials list is located in Appendix D. The EPA's List of Lists can be found at http://www.epa.gov/ceppo/pubs/title3.pdf.

The chemicals should be searched by CAS number and not by the common name, as some chemicals may have several names under different naming conventions, yet each chemical can only have one CAS number. If any chemicals on the MSDS/characterization are found in the tables, then there are regulated chemicals involved in the spill.

6.3 *DETERMINING IF THE RELEASE EXCEEDS A REPORTABLE QUANTITY*

If a release of a regulated chemical has been confirmed, the facility must estimate the quantity of regulated chemical released. The MSDS for the chemical typically lists the concentrations of each constituent. The facility must first estimate the total quantity of the mixture or pure chemical released. The weight percentage of the reportable chemical in the mixture released can then be estimated. This weight must be compared to the Threshold Reporting Quantity (TRQ) in the "Polluting Materials" list and to the Reportable Quantity (RQ) in the "List of Lists." If the amount of chemical released during a 24-hr period exceeds the TRQ or RQ, then a reportable "release" has occurred.

6.4 *DETERMINING THE AGENCIES THAT MUST RECEIVE AN INITIAL NOTIFICATION AND A WRITTEN FOLLOW-UP REPORT*

If a release of a reportable quantity has been confirmed, the facility must immediately notify certain agencies. The applicable agencies are determined from the "Release Notification Requirements in Michigan" table, located in Appendix C or http://www.michigan.gov/documents/deq/deq-op2ca-sara-releasenotificationrequirements_273699_7.pdf. This table summarizes the applicable regulatory reference, describes the scenario that would require reporting, and provides the general procedures for making the initial notification and submitting a written follow-up report. A summary of key contacts and telephone numbers for the emergency agencies is included in Table 5.

A variety of information specific to the facility and the release must be provided in the initial verbal notification. This information includes the

items listed below and any additional information requested by the applicable agency during the phone conversation.

Verbal notifications require the following minimum information:

1. Facility address/exact location and phone number;
2. Type and estimated quantity of material discharged;
3. Source of discharge;
4. Affected media;
5. Cause of discharge;
6. Damages of injuries caused by discharge;
7. Actions taken to stop/remove/mitigate discharge;
8. Evacuation needs; and
9. Names of individuals/organizations that have been contacted.

Various agencies may also require a follow-up written report to confirm the information concerning the occurrence and resulting clean up of the reported release. Some written reports must be submitted on specific forms provided by the agencies. Since these forms are subject to change, the agencies can provide the necessary forms during the initial telephone notification or the forms can be obtained from the appropriate agencies' Internet Web Site.

Table 5 *Off-Site Emergency Response Contact List*

GOVERNMENT RESPONSE UNITS	CONTACT NUMBERS
Holland Fire and Police Departments:	911
Fire Business Number:	616-355-1020
Police Business Number:	616-355-1100
Allegan County Sheriff:	911 or 269-673-3899
Allegan County Health Department:	269-673-5411
Allegan County Health Department:	269-673-5411
Allegan County LEPC:	269-673-0571
Ottawa County Sheriff:	911 or 616-738-4025
Ottawa County Health Department:	616-396-5266
Holland Drinking Water Plant:	616-355-1500
Holland Wastewater Treatment Plant:	616-355-1250
CHEMTREC Emergency Response:	1-800-424-9300
Poison Control Centre:	1-800-764-7661
Michigan Department of Environmental Quality Grand Rapids Offices:	616-356-0500
Michigan Department of Environmental Quality Kalamazoo Offices:	269-567-3500
Michigan Department of Environmental Quality PEA:	1-800-292-4706
USEPA National Response Centre:	1-800-424-8802
USEPA, Region V Offices, Chicago, IL:	1-312-353-2318

HOSPITALS AND AMBULANCE SERVICES	CONTACT NUMBERS
Ambulance:	911
Holland Hospital 602 Michigan Avenue Holland, MI 49423	616-392-5141
Holland Medicenter 335 North 120th Avenue Holland, MI 49423	616-392-5222
SPILL RESPONSE CONTRACTORS AND TRANSPORTERS	**CONTACT NUMBERS**
Valley City Transport 1040 Market SW, Grand Rapids, MI 49503	616-235-1500
Dynecol Inc. 620 Georgia Street Detroit, MI 48211 Contact; Ms. Lori Mexicotte	(office 313-571-7141, cell 313-400-9899)
Terra Industrial Services LLC 5100 West Michigan Ave, Kalamazoo, MI 49006	269-375-9595 or 1-866-354-8963
Northern A1 Services 1122 East Barney, Muskegon, MI 49444 231-728-4354	1-800-544-2663
K&D 1309 West M-89 Plainwell, MI	269-694-6672

6.5 *ADDITIONAL REPORTING REQUIREMENTS*

6.5.1 *Discharge to Navigable Waters*

EPA Region V must be notified in writing if a facility has discharged into or upon the navigable waters of the United States or adjoining shorelines:

1. More than 1,000 U.S. gallons of oil in a single spill event; or
2. More than 42 gallons of oil in two (2) spill events occurring within any 12-month period.

In either of these two cases, the facility shall submit the following information in writing to the EPA Regional Administrator within sixty (60) days:

1. Name of facility;
2. Name(s) of the owner or operator of the facility;
3. Location of facility;

4. Maximum storage or handling capacity of the facility and normal daily throughput;

5. The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

6. Description of the facility, including maps, flow diagrams, and topographical maps, as necessary;

7. The cause(s) of such spill, including a failure analysis of system or sub-system in which the failure occurred;

8. Additional preventative measures taken or contemplated to minimize the possibility of recurrence; and

9. Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

The appropriate EPA Regional Administrator can be contacted at the following address and phone number:

U.S. Environmental Protection Agency – Region V
Emergency Response and Support Branch
Waste Management Division
77 W. Jackson Boulevard
Chicago, Illinois 60604
(312) 353-2318 (24-hour number)

In accordance with 40 CFR 112.4(c), this information must also be submitted to the appropriate State agency, at the following address:

MDEQ – Water Resources
State Office Building, 5th Floor
350 Ottawa Avenue, NW, Unit 10
Grand Rapids, Michigan 49503
Attn: PIPP Coordinator.

MDEQ- Water Resources
District Office Building
Adobe Road
Kalamazoo, MI 49009
Attn: PIPP Coordinator.

6.5.2 *Releases of CERCLA Hazardous or SARA Extremely Hazardous Substances*

As soon as practicable after a release of a reportable quantity of any CERCLA hazardous substance or SARA extremely hazardous substance, a written follow-up emergency notice (or notices as more information becomes available) must be provided to both the LEPC and the SERC. The notice shall set forth and update information provided in the verbal notice and include additional information with respect to:

a. Actions taken to respond to and contain the release;

b. Any known or anticipated acute or chronic health risks associated with the release; and

c. Where appropriate, advice regarding medical attention necessary for exposed individuals.

This notice should be sent to the following agencies:

Local Emergency Planning Committee (LEPC)

Mr. Scott Corbin
Allegan County Emergency Management/Homeland Security
Allegan County LEPC
3271 122nd Avenue
Allegan, Michigan 49010

and

State Emergency Response Commission (SERC)

Michigan Department of Environmental Quality
SARA Title III Program Office
P.O. Box 30457
Lansing, Michigan 48909

6.5.3 *Releases of Michigan Polluting Materials*

Submit a written report within ten (10) days after a release of a reportable quantity of a Michigan Polluting Material (oil, salt, polluting materials listed in R324.2009) to the public sewer, surface of ground, surface water, or groundwater in excess of its threshold reporting quantity during a 24-hr period.

This report should be sent to the following agencies:

MDEQ – Water Resources Division
Chief, Field Operations Division

P.O. Box 30273
Lansing, Michigan 48909

and

Allegan County Health Department
3255 122nd Avenue, #200
Allegan, Michigan 49010-9511

This report must include the following information:

a. Cause of the release;

b. Discovery of the release;

c. Response measures taken; and

d. Measures taken to prevent recurrence.

6.5.4 *Releases of RCRA Hazardous Wastes*

If the facility has had a release, fire or explosion involving a hazardous waste that could threaten human health or the environment outside of the facility, a written report must be submitted within 15 days of the incident. If the facility has had a release from a tank or secondary containment system, a written report must be submitted within 30 days of discovery.

This report should be submitted to the following agency:

MDEQ – Resource Management Division
P.O. Box 30241
Lansing, Michigan 48909

The report must include:

a. Name, address, and telephone number of the owner or operator;

b. Name, address, and telephone number of the facility;

c. Date, time, and type of incident (e.g., fire, explosion);

d. Name and quantity of material(s) involved;

e. The extent of injuries, if any;

f. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

g. Estimated quantity and disposition of recovered material that resulted from the incident.

6.5.5 *Releases of Flammable/Combustible Liquids from AST Systems*

Within ten (10) days of the release, a written report must be submitted to the MDEQ-Waste and Hazardous Materials Division, Storage Tank Unit at the address below:

MDEQ – Resource Management Division
Storage Tank Unit
P.O. Box 30241
Lansing, Michigan 48909

The report must specify:

a. The underlying cause of the release;

b. Method of release discovery; and

c. Responses/actions made to prevent a recurrence.

6.5.6 *Releases during Transportation of Hazardous Materials*

For incidents during transportation (including loading, unloading, temporary storage) that involve hazardous materials and result in death, hospitalizing injury, public evacuation, transportation/facility closure, or flight pattern alteration, a written report must be sent to the U.S. Department of Transportation (U.S. DOT) within thirty (30) days at the address below:

Information Systems Manager
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Materials Safety
DHM-63
Washington D.C. 20590-0001

The report must be submitted on DOT Form F 5800.1 (01-2004) "Hazardous Materials Incident Report."

6.5.7 *Local Wastewater Treatment Plant*

In accordance with the requirements of the Holland Wastewater Treatment Plant, Industrial Pretreatment Program, LG Chem Michigan Inc shall notify the Pollution Control Division under the following conditions:

1. Immediate verbal notice upon any accidental or slug discharge to the sanitary sewer. Formal written notification within five (5) days of becoming aware of the occurrence, to include:
   a. Date and time of the discharge
   b. Cause of the discharge;
   c. Anticipated time the violation is expected to continue; and
   d. Actions proposed to eliminate the violation from occurring again.

2. Verbal notice within 24 hours of becoming aware of an upset or unanticipated bypass. Formal written notice within five (5) days of becoming aware of the occurrence, to include:
   a. Period of noncompliance, including exact dates and times;
   b. Description and cause of the indirect discharge;
   c. Anticipated time the violation is expected to continue; and
   d. The steps being taken and/or planned to reduce, eliminate, and prevent reoccurrence of the violation.

Notification of the Holland WWTP can be directed to the following address:

Pretreatment Coordinator
Holland WWTP
42 South River Avenue
Holland, Michigan 49423
(231) 724-3440

6.6 *ADDITIONAL ASSISTANCE*

CHEMTREC

For Chemical Emergency

Spill, Release, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night (24 hour)

Within USA and Canada: 1-800-424-9300

The following persons may also be contacted to provide technical assistance in the event of an oil/polluting materials spill or incident.

Mike Winchester, CHMM
Environmental Resources Management, Inc.
Cell: (616) 795-8490
Office: (616) 738-7352

Ronald R. Vriesman, P.E.
Environmental Resources Management, Inc.
Cell: (616) 283-7153
Office: (616) 738-7302

7.0 *EMERGENCY EQUIPMENT/CONTRACTORS*

7.1 *ON-SITE EQUIPMENT*

The following equipment is available on-site for emergency use at the LG Chem Michigan Inc. facility:

1. Fire extinguishers
2. First aid station
3. Safety Showers/Eyewash Stations
4. Two way radios for supervisors
5. PA system (power outage proof)
6. Soda ash for chemical spills
7. Absorbent spill socks
8. Emergency shut off valves for storm water trench drains in loading docks
9. Three universal spill kits and one oil spill kit (Co-Gen)

Note: Each spill kit has a specific inventory list and is inspected weekly.

7.2 *APPROVED CLEAN-UP CONTRACTORS FOR EMERGENCY RESPONSE*

In cases where a spill has not been contained within the facility or by other means, and there exists the chance that the oils/polluting materials will spill, discharge, run off, or leak into the natural resources of the State, immediate action should be taken to notify one of the following firms to assist in emergency containment and clean-up operations. The following contractors have the required equipment, staff, and expertise to respond to any spill or release from the facilities operations.

Valley City Transport
1040 Market SW, Grand Rapids, MI 49503
616-235-1500

Terra Industrial Services (IS) LLC
5100 West Michigan Ave,
Kalamazoo, MI 49006

269-375-9595 or 1-866-354-8963

Northern A1 Services
1122 East Barney,
Muskegon, MI 49444
231-728-4354
1-800-544-2663

K&D
1309 West M-89
Plainwell, MI
269-694-6672

Dynecol Inc.
620 Georgia Street
Detroit, MI 48211
Contact; Ms. Lori Mexicotte (office 313-571-7141, cell 313-400-9899)

Commented [RS1]: Spill Contractors need to be updated

8.0 SPCC/PIPP PERSONNEL TRAINING PROGRAM

8.1 INITIAL TRAINING PROGRAM

All LG Chem Michigan Inc. employees are trained when they start their new job. Training includes: GRCC staff training, LG Chem Human Resources staff training which includes company policies and procedures. Specific environmental training starts with employee on the job training and annual environmental program training.

All oil-handling personnel are trained in general facility operations and the operation and maintenance of equipment to prevent discharges. This training is generally provided by "on-the-job" explanations of the proper use and maintenance of facility equipment. Personnel in each department or area of responsibility within the plant that handles quantities of oils or chemicals have the responsibility of following proper procedures in the handling of oil shipments and storage facilities/operations.

Oil-handling personnel are also trained in the facility's emergency response procedures and the contents of the LG Chem Michigan Inc.'s SPCC/PIPP Plan through a formalized training program.

8.2 ANNUAL SPILL PREVENTION REFRESHER

Spill prevention refresher training is conducted once a year for all oil-handling personnel. The annual training session covers known discharges, failures, and malfunctioning components that occurred during the previous year, and any additional precautionary measures or facility modifications that occurred during the previous year. The annual training session is provided by the Spill Prevention and Control Coordinator or another knowledgeable individual. Records are kept of each training session, including a listing of all attendees and the training agenda for a period of five (5) years.

9.0 SPILL PREVENTION INSPECTIONS

Inspections and tests identified in this SPCC plan are performed in accordance with American Petroleum Institute (API) and Steel Tank Institute (STI) standards and good engineering practices for oil regulated containers. Any identified potential mechanical failures or other concerns are communicated to the company EHS Specialist for the appropriate preventative procedures.

9.1 CONTAINER INSPECTIONS

A general visual examination of the chemical/oil storage areas, chemical/oil-containing equipment, and loading and unloading areas identified in Section 3.0 occur on a monthly basis. Visible discharges of oil/chemicals
are promptly addressed and the source/cause of the release determined and corrected.

This is the limit of the inspections and testing performed on regulated containers stored in a manner where all sides are visible thus allowing for the effective visual inspection for early signs of deterioration and leakage. This is a deviation from the full SPCC integrity testing requirements, as allowed in the SPCC regulations based upon a determination of Environmental Equivalence. Should LG Chem Michigan Inc. conduct "certified inspections" of the containers, a STI Certified Inspector must perform the inspections as specified in the standard.

As per the regulations, the SPCC integrity testing requirements do not apply to oil-filled electrical, operating, and manufacturing devices or equipment, except on a voluntary basis to prevent the potential release of oils, since they do not meet the regulatory definition of a bulk storage container. This voluntary monthly inspection is therefore the limit of the inspections/testing performed on all oil-filled manufacturing equipment and transformers, besides the facility's regular preventative maintenance program.

The checklists provided in Appendix E are used during periodic (monthly and annual) inspections. These written reports (checklists) are signed by the inspector and maintained (both hard copy and electronically) with the company records for a period of five (5) years.

Table 6 *Aboveground Storage Tank Inspection Requirements*

Tank ID:	STI Category:	Requirements:
Hot Oil Boiler System (SRS Area 3963 gallons)	2	Periodic AST Inspection (monthly and annual), Formal External Inspection By Certified Inspector, Leak Test by Owner or Owners Designee Every 10 Years
Hot Oil Boiler System (Electrode Area 529 gallons)	1	Periodic AST Inspection
Pump House Diesel Fuel Tank	1	Periodic (monthly and annual) AST Inspection
Emergency Diesel Generators (2 units)	1	Periodic AST Inspection (monthly and annual), Formal External Inspection By Certified Inspector, Leak Test by Owner or Owners Designee Every 10 Years

9.1.1 *Category 1 & 2 Requirements Periodic AST Inspection*

Periodic AST Inspection

LG Chem Michigan Inc. must document the age of the above tanks and implement the inspection procedures listed in the most recent edition of Steel Tank Institute SP001, "Standard for Inspection of Aboveground Storage Tanks"(AST), or the most recent edition of API Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction,". LG Chem Michigan Inc. Pump House Diesel Fuel tank is considered a Category 1

AST (AST with spill control and without Continuous Release Detection Method (CRDM)). As a Category 2 AST, LG Chem Michigan Inc., is only required to complete Monthly and Periodic AST Inspections. These AST inspections include the following:

- Periodic AST inspections are to be conducted by the owner's inspector. Checklists for periodic AST inspections are found in Appendix E. These are to be used as a guide for recording minimum data requirements.

- The owner's inspector must meet the requirements of Paragraph 4.1 of this standard.

    - Section 4.1 reads; "The personnel performing these inspections shall be knowledgeable of storage facility operations, the type of AST and its associated components, and characteristics of the liquid stored".

- Review prior inspections, repairs, and alteration data before each inspection. Note special conditions for a particular AST.

- The owner inspector is to complete the STI SP001 AST Record for each AST or tank site as designated in the checklist. Note special conditions and changes or alterations to the tank.

- The owner's inspector is to complete the STI SP001 Monthly Inspection checklist each month. Take note of instructions on the checklist. Note special conditions.

- The owner's inspector is to complete the STI SP001 Annual Inspection Checklist each year. Take note of instructions on the checklist. Note special conditions.

9.1.2 *Category 2 Requirements Periodic AST Inspection, External Inspection, and Leak Test By Owner or Owners Designee Every 10 Years*

Periodic AST Inspection

LG Chem Michigan Inc., must determine the age of each of the following tanks and implement the inspection procedures listed in the most recent edition of Steel Tank Institute SP001, "Standard for Inspection of Aboveground Storage Tanks"(AST), or the most recent edition of API Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction,". LG Chem Michigan Inc., Pump House Diesel Fuel tank is considered a

Category 2 AST (AST with spill control and without Continuous Release Detection Method (CRDM)). As a Category 2 AST, LG Chem Michigan Inc., is only required to complete Monthly and Periodic AST Inspections. These AST inspections include the following:

- Periodic AST inspections are to be conducted by the owner's inspector. Checklists for periodic AST inspections are found in Appendix E. These are to be used as a guide for recording minimum data requirements.
- The owner's inspector must meet the requirements of Paragraph 4.1 of this standard.
    - Section 4.1 reads; "The personnel performing these inspections shall be knowledgeable of storage facility operations, the type of AST and its associated components, and characteristics of the liquid stored".
- Review prior inspections, repairs, and alteration data before each inspection. Note special conditions for a particular AST.
- The owner inspector is to complete the STI SP001 AST Record for each AST or tank site as designated in the checklist. Note special conditions and changes or alterations to the tank.
- The owner's inspector is to complete the STI SP001 Monthly Inspection checklist each month. Take note of instructions on the checklist. Note special conditions.
- The owner's inspector is to complete the STI SP001 Annual Inspection Checklist each year. Take note of instructions on the checklist. Note special conditions.

Formal External Inspection (FEI) Guidelines

Formal external inspections are to be performed by Certified Inspectors, per Paragraph 4.2 of the Standard. These are minimum inspection requirements. Because of the AST configurations and components, the Certified Inspector is to identify and properly inspect these items to document they comply with industry standards. The inspector shall develop detailed check sheets and reports that identify, record, and document the results of the inspections.

Leak Testing Methods (LTM)

All leak testing on Shop Fabricated containers will be completed by a "Certified Tank Inspector".

Appendix A
SPCC/PIPP Checklists

Appendix B
Site Maps/Figures

Appendix C
MDEQ Spill/Release Report Form and MDEQ's Release Notification Requirements in Michigan Summary

(MDEQ Notification Requirements can be found at: http://www.michigan.gov/documents/deq/deq-op2ca-sara-releasenotificationrequirements_273699_7.pdf)

Appendix D
Chemical Lists, Michigan Polluting Materials List, and EPA List of Lists

Michigan Part 5 Rules and Polluting Materials Table (http://www.michigan.gov/documents/deq/deq-wb-admin-emergresponse-rulespippspillageoilwtable1_265074_7.pdf)

EPA List of Lists (http://www.epa.gov/osweroe1/docs/chem/list_of_lists_revised_7_26_2011.pdf)

Appendix E
SPCC and PIPP Inspection Checklists

Appendix F
Certificate of No Substantial Harm

Appendix G
Training Documentation

Appendix H
Environmental Response Team
Members

Appendix I
DOT Loading and Unloading Procedures

STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION	INSTALLER INFORMATION
Name	Name	Name
Number and Street	Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code	City, State, Zip Code

.

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: _____ Type: _____

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

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TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____ ☐ Other _____

☐ Unknown

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

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TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

TANK ID _____

SPECIFICATION:

Design: ☐ UL _____ ☐ SWRI _____ ☐ Horizontal ☐ Vertical ☐ Rectangular

☐ API _____

☐ Unknown ☐ Other _____

Manufacturer: Contents: Construction Date: Last Repair/Reconstruction Date:

Dimensions: Capacity: Last Change of Service Date:

Construction: ☐ Bare Steel ☐ Cathodically Protected (Check one: A. ☐ Galvanic or B. ☐ Impressed Current) Date Installed: _____

☐ Coated Steel ☐ Concrete ☐ Plastic/Fiberglass ☐ Other

☐ Double-Bottom ☐ Double-Wall ☐ Lined Date Installed: _____

Containment: ☐ Earthen Dike ☐ Steel Dike ☐ Concrete ☐ Synthetic Liner ☐ Other _____

CRDM: ☐ Date Installed: Type:

Release Prevention Barrier: ☐ Date Installed: _____ Type: _____

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STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- **In the event of severe weather (snow, ice, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, debris, cracks or fire hazard	Yes* No N/A	
1.2 Primary tank	Check for water	Yes* No	
1.3 Containment drain valves	Operable and in a closed position	Yes No* N/A	
1.4 Pathways and entry	Clear and gates/doors operable	Yes No* N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	Yes* No	
2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	Yes* No	
2.3 Surrounding soil	Visible signs of leakage	Yes* No N/A	
2.4 Interstice	Visible signs of leakage	Yes* No N/A	

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Item	Task	Status	Comments
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks.	Yes* No N/A	
	b. Tank drain valves must be kept locked.	Yes* No N/A	
3.2 Spill containment boxes on fill pipe	a. Inspect for debris, residue, and water in the box and remove.	Yes* No N/A	
	b. Drain valves must be operable and closed.	Yes* No N/A	
3.3 Liquid level equipment	a. Both visual and mechanical devices must be inspected for physical damage.	Yes No* N/A	
	b. Check that the device is easily readable	Yes No* N/A	
3.4 Overfill equipment	a. If equipped with a "test" button, activate the audible horn or light to confirm operation. This could be battery powered. Replace the battery if needed	Yes No* N/A	
	b. If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	Yes No* N/A	
3.5 Piping connections	Check for leaks, corrosion and damage	Yes* No	
4.0 Tank Attachments and Appurtenances			
4.1 Ladder and platform structure	Secure with no sign of severe corrosion or damage?	Yes No* N/A	
5.0 Other Conditions			
5.1 Are there other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?		Yes* No	

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Additional Comments:

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STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling	Yes* No N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	Yes* No	
2.2 Concrete pad or ring wall	Cracking or spalling?	Yes* No N/A	

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Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	Yes* No N/A	
2.4 Water drainage	Water drains away from tank?	Yes No* N/A	
2.5 Tank grounding	Strap secured and in good condition?	Yes No* N/A	
3.0 Cathodic Protection			
3.1 Gavlvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	Yes No* N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).	Yes No* N/A	
	b. Record hour meter, ammeter and voltmeter readings.	Yes No* N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	Yes* No	
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking	Yes* No	
4.3 Roof slope	Check for low points and standing water	Yes* No N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components	Yes* No	

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Item	Task	Status	Comments
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	Yes* No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	Yes No* N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	Yes No* N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	Yes No* N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	Yes No* N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	Yes No* N/A	
	b. Valves must not be wired in open position.	Yes No* N/A	

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Item	Task	Status	Comments
	c. Make sure fusible element is in place and correctly positioned.	Yes No* N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	Yes No* N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable.	Yes No* N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	Yes* No N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	Yes* No N/A	
	c. Drain valves must be operable and closed	Yes* No N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition.	Yes No* N/A	

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Item	Task	Status	Comments
5.5 Strainer	b. Access strainer basket and check cap and gasket seal as well as bolts.	Yes No* N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.	Yes No* N/A	
	b. Check for leaks and decreased fuel flow	Yes No* N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	Yes* No N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	Yes No* N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	Yes No* N/A	
	b. Does equipment operate as required?	Yes No* N/A	
	c. Follow manufacturer's instructions	Yes No* N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.	Yes No* N/A	
	b. Confirm device is suited for above ground use by the manufacturer	Yes No* N/A	

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Item	Task	Status	Comments
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: • Missing sections • Areas of moisture • Mold • Damage	Yes* No N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	Yes* No N/A	
7.0 Miscellaneous			
7.1 Electrical wiring and boxes	Are they in good condition?	Yes No* N/A	
7.2 Labels and tags	Ensure that all labels and tags are intact and readable.	Yes No* N/A	

Additional Comments:

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STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Containers Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedureS.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.

Item	Area: _____		Area: _____		Area: _____		Area: _____	
1.0 AST Containment/Storage Area								
1.1 ASTs within designated storage area?	Yes	No*	Yes	No*	Yes	No*	Yes	No*
1.2 Debris, spills, or other fire hazards in containment or storage area?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
1.3 Water in outdoor secondary containment?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
1.4 Drain valves operable and in a closed position?	Yes	No*	Yes*	No	Yes*	No	Yes*	No
1.5 Egress pathways clear and gates/doors operable?	Yes	No*	Yes*	No	Yes*	No	Yes*	No

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Item	Area: _____	Area: _____	Area: _____	Area: _____
2.0 Leak Detection				
2.1 Visible signs of leakage around the container or storage area?	Yes* No	Yes* No	Yes* No	Yes* No
3.0 Container				
3.0 Noticeable container distortions, buckling, denting or bulging?	Yes* No	Yes* No	Yes* No	Yes* No

Comments:

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APPENDIX C

Environmental Database Report

LG Energy Solutions Expansion
875 and 901 E 48th Street
Holland, MI 49423

Inquiry Number: 6857396.2s
February 14, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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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 (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

875 AND 901 E 48TH STREET
HOLLAND, MI 49423

COORDINATES

Latitude (North):	42.7567050 - 42ˆ 45' 24.13''
Longitude (West):	86.0683670 - 86ˆ 4' 6.12''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	576237.2
UTM Y (Meters):	4734004.0
Elevation:	679 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	14457511 HOLLAND EAST, MI
Version Date:	2019
South Map:	14457507 HAMILTON WEST, MI
Version Date:	2019

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140722
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
875 AND 901 E 48TH STREET
HOLLAND, MI 49423

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	LG CHEM MICHIGAN INC	875 E 48TH ST (1 LG	TSCA, ICIS, US AIRS, FINDS, ECHO		TP
A2	COMPACT POWER, INC	875 E 48TH STREET	AIRS		TP
A3	L G CHEM MICHIGAN, I	875 E 48TH STREET	SPILLS, AIRS		TP
A4	LG CHEMICAL MICHIGAN	875 E 48TH ST	AST		TP
B5	859 EAST 48TH STREET	859 EAST 48TH STREET	INVENTORY, BEA	Higher	1 ft.
B6	48TH (859) STREET, E	859 EAST 48TH STREET	BEA	Higher	1 ft.
C7	DONNELLY CORP	5373 146TH AVE	WDS	Lower	1 ft.
C8	DONNELLY CORP	5373 146TH AVE	RCRA NonGen / NLR, FINDS, ECHO	Lower	1 ft.
D9	LG CHEM MICHIGAN INC	1 LG WAY	TRIS, FINDS, ECHO	Lower	1 ft.
D10	LG ENERGY SOLUTION M	1 LG WAY	RCRA-LQG	Lower	1 ft.
D11	LG CHEM MICHIGAN INC	1 LG WAY	SPILLS, NPDES, WDS	Lower	1 ft.
12	VENNTIS TECHNOLOGIES	1261 S WAVERLY RD	RCRA-VSQG	Higher	569, 0.108, West
13	40TH (1035) STREET,	1035 E. 40TH STREET	INVENTORY, BEA	Higher	790, 0.150, NNW
14	GPM ACQUISITIONS LLC	935 E 40TH ST	RCRA NonGen / NLR	Higher	845, 0.160, NW
E15	L S MOLD INC	750 WAVERLY COURT	RCRA NonGen / NLR	Higher	846, 0.160, WNW
E16	GLW FINISHING LLC	741 WAVERLY CT	US BROWNFIELDS, RCRA NonGen / NLR, US AIRS, FINDS	Higher	918, 0.174, WNW
E17	K C INDUSTRIES, INC	741 WAVERLY COURT	INVENTORY, AIRS, BEA, WDS	Higher	918, 0.174, WNW
F18	760 E. 40TH STREET	760 E. 40TH STREET	INVENTORY, BEA	Higher	1301, 0.246, NW
F19	USF HOLLAND - HO	750 E 40TH ST	LUST, UST, INVENTORY	Higher	1337, 0.253, NW
G20	NABISCO BRANDS/LIFE	635 E 48TH ST	LUST, UST, INVENTORY	Higher	1374, 0.260, WSW
G21	48TH (635) STREET, E	635 EAST 48TH STREET	BEA	Higher	1374, 0.260, WSW
G22	LIFESAVERS, INC	635 E 48TH STREET	PART 201, INVENTORY, AIRS, BEA, WDS	Higher	1374, 0.260, WSW
F23	TIARA YACHTS (FORMER	725 E 40TH ST	LUST, UST, AST, INVENTORY, WDS	Higher	1453, 0.275, NW
H24	TOTAL J SERVICES	1014 SOUTH WAVERLY R	DEL PART 201	Higher	1512, 0.286, NW
H25	694 EAST 40TH STREET	694 EAST 40TH STREET	INVENTORY, BEA, WDS	Higher	1595, 0.302, NW
H26	40TH (694) STREET, E	694 EAST 40TH STREET	BEA	Higher	1595, 0.302, NW
I27	960 PRODUCTIONS COUR	960 PRODUCTIONS COUR	INVENTORY, BEA	Lower	1987, 0.376, NNE
I28	PRODUCTIONS (960) CO	960 PRODUCTIONS COUR	BEA, WDS	Lower	1987, 0.376, NNE
J29	40TH (636) STREET, E	636 EAST 40TH STREET	INVENTORY	Higher	2008, 0.380, WNW
J30	AMERICAN AEROSOLS	636 E 40TH ST	LUST, UST, AST, INVENTORY, AIRS, WDS, PFAS	Higher	2008, 0.380, WNW
31	HOLLAND ENERGY PARK	1 ENERGY PARK WAY	LUST, UST, INVENTORY	Higher	2062, 0.391, WSW
32	LITHI BAR MATIK	588 E 40TH ST	INVENTORY, BEA, WDS	Higher	2207, 0.418, WNW
K33	M-40 HIGHWAY (1750),	1750 M-40	INVENTORY, BEA	Lower	2636, 0.499, SSW
K34	M-40 (1750) HIGHWAY	1750 M-40 HWY	BEA	Lower	2636, 0.499, SSW
35	48TH STREET (345) E.	345 E. 48TH ST.	PART 201, INVENTORY, BEA, NPDES, WDS	Higher	3898, 0.738, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
LG CHEM MICHIGAN INC 875 E 48TH ST (1 LG HOLLAND, MI 49423	TSCA ICIS FRS ID:: 110046597884 US AIRS Database: US AIRS (AFS), Date of Government Version: 10/12/2016 EPA plant ID:: 110046597884 FINDS Registry ID:: 110046597884 ECHO Registry ID: 110046597884	N/A
COMPACT POWER, INC 875 E 48TH STREET HOLLAND, MI 49423	AIRS State Registration Id: P0087	N/A
L G CHEM MICHIGAN, I 875 E 48TH STREET HOLLAND, MI 49423	SPILLS AIRS State Registration Id: P0087	N/A
LG CHEMICAL MICHIGAN 875 E 48TH ST HOLLAND, MI 49423	AST Facility Id: 91085101 Tank Status: Currently In Use	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

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites

NPL LIENS ---- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---- Federal Facility Site Information listing
SEMS ---- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-SQG ---- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System
US ENG CONTROLS ---- Engineering Controls Sites List
US INST CONTROLS ---- Institutional Controls Sites List

Federal ERNS list

ERNS ---- Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS ---- This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ---- Solid Waste Facilities Database

Lists of state and tribal leaking storage tanks

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---- Underground Storage Tank Listing
UST ---- Underground Storage Tank Facility List
INDIAN UST ---- Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

State and tribal institutional control / engineering control registries

AUL ---------- Engineering and Institutional Controls

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ---------- Brownfields and UST Site Database

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF ---------- Inactive Solid Waste Facilities
SWRCY ---------- Recycling Facilities
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
CDL ---------- Clandestine Drug Lab Listing
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS ---------- Lien List
LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System

Other Ascertainable Records

FUDS ---------- Formerly Used Defense Sites
DOD ---------- Department of Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information
EPA WATCH LIST ---------- EPA WATCH LIST
2020 COR ACTION ---------- 2020 Corrective Action Program List
SSTS ---------- Section 7 Tracking Systems
ROD ---------- Records Of Decision
RMP ---------- Risk Management Plans
RAATS ---------- RCRA Administrative Action Tracking System
PRP ---------- Potentially Responsible Parties
PADS ---------- PCB Activity Database System
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
ASBESTOS	ASBESTOS
COAL ASH	Coal Ash Disposal Sites
DRYCLEANERS	Drycleaning Establishments
Financial Assurance	Financial Assurance Information Listing
LEAD	Lead Safe Housing Registry
UIC	Underground Injection Wells Database
MINES MRDS	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA PART 201	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

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

Lists of Federal RCRA generators

RCRA-LQG: 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.

A review of the RCRA-LQG list, as provided by EDR, and dated 09/13/2021 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LG ENERGY SOLUTION M EPA ID:: MIK124722802	1 LG WAY	0 - 1/8 (0.000 mi.)	D10	54

RCRA-VSQG: 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). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 09/13/2021 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VENNTIS TECHNOLOGIES EPA ID:: MIK150398680	1261 S WAVERLY RD	W 0 - 1/8 (0.108 mi.)	12	69

Lists of state and tribal leaking storage tanks

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 11/08/2021 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
USF HOLLAND - HO Release Status: Closed Facility Id: 00015916	***750 E 40TH ST***	***NW 1/4 - 1/2 (0.253 mi.)***	***F19***	***103***
NABISCO BRANDS/LIFE Release Status: Closed Facility Id: 00011448	***635 E 48TH ST***	***WSW 1/4 - 1/2 (0.260 mi.)***	***G20***	***107***
TIARA YACHTS (FORMER	***725 E 40TH ST***	***NW 1/4 - 1/2 (0.275 mi.)***	***F23***	***113***

Release Status: Closed
Substance Release: Unknown
Substance Release: Gasoline
Facility Id: 00007558

AMERICAN AEROSOLS	***636 E 40TH ST***	***WNW 1/4 - 1/2 (0.380 mi.)***	***J30***	***125***

Release Status: Open
Facility Id: 00016422

HOLLAND ENERGY PARK	***1 ENERGY PARK WAY***	***WSW 1/4 - 1/2 (0.391 mi.)***	***31***	***147***

Release Status: Closed
Substance Release: Unknown
Facility Id: 00042562

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 06/10/2021 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GLW FINISHING LLC	***741 WAVERLY CT***	***WNW 1/8 - 1/4 (0.174 mi.)***	***E16***	***82***

ACRES property ID: 135791
Cleanup Completion Date: -

Local Lists of Hazardous waste / Contaminated Sites

INVENTORY: The Inventory of Facilities has three data sources: Facilities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) identified through state funded or private party response activities (Projects); Facilities under Part 213, Leaking Underground Storage Tanks of the NREPA; and Facilities identified through submittals of Baseline Environmental Assessments (BEA) submitted pursuant to Part 201 or Part 213 of the NREPA. The Part 201 Projects Inventory does not include all of the facilities that are subject to regulation under Part 201 because owners are not required to inform the Department of Environmental Quality (DEQ) about the facilities and can pursue cleanup independently. Facilities that are not known to DEQ are not on the Inventory, nor are locations with releases that resulted in low environmental impact. Part 213 facilities listed here may have more than one release; a list of releases for which corrective actions have been completed and list of releases for which corrective action has not been completed is located on the Leaking Underground Storage Tanks Site Search webpage. The DEQ may or may not have reviewed and concurred with the conclusion that the corrective actions described in a closure report meets criteria. A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the INVENTORY list, as provided by EDR, and dated 10/18/2021 has revealed that there are

EXECUTIVE SUMMARY

15 INVENTORY sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
859 EAST 48TH STREET Facility ID: 3000372	***859 EAST 48TH STREET***	***0 - 1/8 (0.000 mi.)***	***B5***	***14***
40TH (1035) STREET, Facility ID: 3000269	***1035 E. 40TH STREET***	***NNW 1/8 - 1/4 (0.150 mi.)***	***13***	***72***
K C INDUSTRIES, INC Facility ID: 3000363	***741 WAVERLY COURT***	***WNW 1/8 - 1/4 (0.174 mi.)***	***E17***	***99***
760 E. 40TH STREET Facility ID: 3000365	***760 E. 40TH STREET***	***NW 1/8 - 1/4 (0.246 mi.)***	***F18***	***102***
USF HOLLAND - HO Facility ID: 15916	***750 E 40TH ST***	***NW 1/4 - 1/2 (0.253 mi.)***	***F19***	***103***
NABISCO BRANDS/LIFE Facility ID: 11448	***635 E 48TH ST***	***WSW 1/4 - 1/2 (0.260 mi.)***	***G20***	***107***
LIFESAVERS, INC Facility ID: 3000234	***635 E 48TH STREET***	***WSW 1/4 - 1/2 (0.260 mi.)***	***G22***	***110***
TIARA YACHTS (FORMER Facility ID: 7558	***725 E 40TH ST***	***NW 1/4 - 1/2 (0.275 mi.)***	***F23***	***113***
694 EAST 40TH STREET Facility ID: 3000357 Facility ID: 3000408	***694 EAST 40TH STREET***	***NW 1/4 - 1/2 (0.302 mi.)***	***H25***	***117***
40TH (636) STREET, E Facility ID: 3000258	636 EAST 40TH STREET	WNW 1/4 - 1/2 (0.380 mi.)	J29	124
AMERICAN AEROSOLS Facility ID: 16422	***636 E 40TH ST***	***WNW 1/4 - 1/2 (0.380 mi.)***	***J30***	***125***
HOLLAND ENERGY PARK Facility ID: 42562	***1 ENERGY PARK WAY***	***WSW 1/4 - 1/2 (0.391 mi.)***	***31***	***147***
LITHI BAR MATIK Facility ID: 3000341	***588 E 40TH ST***	***WNW 1/4 - 1/2 (0.418 mi.)***	***32***	***148***

Lower Elevation	Address	Direction / Distance	Map ID	Page
960 PRODUCTIONS COUR Facility ID: 3000381	***960 PRODUCTIONS COUR***	***NNE 1/4 - 1/2 (0.376 mi.)***	***I27***	***122***
M-40 HIGHWAY (1750), Facility ID: 3000240	***1750 M-40***	***SSW 1/4 - 1/2 (0.499 mi.)***	***K33***	***150***

PART 201: A Part 201 Listed site is a location that has been evaluated and scored by the DEQ using the Part 201 scoring model. The location is or includes a "facility" as defined by Part 201, where there has been a release of a hazardous substance(s) in excess of the Part 201 residential criteria, and/or where corrective actions have not been completed under Part 201 to meet the applicable cleanup criteria for unrestricted residential use. The Part 201 List does not include all of the sites of contamination that are subject to regulation under Part 201 because owners are not required to inform the DEQ about the sites and can pursue cleanup independently. Sites of environmental contamination that are not known to DEQ are not on the list, nor are sites with releases that resulted in low environmental impact.

A review of the PART 201 list, as provided by EDR, and dated 10/01/2013 has revealed that there are 2

PART 201 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LIFESAVERS, INC	***635 E 48TH STREET***	***WSW 1/4 - 1/2 (0.260 mi.)***	***G22***	***110***
Facility Status: Interim Response conducted - No further activities anticipated Facility ID: 3000234				
48TH STREET (345) E.	***345 E. 48TH ST.***	***W 1/2 - 1 (0.738 mi.)***	***35***	***151***
Facility Status: Inactive - no actions taken to address contamination Facility ID: 3000233				

DEL PART 201: A deleted site has been removed from the Part 201 List because information known to the DEQ at the time of the evaluation does not support inclusion on the Part 201 List. This designation is often applied to sites where changes in cleanup criteria resulted in a determination that the site no longer exceeds any applicable cleanup criterion. A delisted site has been removed from the Part 201 List because response actions have reduced the levels of contaminants to concentrations which meet or are below the criteria for unrestricted residential use.

A review of the DEL PART 201 list, as provided by EDR, and dated 08/01/2013 has revealed that there is 1 DEL PART 201 site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TOTAL J SERVICES Facility Id: 03000065	1014 SOUTH WAVERLY R	NW 1/4 - 1/2 (0.286 mi.)	H24	117

PFAS: PFAS have been widely used in numerous industrial and residential applications since the 1950a??s. Their stability and unique chemical properties produce waterproof, stain resistant, and nonstick qualities in products. They are found in some firefighting foams and a wide range of consumer products such as carpet treatments, non-stick cookware, water-resistant fabrics, food packaging materials, and personal care products.

A review of the PFAS list, as provided by EDR, and dated 11/12/2021 has revealed that there is 1 PFAS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AMERICAN AEROSOLS	***636 E 40TH ST***	***WNW 1/4 - 1/2 (0.380 mi.)***	***J30***	***125***

Records of Emergency Release Reports

SPILLS: Environmental pollution emergencies reported to the Department of Environmental Quality such as tanker accidents, pipeline breaks, and release of reportable quantities of hazardous substances.

A review of the SPILLS list, as provided by EDR, and dated 06/30/2021 has revealed that there is 1 SPILLS site within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LG CHEM MICHIGAN INC	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D11***	***67***

Other Ascertainable Records

RCRA NonGen / NLR: 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 / NLR list, as provided by EDR, and dated 09/13/2021 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GPM ACQUISITIONS LLC EPA ID:: MIK117224618	935 E 40TH ST	NW 1/8 - 1/4 (0.160 mi.)	14	73
L S MOLD INC EPA ID:: MIK104009716	750 WAVERLY COURT	WNW 1/8 - 1/4 (0.160 mi.)	E15	79
GLW FINISHING LLC EPA ID:: MIR000022194	***741 WAVERLY CT***	***WNW 1/8 - 1/4 (0.174 mi.)***	***E16***	***82***

Lower Elevation	Address	Direction / Distance	Map ID	Page
DONNELLY CORP EPA ID:: MID985611540	***5373 146TH AVE***	***0 - 1/8 (0.000 mi.)***	***C8***	***17***

TRIS: The Toxic Chemical Release Inventory System identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA Title III, Section 313. The source of this database is the U.S. EPA.

A review of the TRIS list, as provided by EDR, and dated 12/31/2018 has revealed that there is 1 TRIS site within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LG CHEM MICHIGAN INC TRIS ID: 4942WLGCHM1LGWA	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D9***	***20***

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 05/05/2021 has revealed that there are 2 FINDS sites within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DONNELLY CORP	***5373 146TH AVE***	***0 - 1/8 (0.000 mi.)***	***C8***	***17***

Registry ID:: 110003656482

LG CHEM MICHIGAN INC	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D9***	***20***
Registry ID:: 110044813137				
Registry ID:: 110070380804				

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 01/01/2022 has revealed that there are 2 ECHO sites within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DONNELLY CORP	***5373 146TH AVE***	***0 - 1/8 (0.000 mi.)***	***C8***	***17***
Registry ID: 110003656482				
LG CHEM MICHIGAN INC	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D9***	***20***
Registry ID: 110070380804				
Registry ID: 110044813137				

BEA: A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

A review of the BEA list, as provided by EDR, and dated 08/10/2021 has revealed that there are 14 BEA sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
859 EAST 48TH STREET	***859 EAST 48TH STREET***	***0 - 1/8 (0.000 mi.)***	***B5***	***14***
48TH (859) STREET, E	859 EAST 48TH STREET	0 - 1/8 (0.000 mi.)	B6	15
40TH (1035) STREET,	***1035 E. 40TH STREET***	***NNW 1/8 - 1/4 (0.150 mi.)***	***13***	***72***
K C INDUSTRIES, INC	***741 WAVERLY COURT***	***WNW 1/8 - 1/4 (0.174 mi.)***	***E17***	***99***
760 E. 40TH STREET	***760 E. 40TH STREET***	***NW 1/8 - 1/4 (0.246 mi.)***	***F18***	***102***
48TH (635) STREET, E	635 EAST 48TH STREET	WSW 1/4 - 1/2 (0.260 mi.)	G21	109
LIFESAVERS, INC	***635 E 48TH STREET***	***WSW 1/4 - 1/2 (0.260 mi.)***	***G22***	***110***
694 EAST 40TH STREET	***694 EAST 40TH STREET***	***NW 1/4 - 1/2 (0.302 mi.)***	***H25***	***117***
40TH (694) STREET, E	694 EAST 40TH STREET	NW 1/4 - 1/2 (0.302 mi.)	H26	120
LITHI BAR MATIK	***588 E 40TH ST***	***WNW 1/4 - 1/2 (0.418 mi.)***	***32***	***148***

Lower Elevation	Address	Direction / Distance	Map ID	Page
960 PRODUCTIONS COUR	***960 PRODUCTIONS COUR***	***NNE 1/4 - 1/2 (0.376 mi.)***	***I27***	***122***
PRODUCTIONS (960) CO	***960 PRODUCTIONS COUR***	***NNE 1/4 - 1/2 (0.376 mi.)***	***I28***	***123***
M-40 HIGHWAY (1750),	***1750 M-40***	***SSW 1/4 - 1/2 (0.499 mi.)***	***K33***	***150***
M-40 (1750) HIGHWAY	1750 M-40 HWY	SSW 1/4 - 1/2 (0.499 mi.)	K34	151

EXECUTIVE SUMMARY

NPDES: General information regarding NPDES (National Pollutant Discharge Elimination System) permits and NPDES Storm Water permits.

A review of the NPDES list, as provided by EDR, and dated 10/22/2020 has revealed that there is 1 NPDES site within approximately 0.001 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LG CHEM MICHIGAN INC Permit Number: MIS220096	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D11***	***67***

WDS: The Waste Data System (WDS) tracks activities at facilities regulated by the Solid Waste, Scrap Tire, Hazardous Waste, and Liquid Industrial Waste programs.

A review of the WDS list, as provided by EDR, and dated 03/30/2021 has revealed that there are 2 WDS sites within approximately 0.001 miles of the target property.

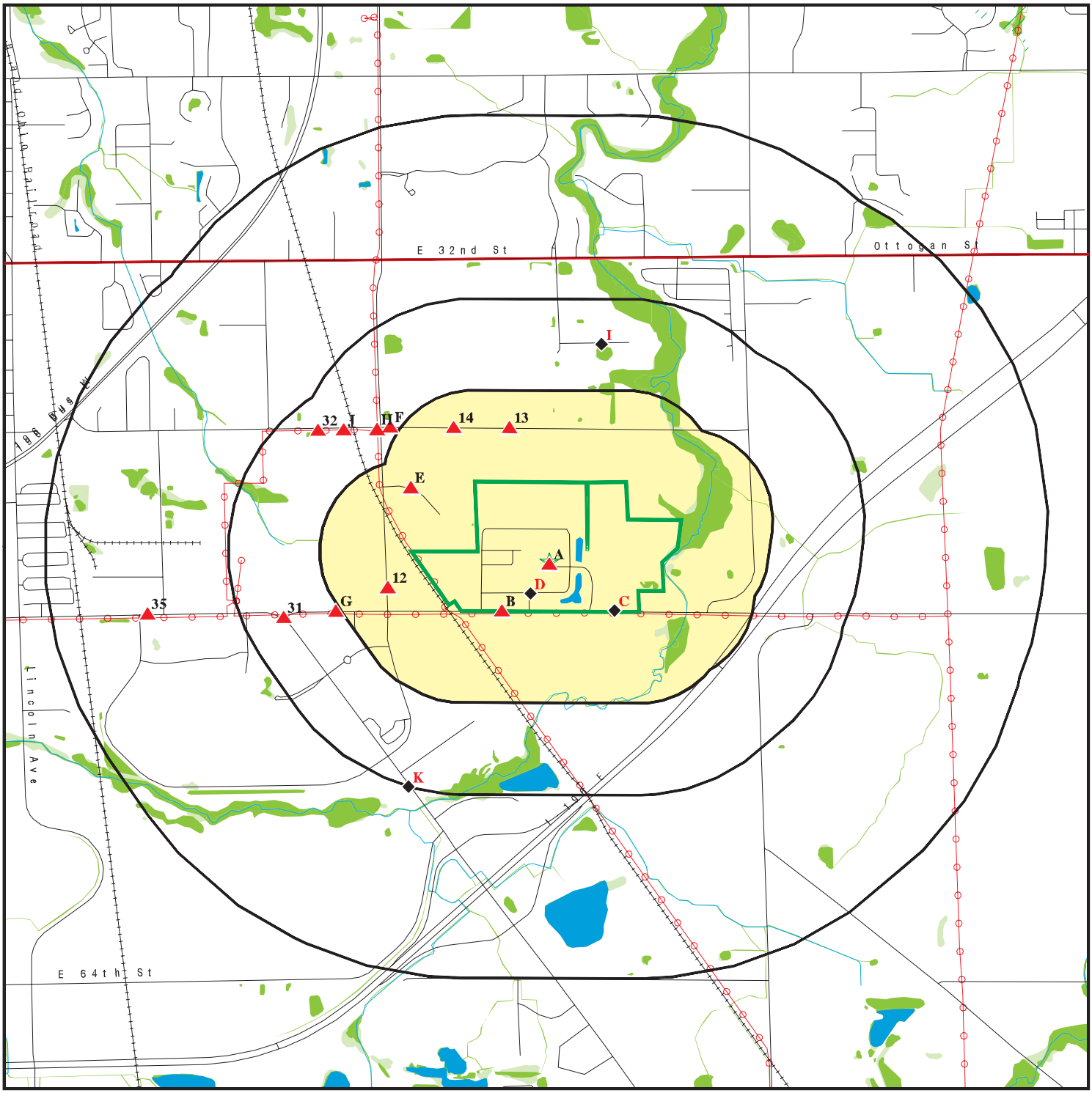
Lower Elevation	Address	Direction / Distance	Map ID	Page
DONNELLY CORP Site Id: MID985611540 WMD Id: 405043	5373 146TH AVE	0 - 1/8 (0.000 mi.)	C7	16
LG CHEM MICHIGAN INC Site Id: MIK124722802 WMD Id: 490242	***1 LG WAY***	***0 - 1/8 (0.000 mi.)***	***D11***	***67***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
	CDL

OVERVIEW MAP - 6857396.2S



0 1/4 1/2 1 Miles

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

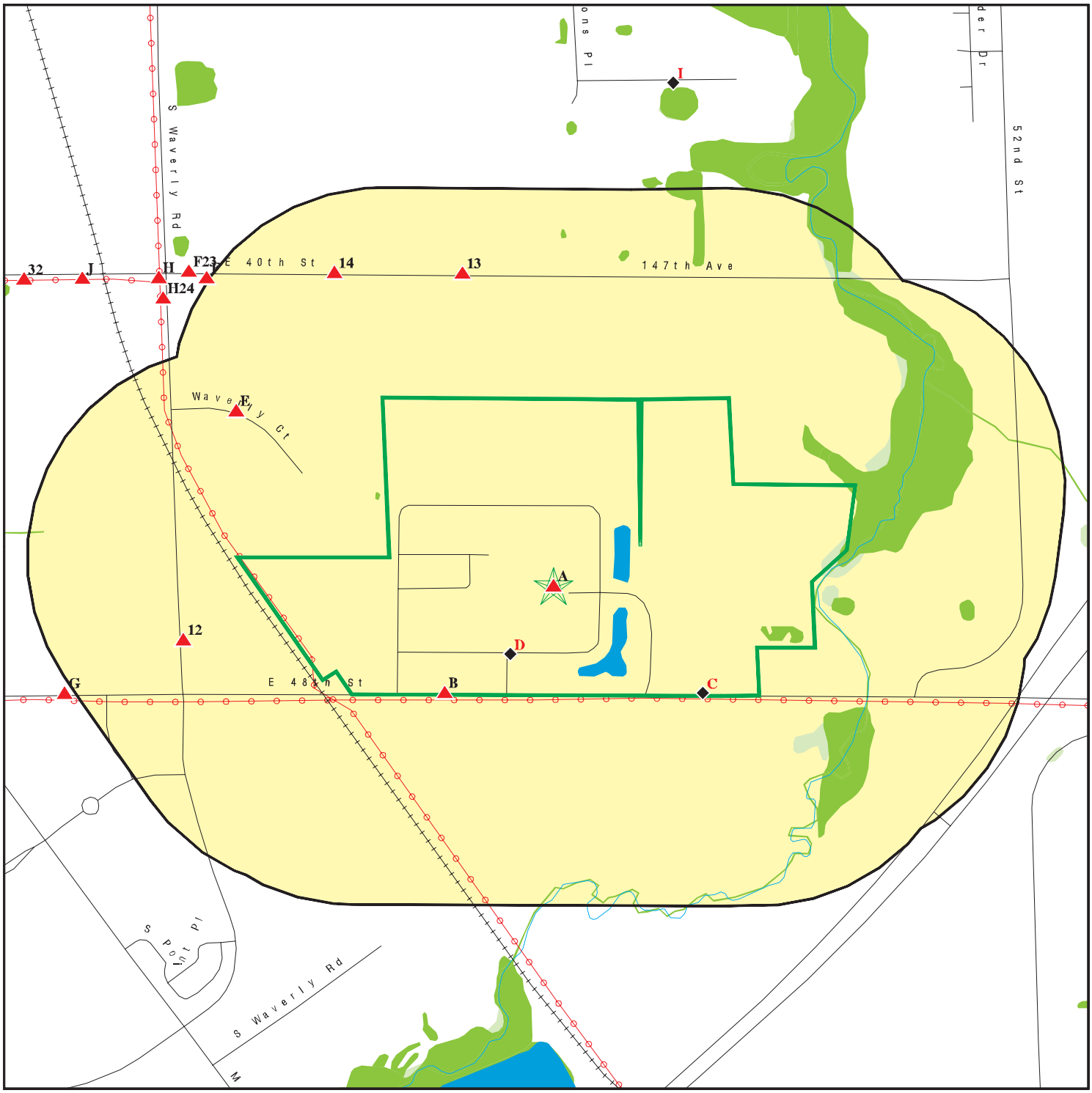
Indian Reservations BIA
County Boundary
Power transmission lines
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory
State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	LG Energy Solutions Expansion	CLIENT:	Environmental Consulting Solutions, LLC
ADDRESS:	875 and 901 E 48th Street Holland MI 49423	CONTACT:	Julie Pratt
		INQUIRY #:	6857396.2s
LAT/LONG:	42.756705 / 86.068367	DATE:	February 14, 2022 10:13 am

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DETAIL MAP - 6857396.2S



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

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

0 1/8 1/4 1/2 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	LG Energy Solutions Expansion	CLIENT:	Environmental Consulting Solutions, LLC
ADDRESS:	875 and 901 E 48th Street Holland MI 49423	CONTACT:	Julie Pratt
		INQUIRY #:	6857396.2s
LAT/LONG:	42.756705 / 86.068367	DATE:	February 14, 2022 10:15 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	5	NR	NR	5

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250	1	0	0	NR	NR	NR	1
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
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	1	0	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
HIST LF	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
INVENTORY	0.500		1	3	11	NR	NR	15
PART 201	1.000		0	0	1	1	NR	2
CDL	0.001		0	NR	NR	NR	NR	0
DEL PART 201	1.000		0	0	1	0	NR	1
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	1	NR	NR	1
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001	1	1	NR	NR	NR	NR	2
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	3	NR	NR	NR	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001	1	0	NR	NR	NR	NR	1
TRIS	0.001		1	NR	NR	NR	NR	1
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001	1	0	NR	NR	NR	NR	1
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001	1	0	NR	NR	NR	NR	1
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	1	2	NR	NR	NR	NR	3
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001	1	2	NR	NR	NR	NR	3
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001	2	0	NR	NR	NR	NR	2
ASBESTOS	0.001		0	NR	NR	NR	NR	0
BEA	0.500		2	3	9	NR	NR	14
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
LEAD	0.001		0	NR	NR	NR	NR	0
NPDES	0.001		1	NR	NR	NR	NR	1
UIC	0.001		0	NR	NR	NR	NR	0
WDS	0.001		2	NR	NR	NR	NR	2
MINES MRDS	0.001		0	NR	NR	NR	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA PART 201	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		9	15	10	28	1	0	63

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
Target Property

LG CHEM MICHIGAN INC.
875 E 48TH ST (1 LG WAY)
HOLLAND, MI 49423

Site 1 of 4 in cluster A

TSCA **1016691680**
ICIS **N/A**
US AIRS
FINDS
ECHO

Actual:
679 ft.

TSCA:
No Details: No Details

ICIS:

Enforcement Action ID:	MI000A000026005P008700003
FRS ID:	110046597884
Action Name:	LG CHEM MICHIGAN INC. 26005P008700003
Facility Name:	LG CHEM MICHIGAN INC.
Facility Address:	875 E 48TH ST (1 LG WAY) HOLLAND, MI 49423
Enforcement Action Type:	Notice of Violation
Facility County:	ALLEGAN
Program System Acronym:	AIR
Enforcement Action Forum Desc:	Administrative - Informal
EA Type Code:	NOV
Facility SIC Code:	Not reported
Federal Facility ID:	Not reported
Latitude in Decimal Degrees:	42.7552
Longitude in Decimal Degrees:	-86.0676
Permit Type Desc:	Not reported
Program System Acronym:	MI00000000000P0087
Facility NAICS Code:	335911
Tribal Land Code:	Not reported

US AIRS (AFS):

Envid:	1016691680
Region Code:	05
County Code:	MI005
Programmatic ID:	AIR MI00000000000P0087
Facility Registry ID:	110046597884
D and B Number:	Not reported
Facility Site Name:	LG CHEM MICHIGAN INC.
Primary SIC Code:	Not reported
NAICS Code:	335911
Default Air Classification Code:	SMI
Facility Type of Ownership Code:	Not reported
Air CMS Category Code:	SMI
HPV Status:	Not reported

US AIRS (AFS):

Region Code:	05
Programmatic ID:	AIR MI00000000000P0087
Facility Registry ID:	110046597884
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	Not reported
Activity Status Date:	2014-10-19 00:00:00
Activity Group:	Case File
Activity Type:	Case File
Activity Status:	Case File Data Entered

Region Code: 05

LG CHEM MICHIGAN INC. (Continued) **1016691680**

Programmatic ID:	AIR MI00000000000P0087
Facility Registry ID:	110046597884
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2012-09-12 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported

Region Code:	05
Programmatic ID:	AIR MI00000000000P0087
Facility Registry ID:	110046597884
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2012-09-27 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported

Region Code:	05
Programmatic ID:	AIR MI00000000000P0087
Facility Registry ID:	110046597884
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2012-10-09 00:00:00
Activity Status Date:	2012-10-09 00:00:00
Activity Group:	Enforcement Action
Activity Type:	Administrative - Informal
Activity Status:	Achieved

FINDS:
Registry ID: 110046597884

Click Here:

Environmental Interest/Information System:
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.
AIR EMISSIONS CLASSIFICATION UNKNOWN
AIR SYNTHETIC MINOR
TSCA SUBMITTER

LG CHEM MICHIGAN INC. (Continued) **1016691680**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1016691680
Registry ID:	110046597884
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110046597884
Name:	LG CHEM MICHIGAN INC.
Address:	875 E 48TH ST (1 LG WAY)
City,State,Zip:	HOLLAND, MI 49423

A2 **COMPACT POWER, INC** **AIRS** **S121721457**
Target **875 E 48TH STREET** **N/A**
Property **HOLLAND, MI 49423**

Site 2 of 4 in cluster A

Actual:
679 ft.

AIRS:

Name:	COMPACT POWER, INC
Address:	875 E 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
State Registration Number:	P0087
Naics Code:	Not reported
Contact Email:	Not reported
Contact Name:	HEE YIL RO
Contact Phone:	2483071800
Contact Address:	(same as site address)
Contact City,St,Zip:	Not reported
Permit Number:	64-10
Date Received:	03/17/2010
Application Reason:	LITHIUM-ION POLYMER BATTERIES
Record Type:	Not reported
State County FIPS:	Not reported
Facility Category:	Not reported
SIC Primary:	Not reported
Tribal Code:	Not reported
Facility Status Code:	Not reported
Facility Status:	InActive
Supplemental Location Text:	Not reported
Business Name:	Not reported
Principal Product:	Not reported
Principal Product Description:	Not reported
UTM Zone (Geo Coordinates Universal Transverse Mercator System):	Not reported
UTM Horizontal Coord:	Not reported
UTM Vertical Coord:	Not reported
Mailing Name:	Not reported
Mailing Contact Person:	Not reported
Mailing Street:	Not reported
Mailing City:	Not reported
Mailing State:	Not reported
Mailing Zip:	Not reported
Mailing Zip 4 Extension:	Not reported
Compliance Person:	Not reported
Compliance Area Code:	Not reported
Compliance Phone Number:	Not reported
Emission Inventory Contact Person:	Not reported
EI Contact Area Code:	Not reported

COMPACT POWER, INC (Continued) **S121721457**

EI Contact Phone Number:	Not reported
Permit Contact Person:	Not reported
Permit Contact Person Area Code:	Not reported
Permit Contact Person Phone Number:	Not reported
Federal Employer Id Number:	Not reported
# Of Employees:	Not reported
Reporting Year:	Not reported
Date Record Was Created:	Not reported

A3 **L G CHEM MICHIGAN, INC** **SPILLS S112087962**
Target **875 E 48TH STREET** **AIRS N/A**
Property **HOLLAND, MI 49423**

Site 3 of 4 in cluster A

Actual:
679 ft.

PEAS:

Name:	Not reported
Address:	875 E 48TH ST
City,State,Zip:	HOLLAND, MI
Incident Date:	2012-06-25 00:00:00
Office Status:	OFFICE HOURS
Initials of Incoming Operator:	VCB
Time Received by DNRE Staff:	1357
Time Occur:	Not reported
Date Of PEAS Call:	Not reported
Complainant / Company:	Not reported
Complainant Address:	875 E 48TH ST
Company Involved:	LG CHEM MICHIGAN
DEQ Division Involved:	KALAMAZOO
Incident Description:	THEY HAD A FIRE IN ACTIVATED CARBON SCUBBER TOWER THE FIRE DEPARTMENT
Incident Description:	CAME OUT AND FLUSHED IT OUT AND THE WATER AND CARBON WENT INTO THE
Incident Description:	DRAINS THAT ARE CONNECTED TO THEIR RETENTION PONDS THAT GO INTO THE
Incident Description:	MACKINAW. THE TOWER IS CAPABLE OF HOLDING 3180 POUNDS, THEY DO NOT
Description:	Not reported
Date Discovered:	6/22/2012
Time Discovered:	1300
Office/After Hours:	Not reported
Party Involved - Phone 1:	Not reported
Party Involved - Phone 2:	Not reported
Ongoing?:	Not reported
Release Secured:	Not reported
Source:	Not reported
Source decode:	Not reported
Lead Division 2:	Not reported
Party Involved Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Release/Incident Ctrl:	Not reported
Release/Incident Ctrl Detail:	Not reported
Special Referral:	Not reported

AIRS:

Name:	L G CHEM MICHIGAN, INC
Address:	875 E 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
State Registration Number:	P0087
Naics Code:	Not reported

L G CHEM MICHIGAN, INC (Continued) **S112087962**

Contact Email:	jkimm@lgchem.com
Contact Name:	JUNG HYUN KIM
Contact Phone:	6164947299
Contact Address:	1 LG WAY
Contact City,St,Zip:	HOLLAND, MI 49423
Permit Number:	64-10A
Date Received:	02/07/2013
Application Reason:	BOILERS, MODIFY STACK HEIGHTS
Record Type:	Not reported
State County FIPS:	Not reported
Facility Category:	Not reported
SIC Primary:	Not reported
Tribal Code:	Not reported
Facility Status Code:	Not reported
Facility Status:	InActive
Supplemental Location Text:	Not reported
Business Name:	Not reported
Principal Product:	Not reported
Principal Product Description:	Not reported
UTM Zone (Geo Coordinates Universal Transverse Mercator System):	Not reported
UTM Horizontal Coord:	Not reported
UTM Vertical Coord:	Not reported
Mailing Name:	Not reported
Mailing Contact Person:	Not reported
Mailing Street:	Not reported
Mailing City:	Not reported
Mailing State:	Not reported
Mailing Zip:	Not reported
Mailing Zip 4 Extension:	Not reported
Compliance Person:	Not reported
Compliance Area Code:	Not reported
Compliance Phone Number:	Not reported
Emission Inventory Contact Person:	Not reported
EI Contact Area Code:	Not reported
EI Contact Phone Number:	Not reported
Permit Contact Person:	Not reported
Permit Contact Person Area Code:	Not reported
Permit Contact Person Phone Number:	Not reported
Federal Employer Id Number:	Not reported
# Of Employees:	Not reported
Reporting Year:	Not reported
Date Record Was Created:	Not reported

A4 **LG CHEMICAL MICHIGAN INC** **AST** **A100414197**
Target **875 E 48TH ST** **N/A**
Property **HOLLAND, MI 49423**

Site 4 of 4 in cluster A

Actual: **679 ft.**

AST:

Name:	LG CHEMICAL MICHIGAN INC
Address:	875 E 48TH ST
City:	HOLLAND
Zip:	49423-8573
Facility ID:	91085101
Owner Name:	LG CHEMICAL MICHIGAN INC
Owner Address:	875 EAST 48TH STREET
Owner City,St,Zip:	HOLLAND, MI 49423

LG CHEMICAL MICHIGAN INC (Continued) **A100414197**

District:	3
Date of Collection:	Not reported
Accuracy:	Not reported
Source:	Not reported
Point Line Area:	Not reported
Description Category:	Not reported
Method of Collection:	Not reported
Horizontal Datum:	Not reported
Latitude:	Not reported
Longitude:	Not reported

Tank Id:	ATK-140289-15
Tank Status:	Currently In Use
Capacity (in gallons):	1320
Installation Date:	06/11/2012
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-140288-15
Tank Status:	Currently In Use
Capacity (in gallons):	1320
Installation Date:	06/11/2012
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-138710-15
Tank Status:	Currently In Use
Capacity (in gallons):	2377
Installation Date:	07/02/2012
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-138307-15
Tank Status:	Currently In Use
Capacity (in gallons):	15000
Installation Date:	07/15/2011
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-138434-15
Tank Status:	Currently In Use
Capacity (in gallons):	15000
Installation Date:	07/05/2012
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-138433-15
Tank Status:	Currently In Use
Capacity (in gallons):	15000
Installation Date:	07/05/2012
Substance Stored:	Other
Removed/Closed Date:	Not reported

B5 **859 EAST 48TH STREET** **INVENTORY** **S114026796**
859 EAST 48TH STREET **BEA** **N/A**
< 1/8 **HOLLAND, MI 49423**
1 ft.

Site 1 of 2 in cluster B

Relative: Higher

Actual: 680 ft.

INVENTORY:

Name:	859 EAST 48TH STREET
Address:	859 EAST 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69806
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Heywood, David
Latitude:	42.75573038
Longitude:	-86.07436846

BEA:

Name:	859 EAST 48TH STREET
Address:	859 EAST 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	06/21/2010
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000372
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201001499PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2010-06-21 16:59:17
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B1 (Associated ID #s like ITS and Site ID go here.) REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates no imminent, ongoing or evident future significant risk exists. At 8,500 ug/kg, one soil boring (of 5 total) exceeded the Part 201 criterion of 5,800 ug/kg for arsenic. At 170 ug/L, one groundwater sample exceeded Part 201 criterion of 6.0 (DWPC) for bis(2-ethylhexyl)phthalate. Site is 120 acres of v
Organization:	LG Chem, Ltd.
Contact:	Mr. Hee-Yil Ro
Contact Type:	Submitter Contact
Name:	859 EAST 48TH STREET
Address:	859 EAST 48TH STREET

859 EAST 48TH STREET (Continued) **S114026796**

City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	06/21/2010
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000372
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201001500PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2010-06-21 17:09:24
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B1 (Associated ID #s like ITS and Site ID go here.) REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates no imminent, ongoing or evident future significant risk exists. At 8,500 ug/kg, one soil boring (of 5 total) exceeded the Part 201 criterion of 5,800 ug/kg for arsenic. At 170 ug/L, one groundwater sample exceeded Part 201 criterion of 6.0 (DWPC) for bis(2-ethylhexyl)phthalate. Site is 120 acres of v
Organization:	Compact Power, Inc.
Contact:	Mr. Kee Eun
Contact Type:	Submitter Contact

B6 **48TH (859) STREET, EAST** **BEA** **S110482863**
859 EAST 48TH STREET **N/A**
< 1/8 **HOLLAND, MI 49423**
1 ft.

Site 2 of 2 in cluster B

Relative: Higher
Actual: 680 ft.

BEA:

Name:	48TH (859) STREET, EAST
Address:	859 EAST 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1499
District:	Kalamazoo
Date Received:	06/21/2010
Submitter Name:	LG Chem, Ltd.
Petition Determination:	No Request
Petition Disclosure:	0
Category:	D
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	RRD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported

48TH (859) STREET, EAST (Continued) **S110482863**

Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported
Name:	48TH (859) STREET, EAST
Address:	859 EAST 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1500
District:	Kalamazoo
Date Received:	06/21/2010
Submitter Name:	Compact Power, Inc.
Petition Determination:	No Request
Petition Disclosure:	0
Category:	D
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	RRD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

C7 **DONNELLY CORP** **WDS** **S111939644**
5373 146TH AVE **N/A**
< 1/8 **HOLLAND, MI 49423**
1 ft.

Site 1 of 2 in cluster C

Relative: WDS:
Lower

Actual: Name:	DONNELLY CORP
665 ft. Address:	5373 146TH AVE
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MID985611540
WMD Id:	405043
Site Specific Name:	DONNELLY CORP 146TH WHSE
Mailing Address:	5373 146TH AVE
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

C8 **DONNELLY CORP** **RCRA NonGen / NLR** **1000528731**
5373 146TH AVE **FINDS** **MID985611540**
< 1/8 **HOLLAND, MI 49423** **ECHO**
1 ft.

Site 2 of 2 in cluster C

Relative: RCRA NonGen / NLR:
Lower

Actual: Date Form Received by Agency:		19910422
665 ft. Handler Name:	DONNELLY CORP	
Handler Address:		5373 146TH AVE
Handler City,State,Zip:		HOLLAND, MI 49423
EPA ID:		MID985611540
Contact Name:		SUSAN PAAUWE
Contact Address:		5373 146TH AVE
Contact City,State,Zip:		HOLLAND, MI 49423
Contact Telephone:		616-786-5652
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		05
Land Type:		Private
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		5373 146TH AVE
Mailing City,State,Zip:		HOLLAND, MI 49423
Owner Name:		DONNELLY CORP
Owner Type:		Private
Operator Name:		DONNELLY CORP
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site Fed-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site Converter Treatment storage and Disposal Facility:		Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:		Not reported
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		NN
Sub-Part K Indicator:		Not reported
Commercial TSD Indicator:		No
Treatment Storage and Disposal Type:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
Permit Renewals Workload Universe:		Not reported

DONNELLY CORP (Continued) **1000528731**

Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20110303
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	DONNELLY CORP
Legal Status:	Private
Date Became Current:	19700101
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	DONNELLY CORP
Legal Status:	Private
Date Became Current:	19700101
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported

DONNELLY CORP (Continued) **1000528731**

Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 19910422
Handler Name: DONNELLY CORP
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 11131
NAICS Description: ORANGE GROVES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

FINDS:
Registry ID: 110003656482

Click Here:

Environmental Interest/Information System:
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.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000528731
Registry ID: 110003656482
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110003656482
Name: DONNELLY CORP
Address: 5373 146TH AVE
City,State,Zip: HOLLAND, MI 49423

D9 **LG CHEM MICHIGAN INC** **TRIS 1015843691**
1 LG WAY **FINDS 4942WLGCHM1LGWA**
< 1/8 **HOLLAND, MI 49423** **ECHO**
1 ft.

Site 1 of 3 in cluster D

Relative: **Lower**
Actual: **676 ft.**

Facility, Chemical, Releases and Other Waste Management Summary Information:

TRI ID:	4942WLGCHM1LGWA
Form Type:	Form R
Reporting year:	2018
Trade secret indicator:	NO
Sanitized indicator:	NO
Title of certifying official:	SENIOR ENVIRONMENTAL SPECIALIST RALPH SEVERNS
Certifying officials signature indicator:	ELECTRONIC
Date signed:	2019-06-27
Name:	LG CHEM MICHIGAN INC
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI 49423
BIA code:	Not reported
Tribe name:	Not reported
Mailing name:	LG CHEM MICHIGAN INC
Mailing street:	1 LG WAY
Mailing province:	Not reported
Mailing City,State,Zip:	HOLLAND, MI 49423
Entire facility ind:	YES
Partial facility ind:	NO
Federal facility ind:	NO
Goco facility ind:	NO
Assigned fed facility flag:	NO
Public contact name:	RECEPTIONIST
Public contact phone and Ext:	6164947100
Public contact email:	RSEVERNS@LGCHEM.COM
Primary sic code:	Not reported
Sic code 2:	Not reported
Sic code 3:	Not reported
Sic code 4:	Not reported
Sic code 5:	Not reported
Sic code 6:	Not reported
Naics origin:	Not reported
Primary naics code:	335911
Naics code 2:	Not reported
Naics code 3:	Not reported
Naics code 4:	Not reported
Naics code 5:	Not reported
Naics code 6:	Not reported
Latitude:	42.75623
Longitude:	-86.069341
D and B number A:	603128195
D and B number B:	Not reported
RCRA number A:	MIK124722802
RCRA number B:	Not reported
RCRA number C:	Not reported
RCRA number D:	Not reported
RCRA number E:	Not reported
RCRA number F:	Not reported
RCRA number G:	Not reported
RCRA number H:	Not reported
NPDES number A:	Not reported
NPDES number B:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

NPDES number C:	Not reported
NPDES number D:	Not reported
NPDES number E:	Not reported
NPDES number F:	Not reported
NPDES number G:	Not reported
Parent company name:	Not reported
Parent company D and B number:	Not reported
Standardized parent company name:	NA
Document control number:	1318217236482
TRI ID:	4942WLGCHM1LGWA
Cas number:	N450
Chemical name:	MANGANESE COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Metal ind:	YES
Revision code 1:	Not reported
Revision code 2:	Not reported
Maximum amount on site:	05
Fugitive air emissions - total release pounds:	NA
Fugitive air emissions - total release range code:	Not reported
Total fugitive air emissions:	0
Fugitive air emissions - basis of estimate:	Not reported
Stack air emissions - release pounds:	63.37
Stack air emissions - release range code:	Not reported
Total stack air emissions:	63.37
Stack air emissions - basis of estimate:	On-Site-Specific Emission Factors
Total air emissions:	63.37
Discharges to stream a - stream name:	NA
Total discharges to stream a:	0
Discharges to stream a - basis of estimate:	Not reported
Discharges to stream a - % from stormwater:	Not reported
Discharges to stream b - stream name:	Not reported
Total discharges to stream b:	Not reported
Discharges to stream b - basis of estimate:	Not reported
Discharges to stream b - % from stormwater:	Not reported
Discharges to stream c - stream name:	Not reported
Total discharges to stream c:	Not reported
Discharges to stream c - basis of estimate:	Not reported
Discharges to stream c - % from stormwater:	Not reported
Discharges to stream d - stream name:	Not reported
Total discharges to stream d:	Not reported
Discharges to stream d - basis of estimate:	Not reported
Discharges to stream d - % from stormwater:	Not reported
Discharges to stream e - stream name:	Not reported
Total discharges to stream e:	Not reported
Discharges to stream e - basis of estimate:	Not reported
Discharges to stream e - % from stormwater:	Not reported
Discharges to stream f - stream name:	Not reported
Total discharges to stream f:	Not reported
Discharges to stream f - basis of estimate:	Not reported
Discharges to stream f - % from stormwater:	Not reported
Discharges to stream g - stream name:	Not reported
Total discharges to stream g:	Not reported
Discharges to stream g - basis of estimate:	Not reported
Discharges to stream g - % from stormwater:	Not reported
Total number of receiving streams:	0
Total surface water discharge:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Total on-site underground inj - pounds:	Not reported
On-site underground inj - basis of estimate:	Not reported
Total on-site ugrnd inj to cl i wells - pounds:	0
On-site underground inj to c1 i wells - basis of estimate:	Not reported
Total on-site ugrnd inj to cl ii-v wells - pounds:	0
On-site ungrnd inj to cl ii-v wells - basis of estimate:	Not reported
Total on-site underground injection:	0
Total on-site landfills:	Not reported
On-site landfills - basis of estimate:	Not reported
Total on-site RCRA subtitle c landfills:	0
On-site RCRA subtitle c landfills - basis of estimate:	Not reported
Total other on-site landfills:	0
Other landfills - basis of estimate:	Not reported
Total on-site land treatment:	0
Land trtmt/appl farming - basis of estimate:	Not reported
Total surface impoundments:	Not reported
Surface impoundment - basis of estimate:	Not reported
Total RCRA c surface impoundments:	0
RCRA c Surface impoundment - basis of estimate:	Not reported
Total other surface impoundments:	0
Other surface impoundment - basis of estimate:	Not reported
Total other disposal:	0
Other disposal - basis of estimate:	Not reported
Total on-site land releases:	0
Total on-site releases:	63.37
Off-site - POTW releases:	0
Off-site - storage only:	0
Off-site - solid/stab - metals:	0
Off-site - wastewater treatment release - metals:	0
Off-site - solid/stab - release - metals:	0
Off-site - wastewater treatment - metals:	0
Off-site - underground injection:	0
Off-site - underground injection - class 1 wells:	0
Off-site - underground injection - class ii-v wells:	0
Off-site - landfills/disposal surface impoundments:	0
Off-site - surface impoundment:	0
Off-site - RCRA subtitle c surface impoundments:	0
Off-site - other surface impoundments:	0
Off-site - other landfills:	0
Off-site - RCRA subtitle c landfills:	0
Off-site - disposal - land treatment:	0
Off-site - disposal - other land disposal:	0
Off-site - disposal - other off-site management:	0
Off-site - disposal - transfer to waste broker:	0
Off-site - disposal - unknown:	0
Total transferred off site for disposal:	0
Off-site - recycling - solvents/organics recovery:	0
Off-site - recycling -metals recovery:	0
Off-site - recycling - other reuse or recovery:	11276
Off-site - recycling - acid regeneration:	0
Off-site - recycling - transfer to waste broker:	0
Total transferred off site for recycling:	11276
Off-site - energy recovery:	0
Off-site - transfer to waste broker for energy recovery:	0
Total transferred off site for energy recovery:	0
Off-site - POTW treatment:	0
Off-site - solid/stab treatment - non metals:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Off-site -incineration/thermal treatment:	0
Off-site - incineration/insignificant heat value:	0
Off-site - wastewater treatment - non-metals:	0
Off-site - other waste treatment:	0
Off-site - transfer to waste broker - waste treatment:	0
Total transferred off site for treatment:	0
Off-site - transfer to waste broker:	0
Total transferred off site for further waste management:	11276
Total POTW transfer:	0
Energy recovery on site current year:	0
Recycled on site current year:	0
Treated on site current year:	0
Total on-site waste management:	0
On-site energy recovery method 1:	Not Applicable
On-site energy recovery method 2:	Not reported
On-site energy recovery method 3:	Not Applicable
On-site energy recovery method 4:	Not reported
On-site recycling processes method 1:	Not Applicable
On-site recycling processes method 2:	Not reported
On-site recycling processes method 3:	Not reported
On-site recycling processes method 4:	Not reported
On-site recycling processes method 5:	Not reported
On-site recycling processes method 6:	Not reported
On-site recycling processes method 7:	Not reported
FRS Facility ID:	110044813137
Elemental Metal Included:	YES
Waste Rock Pile managed Indicator:	0
Waste Rock Quantity:	Not reported
Off Site - POTW Releases 81C:	0
Off Site - POTW Releases 81D:	0

Chemical Activities and Uses:

Cas number:	N450
Document control number:	1318217236482
Chemical name:	MANGANESE COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Produce the chemical:	No
Import the chemical:	No
On-site use of the chemical:	No
Sale or distribution of the chemical:	No
As a byproduct:	No
As a manufactured impurity:	No
Used as a reactant:	No
P101 feedstocks:	No
P102 raw materials:	No
P103 intermediates:	No
P104 initiators:	No
P199 other:	No
Added as a formulation component:	No
P201 additives:	No
P202 dyes:	No
P203 reaction diluents:	No
P204 initiators:	No
P205 solvents:	No
P206 inhibitors:	No
P207 emulsifiers:	No
P208 surfactants:	No

LG CHEM MICHIGAN INC (Continued) **1015843691**

P209 lubricants:	No
P210 flame retardants:	No
P211 rheological modifiers:	No
P299 other:	No
Used as an article component:	Yes
Repackaging:	No
As a process impurity:	No
Processed / recycling:	No
Used as a chemical processing aid:	No
Z101 process solvents:	No
Z102 catalysts:	No
Z103 inhibitors:	No
Z104 initiators:	No
Z105 reaction terminators:	No
Z106 solution buffers:	No
Z199 other:	No
Used as a manufacturing aid:	No
Z201 process lubricants:	No
Z202 metalworking fluids:	No
Z203 coolants:	No
Z204 refrigerants:	No
Z205 hydraulic fluids:	No
Z299 other:	No
Ancillary or other use:	No
Z301 cleaner:	No
Z302 degreaser:	No
Z303 lubricant:	No
Z304 fuel:	No
Z305 flame retardant:	No
Z306 waste treatment:	No
Z307 water treatment:	No
Z308 construction materials:	No
Z399 other:	No

Submitted Facility Name:	LG CHEM MICHIGAN INC.
Submitted Street:	1 LG WAY
Submitted City:	HOLLAND
Submitted County:	ALLEGAN
Submitted State:	MI
Submitted Zip Code:	49423
Submitted BIA Code:	Not reported
Submitted Tribe Name:	Not reported
Submitted Parent Company Name:	Not reported
Submitted Parent Company DB Number:	Not reported
Submitted Standardized Parent Company Name:	NA
Submitted Primary NAICS Code:	335911
Submitted Industry Code:	335
Submitted Industry Name:	Electrical Equipment
Industry Code:	335
Industry Name:	Electrical Equipment
Last year the facility reported:	2019
First year the facility reported:	2012
Number of forms submitted:	5
Total number of forms submitted:	42 20200808

Detailed Source Reduction Activities and Methods:

Cas number:	N450

LG CHEM MICHIGAN INC (Continued) **1015843691**

Document control number:	1318217236482
Chemical name:	MANGANESE COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
On-site limited releases - prior year:	0
On-site limited releases - current year:	0
On-site limited releases - following year:	0
On-site limited releases - 2nd-following year:	0
Other on-site releases - prior year:	79.4396
Other on-site releases - current year:	63.37
Other on-site releases - following year:	22.049
Other on-site releases - 2nd-following year:	22.049
Off-site limited releases - prior year:	0
Off-site limited releases - current year:	0
Off-site limited releases - following year:	0
Off-site limited releases - 2nd-following year:	0
Other off-site releases - previous year:	0
Other off-site releases - current year:	0
Other off-site releases - following year:	0
Other off-site releases - 2nd-following year:	0
Energy recovery on site prior year:	0
Energy recovery on site current year:	0
Energy recovery on site following year:	0
Energy recovery on site 2nd-following year:	0
Energy recovery off site prior year:	0
Energy recovery off site current year:	0
Energy recovery off site following year:	0
Energy recovery off site 2nd-following year:	0
Quantity recycled on site prior year:	0
Quantity recycled on site current year:	0
Quantity recycled on site following year:	0
Quantity recycled on site 2nd-following year:	0
Quantity recycled off site prior year:	3934.4
Quantity recycled off site current year:	11276
Quantity recycled off site following year:	11276
Quantity recycled off site 2nd-following year:	11276
Quantity treated on site prior year:	0
Quantity treated on site current year:	0
Quantity treated on site following year:	0
Quantity treated on site 2nd-following year:	0
Quantity treated off site prior year:	0
Quantity treated off site current year:	0
Quantity treated off site following year:	0
Quantity treated off site 2nd-following year:	0
Catastrophic releases or other one-time events:	Not reported
Prod ratio/activity index:	1.1
Prod ratio or activity:	PRODUCTION
1st SR reduction activity:	NA-NA
1st SR activity ID meth code and desc 1:	Not reported
1st SR activity ID meth code and desc 2:	Not reported
1st SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 1st source REDN act code and desc:	Not reported
2nd SR activity code and desc:	Not reported
2nd SR activity ID meth code and desc 1:	Not reported
2nd SR activity ID meth code and desc 2:	Not reported
2nd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 2nd source REDN act code and desc:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

3rd SR activity code and desc:	Not reported
3rd SR activity ID meth code and desc 1:	Not reported
3rd SR activity ID meth code and desc 2:	Not reported
3rd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 3rd source REDN act code and desc:	Not reported
4th SR activity code and desc:	Not reported
4th SR activity ID meth code and desc 1:	Not reported
4th SR activity ID meth code and desc 2:	Not reported
4th SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 4th source REDN act code and desc:	Not reported

Detailed On-site Waste Treatment Methods and Efficiency:

Cas number:	N450
Document control number:	1318217236482
Chemical name:	MANGANESE COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Stream 1 - waste stream code:	NA
Stream 1 - trtmt method - sequence 1:	Not reported
Stream 1 - trtmt method - sequence 2:	Not reported
Stream 1 - trtmt method - sequence 3:	Not reported
Stream 1 - trtmt method - sequence 4:	Not reported
Stream 1 - trtmt method - sequence 5:	Not reported
Stream 1 - trtmt method - sequence 6:	Not reported
Stream 1 - trtmt method - sequence 7:	Not reported
Stream 1 - trtmt method - sequence 8:	Not reported
Stream 1 - based on operating data:	Not reported
Stream 2 - waste stream code:	Not reported
Stream 2 - trtmt method - sequence 1:	Not reported
Stream 2 - trtmt method - sequence 2:	Not reported
Stream 2 - trtmt method - sequence 3:	Not reported
Stream 2 - trtmt method - sequence 4:	Not reported
Stream 2 - trtmt method - sequence 5:	Not reported
Stream 2 - trtmt method - sequence 6:	Not reported
Stream 2 - trtmt method - sequence 7:	Not reported
Stream 2 - trtmt method - sequence 8:	Not reported
Stream 2 - based on operating data:	Not reported
Stream 3 - waste stream code:	Not reported
Stream 3 - trtmt method - sequence 1:	Not reported
Stream 3 - trtmt method - sequence 2:	Not reported
Stream 3 - trtmt method - sequence 3:	Not reported
Stream 3 - trtmt method - sequence 4:	Not reported
Stream 3 - trtmt method - sequence 5:	Not reported
Stream 3 - trtmt method - sequence 6:	Not reported
Stream 3 - trtmt method - sequence 7:	Not reported
Stream 3 - trtmt method - sequence 8:	Not reported
Stream 3 - based on operating data:	Not reported
Stream 4 - waste stream code:	Not reported
Stream 4 - trtmt method - sequence 1:	Not reported
Stream 4 - trtmt method - sequence 2:	Not reported
Stream 4 - trtmt method - sequence 3:	Not reported
Stream 4 - trtmt method - sequence 4:	Not reported
Stream 4 - trtmt method - sequence 5:	Not reported
Stream 4 - trtmt method - sequence 6:	Not reported
Stream 4 - trtmt method - sequence 7:	Not reported
Stream 4 - trtmt method - sequence 8:	Not reported
Stream 4 - based on operating data:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Stream 5 - waste stream code:	Not reported
Stream 5 - trtmt method - sequence 1:	Not reported
Stream 5 - trtmt method - sequence 2:	Not reported
Stream 5 - trtmt method - sequence 3:	Not reported
Stream 5 - trtmt method - sequence 4:	Not reported
Stream 5 - trtmt method - sequence 5:	Not reported
Stream 5 - trtmt method - sequence 6:	Not reported
Stream 5 - trtmt method - sequence 7:	Not reported
Stream 5 - trtmt method - sequence 8:	Not reported
Stream 5 - based on operating data:	Not reported

Details of Off-site Transfers:

Cas number:	N450
Document control number:	1318217236482
Chemical name:	MANGANESE COMPOUNDS
Classification:	TRI
Offsite RCRA id nr:	NA
Offsite transfer sequence number:	1
Offsite name:	KENT COUNTY WASTE TO ENERGY SITE
Offsite street address:	950 MARKET AVENUE
Offsite City,State,Zip:	GRAND RAPIDS, MI 49503
Offsite county:	KENT
Offsite province:	Not reported
Offsite country id:	Not reported
Offsite control:	NO
Unit of measure:	Pounds
Total amount transferred offsite for disposal:	0
Offsite other reuse or recovery m26 LBS:	11276
Offsite other reuse or recovery m26 BOE:	Mass Balance Calculations
Total amount transferred offsite for recycling:	11276
Total amount transferred offsite for energy recovery:	0
Total amount transferred offsite for treatment:	0
FRS ID - Transfer Location:	Not reported

TRI ID:	4942WLGCHM1LGWA
Cas number:	000872504
Chemical name:	N-METHYL-2-PYRROLIDONE
Classification:	TRI
Unit of measure:	Pounds
Metal ind:	NO
Revision code 1:	Not reported
Revision code 2:	Not reported
Maximum amount on site:	05
Fugitive air emissions - total release pounds:	NA
Fugitive air emissions - total release range code:	Not reported
Total fugitive air emissions:	0
Fugitive air emissions - basis of estimate:	Not reported
Stack air emissions - release pounds:	4905.9648
Stack air emissions - release range code:	Not reported
Total stack air emissions:	4905.9648
Stack air emissions - basis of estimate:	On-Site-Specific Emission Factors
Total air emissions:	4905.9648
Discharges to stream a - stream name:	NA
Total discharges to stream a:	0
Discharges to stream a - basis of estimate:	Not reported
Discharges to stream a - % from stormwater:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Discharges to stream b - stream name:	Not reported
Total discharges to stream b:	Not reported
Discharges to stream b - basis of estimate:	Not reported
Discharges to stream b - % from stormwater:	Not reported
Discharges to stream c - stream name:	Not reported
Total discharges to stream c:	Not reported
Discharges to stream c - basis of estimate:	Not reported
Discharges to stream c - % from stormwater:	Not reported
Discharges to stream d - stream name:	Not reported
Total discharges to stream d:	Not reported
Discharges to stream d - basis of estimate:	Not reported
Discharges to stream d - % from stormwater:	Not reported
Discharges to stream e - stream name:	Not reported
Total discharges to stream e:	Not reported
Discharges to stream e - basis of estimate:	Not reported
Discharges to stream e - % from stormwater:	Not reported
Discharges to stream f - stream name:	Not reported
Total discharges to stream f:	Not reported
Discharges to stream f - basis of estimate:	Not reported
Discharges to stream f - % from stormwater:	Not reported
Discharges to stream g - stream name:	Not reported
Total discharges to stream g:	Not reported
Discharges to stream g - basis of estimate:	Not reported
Discharges to stream g - % from stormwater:	Not reported
Total number of receiving streams:	0
Total surface water discharge:	0
Total on-site underground inj - pounds:	Not reported
On-site underground inj - basis of estimate:	Not reported
Total on-site ugrnd inj to cl i wells - pounds:	0
On-site underground inj to c1 i wells - basis of estimate:	Not reported
Total on-site ugrnd inj to cl ii-v wells - pounds:	0
On-site ungrnd inj to cl ii-v wells - basis of estimate:	Not reported
Total on-site underground injection:	0
Total on-site landfills:	Not reported
On-site landfills - basis of estimate:	Not reported
Total on-site RCRA subtitle c landfills:	0
On-site RCRA subtitle c landfills - basis of estimate:	Not reported
Total other on-site landfills:	0
Other landfills - basis of estimate:	Not reported
Total on-site land treatment:	0
Land trtmt/appl farming - basis of estimate:	Not reported
Total surface impoundments:	Not reported
Surface impoundment - basis of estimate:	Not reported
Total RCRA c surface impoundments:	0
RCRA c Surface impoundment - basis of estimate:	Not reported
Total other surface impoundments:	0
Other surface impoundment - basis of estimate:	Not reported
Total other disposal:	0
Other disposal - basis of estimate:	Not reported
Total on-site land releases:	0
Total on-site releases:	4905.9648
Off-site - POTW releases:	0
Off-site - storage only:	0
Off-site - solid/stab - metals:	0
Off-site - wastewater treatment release - metals:	0
Off-site - solid/stab - release - metals:	0
Off-site - wastewater treatment - metals:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Off-site - underground injection:	0
Off-site - underground injection - class 1 wells:	0
Off-site - underground injection - class ii-v wells:	0
Off-site - landfills/disposal surface impoundments:	0
Off-site - surface impoundment:	0
Off-site - RCRA subtitle c surface impoundments:	0
Off-site - other surface impoundments:	0
Off-site - other landfills:	0
Off-site - RCRA subtitle c landfills:	0
Off-site - disposal - land treatment:	0
Off-site - disposal - other land disposal:	0
Off-site - disposal - other off-site management:	0
Off-site - disposal - transfer to waste broker:	0
Off-site - disposal - unknown:	0
Total transferred off site for disposal:	0
Off-site - recycling - solvents/organics recovery:	316114
Off-site - recycling -metals recovery:	0
Off-site - recycling - other reuse or recovery:	0
Off-site - recycling - acid regeneration:	0
Off-site - recycling - transfer to waste broker:	0
Total transferred off site for recycling:	316114
Off-site - energy recovery:	0
Off-site - transfer to waste broker for energy recovery:	0
Total transferred off site for energy recovery:	0
Off-site - POTW treatment:	0
Off-site - solid/stab treatment - non metals:	0
Off-site -incineration/thermal treatment:	0
Off-site - incineration/insignificant heat value:	0
Off-site - wastewater treatment - non-metals:	0
Off-site - other waste treatment:	0
Off-site - transfer to waste broker - waste treatment:	0
Total transferred off site for treatment:	0
Off-site - transfer to waste broker:	0
Total transferred off site for further waste management:	316114
Total POTW transfer:	0
Energy recovery on site current year:	0
Recycled on site current year:	0
Treated on site current year:	0
Total on-site waste management:	0
On-site energy recovery method 1:	Not Applicable
On-site energy recovery method 2:	Not reported
On-site energy recovery method 3:	Not Applicable
On-site energy recovery method 4:	Not reported
On-site recycling processes method 1:	Not Applicable
On-site recycling processes method 2:	Not reported
On-site recycling processes method 3:	Not reported
On-site recycling processes method 4:	Not reported
On-site recycling processes method 5:	Not reported
On-site recycling processes method 6:	Not reported
On-site recycling processes method 7:	Not reported
FRS Facility ID:	110044813137
Elemental Metal Included:	NO
Waste Rock Pile managed Indicator:	0
Waste Rock Quantity:	Not reported
Off Site - POTW Releases 81C:	0
Off Site - POTW Releases 81D:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Chemical Activities and Uses:

Cas number:	000872504
Document control number:	1318217236494
Chemical name:	N-METHYL-2-PYRROLIDONE
Classification:	TRI
Unit of measure:	Pounds
Produce the chemical:	No
Import the chemical:	No
On-site use of the chemical:	No
Sale or distribution of the chemical:	No
As a byproduct:	No
As a manufactured impurity:	No
Used as a reactant:	No
P101 feedstocks:	No
P102 raw materials:	No
P103 intermediates:	No
P104 initiators:	No
P199 other:	No
Added as a formulation component:	No
P201 additives:	No
P202 dyes:	No
P203 reaction diluents:	No
P204 initiators:	No
P205 solvents:	No
P206 inhibitors:	No
P207 emulsifiers:	No
P208 surfactants:	No
P209 lubricants:	No
P210 flame retardants:	No
P211 rheological modifiers:	No
P299 other:	No
Used as an article component:	No
Repackaging:	No
As a process impurity:	No
Processed / recycling:	No
Used as a chemical processing aid:	No
Z101 process solvents:	No
Z102 catalysts:	No
Z103 inhibitors:	No
Z104 initiators:	No
Z105 reaction terminators:	No
Z106 solution buffers:	No
Z199 other:	No
Used as a manufacturing aid:	Yes
Z201 process lubricants:	No
Z202 metalworking fluids:	No
Z203 coolants:	No
Z204 refrigerants:	No
Z205 hydraulic fluids:	No
Z299 other:	No
Ancillary or other use:	No
Z301 cleaner:	No
Z302 degreaser:	No
Z303 lubricant:	No
Z304 fuel:	No
Z305 flame retardant:	No
Z306 waste treatment:	No

LG CHEM MICHIGAN INC (Continued) **1015843691**

Z307 water treatment:	No
Z308 construction materials:	No
Z399 other:	No
Submitted Facility Name:	LG CHEM MICHIGAN INC.
Submitted Street:	1 LG WAY
Submitted City:	HOLLAND
Submitted County:	ALLEGAN
Submitted State:	MI
Submitted Zip Code:	49423
Submitted BIA Code:	Not reported
Submitted Tribe Name:	Not reported
Submitted Parent Company Name:	Not reported
Submitted Parent Company DB Number:	Not reported
Submitted Standardized Parent Company Name:	NA
Submitted Primary NAICS Code:	335911
Submitted Industry Code:	335
Submitted Industry Name:	Electrical Equipment
Industry Code:	335
Industry Name:	Electrical Equipment
Last year the facility reported:	2019
First year the facility reported:	2012
Number of forms submitted:	5
Total number of forms submitted:	42 20200808

Detailed Source Reduction Activities and Methods:

Cas number:	000872504
Document control number:	1318217236494
Chemical name:	N-METHYL-2-PYRROLIDONE
Classification:	TRI
Unit of measure:	Pounds
On-site limited releases - prior year:	0
On-site limited releases - current year:	0
On-site limited releases - following year:	0
On-site limited releases - 2nd-following year:	0
Other on-site releases - prior year:	2070.03
Other on-site releases - current year:	4905.9648
Other on-site releases - following year:	4930.4848
Other on-site releases - 2nd-following year:	4930.4848
Off-site limited releases - prior year:	0
Off-site limited releases - current year:	0
Off-site limited releases - following year:	0
Off-site limited releases - 2nd-following year:	0
Other off-site releases - previous year:	0
Other off-site releases - current year:	0
Other off-site releases - following year:	0
Other off-site releases - 2nd-following year:	0
Energy recovery on site prior year:	0
Energy recovery on site current year:	0
Energy recovery on site following year:	0
Energy recovery on site 2nd-following year:	0
Energy recovery off site prior year:	0
Energy recovery off site current year:	0
Energy recovery off site following year:	0
Energy recovery off site 2nd-following year:	0
Quantity recycled on site prior year:	0
Quantity recycled on site current year:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Quantity recycled on site following year:	0
Quantity recycled on site 2nd-following year:	0
Quantity recycled off site prior year:	134291
Quantity recycled off site current year:	316114
Quantity recycled off site following year:	316114
Quantity recycled off site 2nd-following year:	316114
Quantity treated on site prior year:	0
Quantity treated on site current year:	0
Quantity treated on site following year:	0
Quantity treated on site 2nd-following year:	0
Quantity treated off site prior year:	0
Quantity treated off site current year:	0
Quantity treated off site following year:	0
Quantity treated off site 2nd-following year:	0
Catastrophic releases or other one-time events:	Not reported
Prod ratio/activity index:	1.1
Prod ratio or activity:	PRODUCTION
1st SR reduction activity:	NA-NA
1st SR activity ID meth code and desc 1:	Not reported
1st SR activity ID meth code and desc 2:	Not reported
1st SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 1st source REDN act code and desc:	Not reported
2nd SR activity code and desc:	Not reported
2nd SR activity ID meth code and desc 1:	Not reported
2nd SR activity ID meth code and desc 2:	Not reported
2nd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 2nd source REDN act code and desc:	Not reported
3rd SR activity code and desc:	Not reported
3rd SR activity ID meth code and desc 1:	Not reported
3rd SR activity ID meth code and desc 2:	Not reported
3rd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 3rd source REDN act code and desc:	Not reported
4th SR activity code and desc:	Not reported
4th SR activity ID meth code and desc 1:	Not reported
4th SR activity ID meth code and desc 2:	Not reported
4th SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 4th source REDN act code and desc:	Not reported

Detailed On-site Waste Treatment Methods and Efficiency:

Cas number:	000872504
Document control number:	1318217236494
Chemical name:	N-METHYL-2-PYRROLIDONE
Classification:	TRI
Unit of measure:	Pounds
Stream 1 - waste stream code:	NA
Stream 1 - trtmt method - sequence 1:	Not reported
Stream 1 - trtmt method - sequence 2:	Not reported
Stream 1 - trtmt method - sequence 3:	Not reported
Stream 1 - trtmt method - sequence 4:	Not reported
Stream 1 - trtmt method - sequence 5:	Not reported
Stream 1 - trtmt method - sequence 6:	Not reported
Stream 1 - trtmt method - sequence 7:	Not reported
Stream 1 - trtmt method - sequence 8:	Not reported
Stream 1 - based on operating data:	Not reported
Stream 2 - waste stream code:	Not reported
Stream 2 - trtmt method - sequence 1:	Not reported
Stream 2 - trtmt method - sequence 2:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Stream 2 - trtmt method - sequence 3:	Not reported
Stream 2 - trtmt method - sequence 4:	Not reported
Stream 2 - trtmt method - sequence 5:	Not reported
Stream 2 - trtmt method - sequence 6:	Not reported
Stream 2 - trtmt method - sequence 7:	Not reported
Stream 2 - trtmt method - sequence 8:	Not reported
Stream 2 - based on operating data:	Not reported
Stream 3 - waste stream code:	Not reported
Stream 3 - trtmt method - sequence 1:	Not reported
Stream 3 - trtmt method - sequence 2:	Not reported
Stream 3 - trtmt method - sequence 3:	Not reported
Stream 3 - trtmt method - sequence 4:	Not reported
Stream 3 - trtmt method - sequence 5:	Not reported
Stream 3 - trtmt method - sequence 6:	Not reported
Stream 3 - trtmt method - sequence 7:	Not reported
Stream 3 - trtmt method - sequence 8:	Not reported
Stream 3 - based on operating data:	Not reported
Stream 4 - waste stream code:	Not reported
Stream 4 - trtmt method - sequence 1:	Not reported
Stream 4 - trtmt method - sequence 2:	Not reported
Stream 4 - trtmt method - sequence 3:	Not reported
Stream 4 - trtmt method - sequence 4:	Not reported
Stream 4 - trtmt method - sequence 5:	Not reported
Stream 4 - trtmt method - sequence 6:	Not reported
Stream 4 - trtmt method - sequence 7:	Not reported
Stream 4 - trtmt method - sequence 8:	Not reported
Stream 4 - based on operating data:	Not reported
Stream 5 - waste stream code:	Not reported
Stream 5 - trtmt method - sequence 1:	Not reported
Stream 5 - trtmt method - sequence 2:	Not reported
Stream 5 - trtmt method - sequence 3:	Not reported
Stream 5 - trtmt method - sequence 4:	Not reported
Stream 5 - trtmt method - sequence 5:	Not reported
Stream 5 - trtmt method - sequence 6:	Not reported
Stream 5 - trtmt method - sequence 7:	Not reported
Stream 5 - trtmt method - sequence 8:	Not reported
Stream 5 - based on operating data:	Not reported

Details of Off-site Transfers:

Cas number:	000872504
Document control number:	1318217236494
Chemical name:	N-METHYL-2-PYRROLIDONE
Classification:	TRI
Offsite RCRA id nr:	MID980991566
Offsite transfer sequence number:	1
Offsite name:	EQ DETROIT, INC.
Offsite street address:	1923 FREDERICK STREET
Offsite City,State,Zip:	DETROIT, MI 48211
Offsite county:	WAYNE
Offsite province:	Not reported
Offsite country id:	Not reported
Offsite control:	NO
Unit of measure:	Pounds
Total amount transferred offsite for disposal:	0
Offsite solvents/organics recovery m20 LBS:	316114
Offsite solvents/organics recovery m20 BOE:	Mass Balance Calculations
Total amount transferred offsite for recycling:	316114

LG CHEM MICHIGAN INC (Continued) **1015843691**

Total amount transferred offsite for energy recovery:	0
Total amount transferred offsite for treatment:	0
FRS ID - Transfer Location:	Not reported

TRI ID:	4942WLGCHM1LGWA
Cas number:	N096
Chemical name:	COBALT COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Metal ind:	YES
Revision code 1:	Not reported
Revision code 2:	Not reported
Maximum amount on site:	05
Fugitive air emissions - total release pounds:	NA
Fugitive air emissions - total release range code:	Not reported
Total fugitive air emissions:	0
Fugitive air emissions - basis of estimate:	Not reported
Stack air emissions - release pounds:	63.37
Stack air emissions - release range code:	Not reported
Total stack air emissions:	63.37
Stack air emissions - basis of estimate:	On-Site-Specific Emission Factors
Total air emissions:	63.37
Discharges to stream a - stream name:	NA
Total discharges to stream a:	0
Discharges to stream a - basis of estimate:	Not reported
Discharges to stream a - % from stormwater:	Not reported
Discharges to stream b - stream name:	Not reported
Total discharges to stream b:	Not reported
Discharges to stream b - basis of estimate:	Not reported
Discharges to stream b - % from stormwater:	Not reported
Discharges to stream c - stream name:	Not reported
Total discharges to stream c:	Not reported
Discharges to stream c - basis of estimate:	Not reported
Discharges to stream c - % from stormwater:	Not reported
Discharges to stream d - stream name:	Not reported
Total discharges to stream d:	Not reported
Discharges to stream d - basis of estimate:	Not reported
Discharges to stream d - % from stormwater:	Not reported
Discharges to stream e - stream name:	Not reported
Total discharges to stream e:	Not reported
Discharges to stream e - basis of estimate:	Not reported
Discharges to stream e - % from stormwater:	Not reported
Discharges to stream f - stream name:	Not reported
Total discharges to stream f:	Not reported
Discharges to stream f - basis of estimate:	Not reported
Discharges to stream f - % from stormwater:	Not reported
Discharges to stream g - stream name:	Not reported
Total discharges to stream g:	Not reported
Discharges to stream g - basis of estimate:	Not reported
Discharges to stream g - % from stormwater:	Not reported
Total number of receiving streams:	0
Total surface water discharge:	0
Total on-site underground inj - pounds:	Not reported
On-site underground inj - basis of estimate:	Not reported
Total on-site ugrnd inj to cl i wells - pounds:	0
On-site underground inj to c1 i wells - basis of estimate:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Total on-site ugrnd inj to cl ii-v wells - pounds:	0
On-site ungrnd inj to cl ii-v wells - basis of estimate:	Not reported
Total on-site underground injection:	0
Total on-site landfills:	Not reported
On-site landfills - basis of estimate:	Not reported
Total on-site RCRA subtitle c landfills:	0
On-site RCRA subtitle c landfills - basis of estimate:	Not reported
Total other on-site landfills:	0
Other landfills - basis of estimate:	Not reported
Total on-site land treatment:	0
Land trtmt/appl farming - basis of estimate:	Not reported
Total surface impoundments:	Not reported
Surface impoundment - basis of estimate:	Not reported
Total RCRA c surface impoundments:	0
RCRA c Surface impoundment - basis of estimate:	Not reported
Total other surface impoundments:	0
Other surface impoundment - basis of estimate:	Not reported
Total other disposal:	0
Other disposal - basis of estimate:	Not reported
Total on-site land releases:	0
Total on-site releases:	63.37
Off-site - POTW releases:	0
Off-site - storage only:	0
Off-site - solid/stab - metals:	0
Off-site - wastewater treatment release - metals:	0
Off-site - solid/stab - release - metals:	0
Off-site - wastewater treatment - metals:	0
Off-site - underground injection:	0
Off-site - underground injection - class 1 wells:	0
Off-site - underground injection - class ii-v wells:	0
Off-site - landfills/disposal surface impoundments:	0
Off-site - surface impoundment:	0
Off-site - RCRA subtitle c surface impoundments:	0
Off-site - other surface impoundments:	0
Off-site - other landfills:	0
Off-site - RCRA subtitle c landfills:	0
Off-site - disposal - land treatment:	0
Off-site - disposal - other land disposal:	0
Off-site - disposal - other off-site management:	0
Off-site - disposal - transfer to waste broker:	0
Off-site - disposal - unknown:	0
Total transferred off site for disposal:	0
Off-site - recycling - solvents/organics recovery:	0
Off-site - recycling -metals recovery:	0
Off-site - recycling - other reuse or recovery:	11276
Off-site - recycling - acid regeneration:	0
Off-site - recycling - transfer to waste broker:	0
Total transferred off site for recycling:	11276
Off-site - energy recovery:	0
Off-site - transfer to waste broker for energy recovery:	0
Total transferred off site for energy recovery:	0
Off-site - POTW treatment:	0
Off-site - solid/stab treatment - non metals:	0
Off-site -incineration/thermal treatment:	0
Off-site - incineration/insignificant heat value:	0
Off-site - wastewater treatment - non-metals:	0
Off-site - other waste treatment:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Off-site - transfer to waste broker - waste treatment:	0
Total transferred off site for treatment:	0
Off-site - transfer to waste broker:	0
Total transferred off site for further waste management:	11276
Total POTW transfer:	0
Energy recovery on site current year:	0
Recycled on site current year:	0
Treated on site current year:	0
Total on-site waste management:	0
On-site energy recovery method 1:	Not Applicable
On-site energy recovery method 2:	Not reported
On-site energy recovery method 3:	Not Applicable
On-site energy recovery method 4:	Not reported
On-site recycling processes method 1:	Not Applicable
On-site recycling processes method 2:	Not reported
On-site recycling processes method 3:	Not reported
On-site recycling processes method 4:	Not reported
On-site recycling processes method 5:	Not reported
On-site recycling processes method 6:	Not reported
On-site recycling processes method 7:	Not reported
FRS Facility ID:	110044813137
Elemental Metal Included:	YES
Waste Rock Pile managed Indicator:	0
Waste Rock Quantity:	Not reported
Off Site - POTW Releases 81C:	0
Off Site - POTW Releases 81D:	0

Chemical Activities and Uses:

Cas number:	N096
Document control number:	1318217236470
Chemical name:	COBALT COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Produce the chemical:	No
Import the chemical:	No
On-site use of the chemical:	No
Sale or distribution of the chemical:	No
As a byproduct:	No
As a manufactured impurity:	No
Used as a reactant:	No
P101 feedstocks:	No
P102 raw materials:	No
P103 intermediates:	No
P104 initiators:	No
P199 other:	No
Added as a formulation component:	No
P201 additives:	No
P202 dyes:	No
P203 reaction diluents:	No
P204 initiators:	No
P205 solvents:	No
P206 inhibitors:	No
P207 emulsifiers:	No
P208 surfactants:	No
P209 lubricants:	No
P210 flame retardants:	No
P211 rheological modifiers:	No
P299 other:	No

LG CHEM MICHIGAN INC (Continued) **1015843691**

Used as an article component:	Yes
Repackaging:	No
As a process impurity:	No
Processed / recycling:	No
Used as a chemical processing aid:	No
Z101 process solvents:	No
Z102 catalysts:	No
Z103 inhibitors:	No
Z104 initiators:	No
Z105 reaction terminators:	No
Z106 solution buffers:	No
Z199 other:	No
Used as a manufacturing aid:	No
Z201 process lubricants:	No
Z202 metalworking fluids:	No
Z203 coolants:	No
Z204 refrigerants:	No
Z205 hydraulic fluids:	No
Z299 other:	No
Ancillary or other use:	No
Z301 cleaner:	No
Z302 degreaser:	No
Z303 lubricant:	No
Z304 fuel:	No
Z305 flame retardant:	No
Z306 waste treatment:	No
Z307 water treatment:	No
Z308 construction materials:	No
Z399 other:	No

Submitted Facility Name:	LG CHEM MICHIGAN INC.
Submitted Street:	1 LG WAY
Submitted City:	HOLLAND
Submitted County:	ALLEGAN
Submitted State:	MI
Submitted Zip Code:	49423
Submitted BIA Code:	Not reported
Submitted Tribe Name:	Not reported
Submitted Parent Company Name:	Not reported
Submitted Parent Company DB Number:	Not reported
Submitted Standardized Parent Company Name:	NA
Submitted Primary NAICS Code:	335911
Submitted Industry Code:	335
Submitted Industry Name:	Electrical Equipment
Industry Code:	335
Industry Name:	Electrical Equipment
Last year the facility reported:	2019
First year the facility reported:	2012
Number of forms submitted:	5
Total number of forms submitted:	42 20200808

Detailed Source Reduction Activities and Methods:

Cas number:	N096
Document control number:	1318217236470
Chemical name:	COBALT COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds

LG CHEM MICHIGAN INC (Continued) **1015843691**

On-site limited releases - prior year:	0
On-site limited releases - current year:	0
On-site limited releases - following year:	0
On-site limited releases - 2nd-following year:	0
Other on-site releases - prior year:	5.5476
Other on-site releases - current year:	63.37
Other on-site releases - following year:	63.37
Other on-site releases - 2nd-following year:	63.37
Off-site limited releases - prior year:	0
Off-site limited releases - current year:	0
Off-site limited releases - following year:	0
Off-site limited releases - 2nd-following year:	0
Other off-site releases - previous year:	0
Other off-site releases - current year:	0
Other off-site releases - following year:	0
Other off-site releases - 2nd-following year:	0
Energy recovery on site prior year:	0
Energy recovery on site current year:	0
Energy recovery on site following year:	0
Energy recovery on site 2nd-following year:	0
Energy recovery off site prior year:	0
Energy recovery off site current year:	0
Energy recovery off site following year:	0
Energy recovery off site 2nd-following year:	0
Quantity recycled on site prior year:	0
Quantity recycled on site current year:	0
Quantity recycled on site following year:	0
Quantity recycled on site 2nd-following year:	0
Quantity recycled off site prior year:	10840
Quantity recycled off site current year:	11276
Quantity recycled off site following year:	11276
Quantity recycled off site 2nd-following year:	11276
Quantity treated on site prior year:	0
Quantity treated on site current year:	0
Quantity treated on site following year:	0
Quantity treated on site 2nd-following year:	0
Quantity treated off site prior year:	0
Quantity treated off site current year:	0
Quantity treated off site following year:	0
Quantity treated off site 2nd-following year:	0
Catastrophic releases or other one-time events:	Not reported
Prod ratio/activity index:	1.1
Prod ratio or activity:	PRODUCTION
1st SR reduction activity:	NA-NA
1st SR activity ID meth code and desc 1:	Not reported
1st SR activity ID meth code and desc 2:	Not reported
1st SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 1st source REDN act code and desc:	Not reported
2nd SR activity code and desc:	Not reported
2nd SR activity ID meth code and desc 1:	Not reported
2nd SR activity ID meth code and desc 2:	Not reported
2nd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 2nd source REDN act code and desc:	Not reported
3rd SR activity code and desc:	Not reported
3rd SR activity ID meth code and desc 1:	Not reported
3rd SR activity ID meth code and desc 2:	Not reported
3rd SR activity ID meth code and desc 3:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

EST Ann REDN 3rd source REDN act code and desc:	Not reported
4th SR activity code and desc:	Not reported
4th SR activity ID meth code and desc 1:	Not reported
4th SR activity ID meth code and desc 2:	Not reported
4th SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 4th source REDN act code and desc:	Not reported

Detailed On-site Waste Treatment Methods and Efficiency:

Cas number:	N096
Document control number:	1318217236470
Chemical name:	COBALT COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Stream 1 - waste stream code:	NA
Stream 1 - trtmt method - sequence 1:	Not reported
Stream 1 - trtmt method - sequence 2:	Not reported
Stream 1 - trtmt method - sequence 3:	Not reported
Stream 1 - trtmt method - sequence 4:	Not reported
Stream 1 - trtmt method - sequence 5:	Not reported
Stream 1 - trtmt method - sequence 6:	Not reported
Stream 1 - trtmt method - sequence 7:	Not reported
Stream 1 - trtmt method - sequence 8:	Not reported
Stream 1 - based on operating data:	Not reported
Stream 2 - waste stream code:	Not reported
Stream 2 - trtmt method - sequence 1:	Not reported
Stream 2 - trtmt method - sequence 2:	Not reported
Stream 2 - trtmt method - sequence 3:	Not reported
Stream 2 - trtmt method - sequence 4:	Not reported
Stream 2 - trtmt method - sequence 5:	Not reported
Stream 2 - trtmt method - sequence 6:	Not reported
Stream 2 - trtmt method - sequence 7:	Not reported
Stream 2 - trtmt method - sequence 8:	Not reported
Stream 2 - based on operating data:	Not reported
Stream 3 - waste stream code:	Not reported
Stream 3 - trtmt method - sequence 1:	Not reported
Stream 3 - trtmt method - sequence 2:	Not reported
Stream 3 - trtmt method - sequence 3:	Not reported
Stream 3 - trtmt method - sequence 4:	Not reported
Stream 3 - trtmt method - sequence 5:	Not reported
Stream 3 - trtmt method - sequence 6:	Not reported
Stream 3 - trtmt method - sequence 7:	Not reported
Stream 3 - trtmt method - sequence 8:	Not reported
Stream 3 - based on operating data:	Not reported
Stream 4 - waste stream code:	Not reported
Stream 4 - trtmt method - sequence 1:	Not reported
Stream 4 - trtmt method - sequence 2:	Not reported
Stream 4 - trtmt method - sequence 3:	Not reported
Stream 4 - trtmt method - sequence 4:	Not reported
Stream 4 - trtmt method - sequence 5:	Not reported
Stream 4 - trtmt method - sequence 6:	Not reported
Stream 4 - trtmt method - sequence 7:	Not reported
Stream 4 - trtmt method - sequence 8:	Not reported
Stream 4 - based on operating data:	Not reported
Stream 5 - waste stream code:	Not reported
Stream 5 - trtmt method - sequence 1:	Not reported
Stream 5 - trtmt method - sequence 2:	Not reported
Stream 5 - trtmt method - sequence 3:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Stream 5 - trtmt method - sequence 4:	Not reported
Stream 5 - trtmt method - sequence 5:	Not reported
Stream 5 - trtmt method - sequence 6:	Not reported
Stream 5 - trtmt method - sequence 7:	Not reported
Stream 5 - trtmt method - sequence 8:	Not reported
Stream 5 - based on operating data:	Not reported

Details of Off-site Transfers:

Cas number:	N096
Document control number:	1318217236470
Chemical name:	COBALT COMPOUNDS
Classification:	TRI
Offsite RCRA id nr:	NA
Offsite transfer sequence number:	1
Offsite name:	KENT COUNTY WASTE TO ENERGY SITE
Offsite street address:	950 MARKET AVENUE
Offsite City,State,Zip:	GRAND RAPIDS, MI 49503
Offsite county:	KENT
Offsite province:	Not reported
Offsite country id:	Not reported
Offsite control:	NO
Unit of measure:	Pounds
Total amount transferred offsite for disposal:	0
Offsite other reuse or recovery m26 LBS:	11276
Offsite other reuse or recovery m26 BOE:	Mass Balance Calculations
Total amount transferred offsite for recycling:	11276
Total amount transferred offsite for energy recovery:	0
Total amount transferred offsite for treatment:	0
FRS ID - Transfer Location:	Not reported

TRI ID:	4942WLGCHM1LGWA
Cas number:	N495
Chemical name:	NICKEL COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Metal ind:	YES
Revision code 1:	Not reported
Revision code 2:	Not reported
Maximum amount on site:	05
Fugitive air emissions - total release pounds:	NA
Fugitive air emissions - total release range code:	Not reported
Total fugitive air emissions:	0
Fugitive air emissions - basis of estimate:	Not reported
Stack air emissions - release pounds:	63.37
Stack air emissions - release range code:	Not reported
Total stack air emissions:	63.37
Stack air emissions - basis of estimate:	On-Site-Specific Emission Factors
Total air emissions:	63.37
Discharges to stream a - stream name:	NA
Total discharges to stream a:	0
Discharges to stream a - basis of estimate:	Not reported
Discharges to stream a - % from stormwater:	Not reported
Discharges to stream b - stream name:	Not reported
Total discharges to stream b:	Not reported
Discharges to stream b - basis of estimate:	Not reported
Discharges to stream b - % from stormwater:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Discharges to stream c - stream name:	Not reported
Total discharges to stream c:	Not reported
Discharges to stream c - basis of estimate:	Not reported
Discharges to stream c - % from stormwater:	Not reported
Discharges to stream d - stream name:	Not reported
Total discharges to stream d:	Not reported
Discharges to stream d - basis of estimate:	Not reported
Discharges to stream d - % from stormwater:	Not reported
Discharges to stream e - stream name:	Not reported
Total discharges to stream e:	Not reported
Discharges to stream e - basis of estimate:	Not reported
Discharges to stream e - % from stormwater:	Not reported
Discharges to stream f - stream name:	Not reported
Total discharges to stream f:	Not reported
Discharges to stream f - basis of estimate:	Not reported
Discharges to stream f - % from stormwater:	Not reported
Discharges to stream g - stream name:	Not reported
Total discharges to stream g:	Not reported
Discharges to stream g - basis of estimate:	Not reported
Discharges to stream g - % from stormwater:	Not reported
Total number of receiving streams:	0
Total surface water discharge:	0
Total on-site underground inj - pounds:	Not reported
On-site underground inj - basis of estimate:	Not reported
Total on-site ugrnd inj to cl i wells - pounds:	0
On-site underground inj to c1 i wells - basis of estimate:	Not reported
Total on-site ugrnd inj to cl ii-v wells - pounds:	0
On-site ungrnd inj to cl ii-v wells - basis of estimate:	Not reported
Total on-site underground injection:	0
Total on-site landfills:	Not reported
On-site landfills - basis of estimate:	Not reported
Total on-site RCRA subtitle c landfills:	0
On-site RCRA subtitle c landfills - basis of estimate:	Not reported
Total other on-site landfills:	0
Other landfills - basis of estimate:	Not reported
Total on-site land treatment:	0
Land trtmt/appl farming - basis of estimate:	Not reported
Total surface impoundments:	Not reported
Surface impoundment - basis of estimate:	Not reported
Total RCRA c surface impoundments:	0
RCRA c Surface impoundment - basis of estimate:	Not reported
Total other surface impoundments:	0
Other surface impoundment - basis of estimate:	Not reported
Total other disposal:	0
Other disposal - basis of estimate:	Not reported
Total on-site land releases:	0
Total on-site releases:	63.37
Off-site - POTW releases:	0
Off-site - storage only:	0
Off-site - solid/stab - metals:	0
Off-site - wastewater treatment release - metals:	0
Off-site - solid/stab - release - metals:	0
Off-site - wastewater treatment - metals:	0
Off-site - underground injection:	0
Off-site - underground injection - class 1 wells:	0
Off-site - underground injection - class ii-v wells:	0
Off-site - landfills/disposal surface impoundments:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Off-site - surface impoundment:	0
Off-site - RCRA subtitle c surface impoundments:	0
Off-site - other surface impoundments:	0
Off-site - other landfills:	0
Off-site - RCRA subtitle c landfills:	0
Off-site - disposal - land treatment:	0
Off-site - disposal - other land disposal:	0
Off-site - disposal - other off-site management:	0
Off-site - disposal - transfer to waste broker:	0
Off-site - disposal - unknown:	0
Total transferred off site for disposal:	0
Off-site - recycling - solvents/organics recovery:	0
Off-site - recycling -metals recovery:	0
Off-site - recycling - other reuse or recovery:	11276
Off-site - recycling - acid regeneration:	0
Off-site - recycling - transfer to waste broker:	0
Total transferred off site for recycling:	11276
Off-site - energy recovery:	0
Off-site - transfer to waste broker for energy recovery:	0
Total transferred off site for energy recovery:	0
Off-site - POTW treatment:	0
Off-site - solid/stab treatment - non metals:	0
Off-site -incineration/thermal treatment:	0
Off-site - incineration/insignificant heat value:	0
Off-site - wastewater treatment - non-metals:	0
Off-site - other waste treatment:	0
Off-site - transfer to waste broker - waste treatment:	0
Total transferred off site for treatment:	0
Off-site - transfer to waste broker:	0
Total transferred off site for further waste management:	11276
Total POTW transfer:	0
Energy recovery on site current year:	0
Recycled on site current year:	0
Treated on site current year:	0
Total on-site waste management:	0
On-site energy recovery method 1:	Not Applicable
On-site energy recovery method 2:	Not reported
On-site energy recovery method 3:	Not Applicable
On-site energy recovery method 4:	Not reported
On-site recycling processes method 1:	Not Applicable
On-site recycling processes method 2:	Not reported
On-site recycling processes method 3:	Not reported
On-site recycling processes method 4:	Not reported
On-site recycling processes method 5:	Not reported
On-site recycling processes method 6:	Not reported
On-site recycling processes method 7:	Not reported
FRS Facility ID:	110044813137
Elemental Metal Included:	YES
Waste Rock Pile managed Indicator:	0
Waste Rock Quantity:	Not reported
Off Site - POTW Releases 81C:	0
Off Site - POTW Releases 81D:	0

Chemical Activities and Uses:

Cas number:	N495
Document control number:	1318217236506
Chemical name:	NICKEL COMPOUNDS
Classification:	TRI

LG CHEM MICHIGAN INC (Continued) **1015843691**

Unit of measure:	Pounds
Produce the chemical:	No
Import the chemical:	No
On-site use of the chemical:	No
Sale or distribution of the chemical:	No
As a byproduct:	No
As a manufactured impurity:	No
Used as a reactant:	No
P101 feedstocks:	No
P102 raw materials:	No
P103 intermediates:	No
P104 initiators:	No
P199 other:	No
Added as a formulation component:	No
P201 additives:	No
P202 dyes:	No
P203 reaction diluents:	No
P204 initiators:	No
P205 solvents:	No
P206 inhibitors:	No
P207 emulsifiers:	No
P208 surfactants:	No
P209 lubricants:	No
P210 flame retardants:	No
P211 rheological modifiers:	No
P299 other:	No
Used as an article component:	Yes
Repackaging:	No
As a process impurity:	No
Processed / recycling:	No
Used as a chemical processing aid:	No
Z101 process solvents:	No
Z102 catalysts:	No
Z103 inhibitors:	No
Z104 initiators:	No
Z105 reaction terminators:	No
Z106 solution buffers:	No
Z199 other:	No
Used as a manufacturing aid:	No
Z201 process lubricants:	No
Z202 metalworking fluids:	No
Z203 coolants:	No
Z204 refrigerants:	No
Z205 hydraulic fluids:	No
Z299 other:	No
Ancillary or other use:	No
Z301 cleaner:	No
Z302 degreaser:	No
Z303 lubricant:	No
Z304 fuel:	No
Z305 flame retardant:	No
Z306 waste treatment:	No
Z307 water treatment:	No
Z308 construction materials:	No
Z399 other:	No

Submitted Facility Name:	LG CHEM MICHIGAN INC.

LG CHEM MICHIGAN INC (Continued) **1015843691**

Submitted Street:	1 LG WAY
Submitted City:	HOLLAND
Submitted County:	ALLEGAN
Submitted State:	MI
Submitted Zip Code:	49423
Submitted BIA Code:	Not reported
Submitted Tribe Name:	Not reported
Submitted Parent Company Name:	Not reported
Submitted Parent Company DB Number:	Not reported
Submitted Standardized Parent Company Name:	NA
Submitted Primary NAICS Code:	335911
Submitted Industry Code:	335
Submitted Industry Name:	Electrical Equipment
Industry Code:	335
Industry Name:	Electrical Equipment
Last year the facility reported:	2019
First year the facility reported:	2012
Number of forms submitted:	5
Total number of forms submitted:	42 20200808

Detailed Source Reduction Activities and Methods:

Cas number:	N495
Document control number:	1318217236506
Chemical name:	NICKEL COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
On-site limited releases - prior year:	0
On-site limited releases - current year:	0
On-site limited releases - following year:	0
On-site limited releases - 2nd-following year:	0
Other on-site releases - prior year:	2.3115
Other on-site releases - current year:	63.37
Other on-site releases - following year:	22.049
Other on-site releases - 2nd-following year:	22.049
Off-site limited releases - prior year:	0
Off-site limited releases - current year:	0
Off-site limited releases - following year:	0
Off-site limited releases - 2nd-following year:	0
Other off-site releases - previous year:	0
Other off-site releases - current year:	0
Other off-site releases - following year:	0
Other off-site releases - 2nd-following year:	0
Energy recovery on site prior year:	0
Energy recovery on site current year:	0
Energy recovery on site following year:	0
Energy recovery on site 2nd-following year:	0
Energy recovery off site prior year:	0
Energy recovery off site current year:	0
Energy recovery off site following year:	0
Energy recovery off site 2nd-following year:	0
Quantity recycled on site prior year:	0
Quantity recycled on site current year:	0
Quantity recycled on site following year:	0
Quantity recycled on site 2nd-following year:	0
Quantity recycled off site prior year:	1810.28
Quantity recycled off site current year:	11276
Quantity recycled off site following year:	11276

LG CHEM MICHIGAN INC (Continued) **1015843691**

Quantity recycled off site 2nd-following year:	11276
Quantity treated on site prior year:	0
Quantity treated on site current year:	0
Quantity treated on site following year:	0
Quantity treated on site 2nd-following year:	0
Quantity treated off site prior year:	0
Quantity treated off site current year:	0
Quantity treated off site following year:	0
Quantity treated off site 2nd-following year:	0
Catastrophic releases or other one-time events:	Not reported
Prod ratio/activity index:	1.1
Prod ratio or activity:	PRODUCTION
1st SR reduction activity:	NA-NA
1st SR activity ID meth code and desc 1:	Not reported
1st SR activity ID meth code and desc 2:	Not reported
1st SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 1st source REDN act code and desc:	Not reported
2nd SR activity code and desc:	Not reported
2nd SR activity ID meth code and desc 1:	Not reported
2nd SR activity ID meth code and desc 2:	Not reported
2nd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 2nd source REDN act code and desc:	Not reported
3rd SR activity code and desc:	Not reported
3rd SR activity ID meth code and desc 1:	Not reported
3rd SR activity ID meth code and desc 2:	Not reported
3rd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 3rd source REDN act code and desc:	Not reported
4th SR activity code and desc:	Not reported
4th SR activity ID meth code and desc 1:	Not reported
4th SR activity ID meth code and desc 2:	Not reported
4th SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 4th source REDN act code and desc:	Not reported

Detailed On-site Waste Treatment Methods and Efficiency:

Cas number:	N495
Document control number:	1318217236506
Chemical name:	NICKEL COMPOUNDS
Classification:	TRI
Unit of measure:	Pounds
Stream 1 - waste stream code:	NA
Stream 1 - trtmt method - sequence 1:	Not reported
Stream 1 - trtmt method - sequence 2:	Not reported
Stream 1 - trtmt method - sequence 3:	Not reported
Stream 1 - trtmt method - sequence 4:	Not reported
Stream 1 - trtmt method - sequence 5:	Not reported
Stream 1 - trtmt method - sequence 6:	Not reported
Stream 1 - trtmt method - sequence 7:	Not reported
Stream 1 - trtmt method - sequence 8:	Not reported
Stream 1 - based on operating data:	Not reported
Stream 2 - waste stream code:	Not reported
Stream 2 - trtmt method - sequence 1:	Not reported
Stream 2 - trtmt method - sequence 2:	Not reported
Stream 2 - trtmt method - sequence 3:	Not reported
Stream 2 - trtmt method - sequence 4:	Not reported
Stream 2 - trtmt method - sequence 5:	Not reported
Stream 2 - trtmt method - sequence 6:	Not reported
Stream 2 - trtmt method - sequence 7:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Stream 2 - trtmt method - sequence 8:	Not reported
Stream 2 - based on operating data:	Not reported
Stream 3 - waste stream code:	Not reported
Stream 3 - trtmt method - sequence 1:	Not reported
Stream 3 - trtmt method - sequence 2:	Not reported
Stream 3 - trtmt method - sequence 3:	Not reported
Stream 3 - trtmt method - sequence 4:	Not reported
Stream 3 - trtmt method - sequence 5:	Not reported
Stream 3 - trtmt method - sequence 6:	Not reported
Stream 3 - trtmt method - sequence 7:	Not reported
Stream 3 - trtmt method - sequence 8:	Not reported
Stream 3 - based on operating data:	Not reported
Stream 4 - waste stream code:	Not reported
Stream 4 - trtmt method - sequence 1:	Not reported
Stream 4 - trtmt method - sequence 2:	Not reported
Stream 4 - trtmt method - sequence 3:	Not reported
Stream 4 - trtmt method - sequence 4:	Not reported
Stream 4 - trtmt method - sequence 5:	Not reported
Stream 4 - trtmt method - sequence 6:	Not reported
Stream 4 - trtmt method - sequence 7:	Not reported
Stream 4 - trtmt method - sequence 8:	Not reported
Stream 4 - based on operating data:	Not reported
Stream 5 - waste stream code:	Not reported
Stream 5 - trtmt method - sequence 1:	Not reported
Stream 5 - trtmt method - sequence 2:	Not reported
Stream 5 - trtmt method - sequence 3:	Not reported
Stream 5 - trtmt method - sequence 4:	Not reported
Stream 5 - trtmt method - sequence 5:	Not reported
Stream 5 - trtmt method - sequence 6:	Not reported
Stream 5 - trtmt method - sequence 7:	Not reported
Stream 5 - trtmt method - sequence 8:	Not reported
Stream 5 - based on operating data:	Not reported

Details of Off-site Transfers:

Cas number:	N495
Document control number:	1318217236506
Chemical name:	NICKEL COMPOUNDS
Classification:	TRI
Offsite RCRA id nr:	NA
Offsite transfer sequence number:	1
Offsite name:	KENT COUNTY WASTE TO ENERGY SITE
Offsite street address:	950 MARKET AVENUE
Offsite City,State,Zip:	GRAND RAPIDS, MI 49503
Offsite county:	KENT
Offsite province:	Not reported
Offsite country id:	Not reported
Offsite control:	NO
Unit of measure:	Pounds
Total amount transferred offsite for disposal:	0
Offsite other reuse or recovery m26 LBS:	11276
Offsite other reuse or recovery m26 BOE:	Mass Balance Calculations
Total amount transferred offsite for recycling:	11276
Total amount transferred offsite for energy recovery:	0
Total amount transferred offsite for treatment:	0
FRS ID - Transfer Location:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

TRI ID:	4942WLGCHM1LGWA
Cas number:	001120714
Chemical name:	PROPANE SULTONE
Classification:	TRI
Unit of measure:	Pounds
Metal ind:	NO
Revision code 1:	Not reported
Revision code 2:	Not reported
Maximum amount on site:	03
Fugitive air emissions - total release pounds:	.035
Fugitive air emissions - total release range code:	Not reported
Total fugitive air emissions:	.035
Fugitive air emissions - basis of estimate:	On-Site-Specific Emission Factors
Stack air emissions - release pounds:	7.17
Stack air emissions - release range code:	Not reported
Total stack air emissions:	7.17
Stack air emissions - basis of estimate:	On-Site-Specific Emission Factors
Total air emissions:	7.205
Discharges to stream a - stream name:	NA
Total discharges to stream a:	0
Discharges to stream a - basis of estimate:	Not reported
Discharges to stream a - % from stormwater:	Not reported
Discharges to stream b - stream name:	Not reported
Total discharges to stream b:	Not reported
Discharges to stream b - basis of estimate:	Not reported
Discharges to stream b - % from stormwater:	Not reported
Discharges to stream c - stream name:	Not reported
Total discharges to stream c:	Not reported
Discharges to stream c - basis of estimate:	Not reported
Discharges to stream c - % from stormwater:	Not reported
Discharges to stream d - stream name:	Not reported
Total discharges to stream d:	Not reported
Discharges to stream d - basis of estimate:	Not reported
Discharges to stream d - % from stormwater:	Not reported
Discharges to stream e - stream name:	Not reported
Total discharges to stream e:	Not reported
Discharges to stream e - basis of estimate:	Not reported
Discharges to stream e - % from stormwater:	Not reported
Discharges to stream f - stream name:	Not reported
Total discharges to stream f:	Not reported
Discharges to stream f - basis of estimate:	Not reported
Discharges to stream f - % from stormwater:	Not reported
Discharges to stream g - stream name:	Not reported
Total discharges to stream g:	Not reported
Discharges to stream g - basis of estimate:	Not reported
Discharges to stream g - % from stormwater:	Not reported
Total number of receiving streams:	0
Total surface water discharge:	0
Total on-site underground inj - pounds:	Not reported
On-site underground inj - basis of estimate:	Not reported
Total on-site ugrnd inj to cl i wells - pounds:	0
On-site underground inj to c1 i wells - basis of estimate:	Not reported
Total on-site ugrnd inj to cl ii-v wells - pounds:	0
On-site ungrnd inj to cl ii-v wells - basis of estimate:	Not reported
Total on-site underground injection:	0
Total on-site landfills:	Not reported
On-site landfills - basis of estimate:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Total on-site RCRA subtitle c landfills:	0
On-site RCRA subtitle c landfills - basis of estimate:	Not reported
Total other on-site landfills:	0
Other landfills - basis of estimate:	Not reported
Total on-site land treatment:	0
Land trtmt/appl farming - basis of estimate:	Not reported
Total surface impoundments:	Not reported
Surface impoundment - basis of estimate:	Not reported
Total RCRA c surface impoundments:	0
RCRA c Surface impoundment - basis of estimate:	Not reported
Total other surface impoundments:	0
Other surface impoundment - basis of estimate:	Not reported
Total other disposal:	0
Other disposal - basis of estimate:	Not reported
Total on-site land releases:	0
Total on-site releases:	7.205
Off-site - POTW releases:	0
Off-site - storage only:	0
Off-site - solid/stab - metals:	0
Off-site - wastewater treatment release - metals:	0
Off-site - solid/stab - release - metals:	0
Off-site - wastewater treatment - metals:	0
Off-site - underground injection:	0
Off-site - underground injection - class 1 wells:	0
Off-site - underground injection - class ii-v wells:	0
Off-site - landfills/disposal surface impoundments:	0
Off-site - surface impoundment:	0
Off-site - RCRA subtitle c surface impoundments:	0
Off-site - other surface impoundments:	0
Off-site - other landfills:	0
Off-site - RCRA subtitle c landfills:	0
Off-site - disposal - land treatment:	0
Off-site - disposal - other land disposal:	0
Off-site - disposal - other off-site management:	0
Off-site - disposal - transfer to waste broker:	0
Off-site - disposal - unknown:	0
Total transferred off site for disposal:	0
Off-site - recycling - solvents/organics recovery:	0
Off-site - recycling -metals recovery:	0
Off-site - recycling - other reuse or recovery:	5618
Off-site - recycling - acid regeneration:	0
Off-site - recycling - transfer to waste broker:	0
Total transferred off site for recycling:	5618
Off-site - energy recovery:	0
Off-site - transfer to waste broker for energy recovery:	0
Total transferred off site for energy recovery:	0
Off-site - POTW treatment:	0
Off-site - solid/stab treatment - non metals:	0
Off-site -incineration/thermal treatment:	0
Off-site - incineration/insignificant heat value:	0
Off-site - wastewater treatment - non-metals:	0
Off-site - other waste treatment:	0
Off-site - transfer to waste broker - waste treatment:	0
Total transferred off site for treatment:	0
Off-site - transfer to waste broker:	0
Total transferred off site for further waste management:	5618
Total POTW transfer:	0

LG CHEM MICHIGAN INC (Continued) **1015843691**

Energy recovery on site current year:	0
Recycled on site current year:	0
Treated on site current year:	0
Total on-site waste management:	0
On-site energy recovery method 1:	Not Applicable
On-site energy recovery method 2:	Not reported
On-site energy recovery method 3:	Not Applicable
On-site energy recovery method 4:	Not reported
On-site recycling processes method 1:	Not Applicable
On-site recycling processes method 2:	Not reported
On-site recycling processes method 3:	Not reported
On-site recycling processes method 4:	Not reported
On-site recycling processes method 5:	Not reported
On-site recycling processes method 6:	Not reported
On-site recycling processes method 7:	Not reported
FRS Facility ID:	110044813137
Elemental Metal Included:	NO
Waste Rock Pile managed Indicator:	0
Waste Rock Quantity:	Not reported
Off Site - POTW Releases 81C:	0
Off Site - POTW Releases 81D:	0

Chemical Activities and Uses:

Cas number:	001120714
Document control number:	1318217236518
Chemical name:	PROPANE SULTONE
Classification:	TRI
Unit of measure:	Pounds
Produce the chemical:	No
Import the chemical:	No
On-site use of the chemical:	No
Sale or distribution of the chemical:	No
As a byproduct:	No
As a manufactured impurity:	No
Used as a reactant:	No
P101 feedstocks:	No
P102 raw materials:	No
P103 intermediates:	No
P104 initiators:	No
P199 other:	No
Added as a formulation component:	Yes
P201 additives:	No
P202 dyes:	No
P203 reaction diluents:	No
P204 initiators:	No
P205 solvents:	No
P206 inhibitors:	No
P207 emulsifiers:	No
P208 surfactants:	No
P209 lubricants:	No
P210 flame retardants:	No
P211 rheological modifiers:	No
P299 other:	No
Used as an article component:	No
Repackaging:	No
As a process impurity:	No
Processed / recycling:	No
Used as a chemical processing aid:	No

LG CHEM MICHIGAN INC (Continued) **1015843691**

Z101 process solvents:	No
Z102 catalysts:	No
Z103 inhibitors:	No
Z104 initiators:	No
Z105 reaction terminators:	No
Z106 solution buffers:	No
Z199 other:	No
Used as a manufacturing aid:	No
Z201 process lubricants:	No
Z202 metalworking fluids:	No
Z203 coolants:	No
Z204 refrigerants:	No
Z205 hydraulic fluids:	No
Z299 other:	No
Ancillary or other use:	No
Z301 cleaner:	No
Z302 degreaser:	No
Z303 lubricant:	No
Z304 fuel:	No
Z305 flame retardant:	No
Z306 waste treatment:	No
Z307 water treatment:	No
Z308 construction materials:	No
Z399 other:	No

Submitted Facility Name:	LG CHEM MICHIGAN INC.
Submitted Street:	1 LG WAY
Submitted City:	HOLLAND
Submitted County:	ALLEGAN
Submitted State:	MI
Submitted Zip Code:	49423
Submitted BIA Code:	Not reported
Submitted Tribe Name:	Not reported
Submitted Parent Company Name:	Not reported
Submitted Parent Company DB Number:	Not reported
Submitted Standardized Parent Company Name:	NA
Submitted Primary NAICS Code:	335911
Submitted Industry Code:	335
Submitted Industry Name:	Electrical Equipment
Industry Code:	335
Industry Name:	Electrical Equipment
Last year the facility reported:	2019
First year the facility reported:	2012
Number of forms submitted:	5
Total number of forms submitted:	42 20200808

Detailed Source Reduction Activities and Methods:

Cas number:	001120714
Document control number:	1318217236518
Chemical name:	PROPANE SULTONE
Classification:	TRI
Unit of measure:	Pounds
On-site limited releases - prior year:	0
On-site limited releases - current year:	0
On-site limited releases - following year:	0
On-site limited releases - 2nd-following year:	0
Other on-site releases - prior year:	.08872

LG CHEM MICHIGAN INC (Continued) **1015843691**

Other on-site releases - current year:	7.205
Other on-site releases - following year:	7.205
Other on-site releases - 2nd-following year:	7.205
Off-site limited releases - prior year:	0
Off-site limited releases - current year:	0
Off-site limited releases - following year:	0
Off-site limited releases - 2nd-following year:	0
Other off-site releases - previous year:	0
Other off-site releases - current year:	0
Other off-site releases - following year:	0
Other off-site releases - 2nd-following year:	0
Energy recovery on site prior year:	0
Energy recovery on site current year:	0
Energy recovery on site following year:	0
Energy recovery on site 2nd-following year:	0
Energy recovery off site prior year:	970.1
Energy recovery off site current year:	0
Energy recovery off site following year:	0
Energy recovery off site 2nd-following year:	0
Quantity recycled on site prior year:	0
Quantity recycled on site current year:	0
Quantity recycled on site following year:	0
Quantity recycled on site 2nd-following year:	0
Quantity recycled off site prior year:	0
Quantity recycled off site current year:	5618
Quantity recycled off site following year:	5618
Quantity recycled off site 2nd-following year:	5618
Quantity treated on site prior year:	0
Quantity treated on site current year:	0
Quantity treated on site following year:	0
Quantity treated on site 2nd-following year:	0
Quantity treated off site prior year:	0
Quantity treated off site current year:	0
Quantity treated off site following year:	0
Quantity treated off site 2nd-following year:	0
Catastrophic releases or other one-time events:	Not reported
Prod ratio/activity index:	1.25
Prod ratio or activity:	PRODUCTION
1st SR reduction activity:	NA-NA
1st SR activity ID meth code and desc 1:	Not reported
1st SR activity ID meth code and desc 2:	Not reported
1st SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 1st source REDN act code and desc:	Not reported
2nd SR activity code and desc:	Not reported
2nd SR activity ID meth code and desc 1:	Not reported
2nd SR activity ID meth code and desc 2:	Not reported
2nd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 2nd source REDN act code and desc:	Not reported
3rd SR activity code and desc:	Not reported
3rd SR activity ID meth code and desc 1:	Not reported
3rd SR activity ID meth code and desc 2:	Not reported
3rd SR activity ID meth code and desc 3:	Not reported
EST Ann REDN 3rd source REDN act code and desc:	Not reported
4th SR activity code and desc:	Not reported
4th SR activity ID meth code and desc 1:	Not reported
4th SR activity ID meth code and desc 2:	Not reported
4th SR activity ID meth code and desc 3:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

EST Ann REDN 4th source REDN act code and desc: Not reported

Detailed On-site Waste Treatment Methods and Efficiency:

Cas number:	001120714
Document control number:	1318217236518
Chemical name:	PROPANE SULTONE
Classification:	TRI
Unit of measure:	Pounds
Stream 1 - waste stream code:	NA
Stream 1 - trtmt method - sequence 1:	Not reported
Stream 1 - trtmt method - sequence 2:	Not reported
Stream 1 - trtmt method - sequence 3:	Not reported
Stream 1 - trtmt method - sequence 4:	Not reported
Stream 1 - trtmt method - sequence 5:	Not reported
Stream 1 - trtmt method - sequence 6:	Not reported
Stream 1 - trtmt method - sequence 7:	Not reported
Stream 1 - trtmt method - sequence 8:	Not reported
Stream 1 - based on operating data:	Not reported
Stream 2 - waste stream code:	Not reported
Stream 2 - trtmt method - sequence 1:	Not reported
Stream 2 - trtmt method - sequence 2:	Not reported
Stream 2 - trtmt method - sequence 3:	Not reported
Stream 2 - trtmt method - sequence 4:	Not reported
Stream 2 - trtmt method - sequence 5:	Not reported
Stream 2 - trtmt method - sequence 6:	Not reported
Stream 2 - trtmt method - sequence 7:	Not reported
Stream 2 - trtmt method - sequence 8:	Not reported
Stream 2 - based on operating data:	Not reported
Stream 3 - waste stream code:	Not reported
Stream 3 - trtmt method - sequence 1:	Not reported
Stream 3 - trtmt method - sequence 2:	Not reported
Stream 3 - trtmt method - sequence 3:	Not reported
Stream 3 - trtmt method - sequence 4:	Not reported
Stream 3 - trtmt method - sequence 5:	Not reported
Stream 3 - trtmt method - sequence 6:	Not reported
Stream 3 - trtmt method - sequence 7:	Not reported
Stream 3 - trtmt method - sequence 8:	Not reported
Stream 3 - based on operating data:	Not reported
Stream 4 - waste stream code:	Not reported
Stream 4 - trtmt method - sequence 1:	Not reported
Stream 4 - trtmt method - sequence 2:	Not reported
Stream 4 - trtmt method - sequence 3:	Not reported
Stream 4 - trtmt method - sequence 4:	Not reported
Stream 4 - trtmt method - sequence 5:	Not reported
Stream 4 - trtmt method - sequence 6:	Not reported
Stream 4 - trtmt method - sequence 7:	Not reported
Stream 4 - trtmt method - sequence 8:	Not reported
Stream 4 - based on operating data:	Not reported
Stream 5 - waste stream code:	Not reported
Stream 5 - trtmt method - sequence 1:	Not reported
Stream 5 - trtmt method - sequence 2:	Not reported
Stream 5 - trtmt method - sequence 3:	Not reported
Stream 5 - trtmt method - sequence 4:	Not reported
Stream 5 - trtmt method - sequence 5:	Not reported
Stream 5 - trtmt method - sequence 6:	Not reported
Stream 5 - trtmt method - sequence 7:	Not reported
Stream 5 - trtmt method - sequence 8:	Not reported

LG CHEM MICHIGAN INC (Continued) **1015843691**

Stream 5 - based on operating data: Not reported

Details of Off-site Transfers:

Cas number:	001120714
Document control number:	1318217236518
Chemical name:	PROPANE SULTONE
Classification:	TRI
Offsite RCRA id nr:	MID980991566
Offsite transfer sequence number:	1
Offsite name:	EQ DETROIT, INC.
Offsite street address:	1923 FREDERICK STREET
Offsite City,State,Zip:	DETROIT, MI 48211
Offsite county:	WAYNE
Offsite province:	Not reported
Offsite country id:	Not reported
Offsite control:	NO
Unit of measure:	Pounds
Total amount transferred offsite for disposal:	0
Offsite other reuse or recovery m26 LBS:	5618
Offsite other reuse or recovery m26 BOE:	On-Site-Specific Emission Factors
Total amount transferred offsite for recycling:	5618
Total amount transferred offsite for energy recovery:	0
Total amount transferred offsite for treatment:	0
FRS ID - Transfer Location:	Not reported

FINDS:
Registry ID: 110044813137

Click Here:

Environmental Interest/Information System:
TSCA SUBMITTER
US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.
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.
OSHA ESTABLISHMENT
HAZARDOUS WASTE BIENNIAL REPORTER
ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region

LG CHEM MICHIGAN INC (Continued) **1015843691**

that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Registry ID: 110070886844

Click Here:

Environmental Interest/Information System:
TSCA SUBMITTER

Registry ID: 110070380804

Click Here:

Environmental Interest/Information System:
TSCA SUBMITTER
US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1015843691
Registry ID:	110070380804
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110070380804
Name:	LG ENERGY SOLUTION MICHIGAN INC
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI 49423

Envid:	1015843691
Registry ID:	110044813137
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110044813137
Name:	LG CHEM MICHIGAN INC
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI 49423

D10 **LG ENERGY SOLUTION MICHIGAN INC** **RCRA-LQG** **1014924020**
1 LG WAY **MIK124722802**
< 1/8 **HOLLAND, MI 49423**
1 ft.

Site 2 of 3 in cluster D

Relative: **Lower**
Actual: **676 ft.**

RCRA-LQG:

Date Form Received by Agency:	20210407
Handler Name:	LG ENERGY SOLUTION MICHIGAN INC
Handler Address:	1 LG WAY
Handler City,State,Zip:	HOLLAND, MI 49423
EPA ID:	MIK124722802
Contact Name:	SARAH KIM
Contact Address:	Not reported
Contact City,State,Zip:	Not reported
Contact Telephone:	616-494-7273
Contact Fax:	Not reported
Contact Email:	SKIMUK@LGENSOL.COM

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Contact Title:	Not reported
EPA Region:	05
Land Type:	Private
Federal Waste Generator Description:	Large Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1 LG WAY
Mailing City,State,Zip:	HOLLAND, MI 49423
Owner Name:	LG CHEM MICHIGAN INC
Owner Type:	Private
Operator Name:	LG CHEM MICHIGAN INC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	Yes
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20210819
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Biennial: List of Years
Year: 2019

Click Here for Biennial Reporting System Data:
Year: 2017

Click Here for Biennial Reporting System Data:
Year: 2015

Click Here for Biennial Reporting System Data:
Year: 2013

Click Here for Biennial Reporting System Data:

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	D002
Waste Description:	CORROSIVE WASTE
Waste Code:	D003
Waste Description:	REACTIVE WASTE
Waste Code:	D010
Waste Description:	SELENIUM
Waste Code:	D022
Waste Description:	CHLOROFORM
Waste Code:	D035
Waste Description:	METHYL ETHYL KETONE
Waste Code:	F003
Waste Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: F005
Waste Description: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code: U002
Waste Description: 2-PROPANONE (I) (OR) ACETONE (I)

Waste Code: U154
Waste Description: METHANOL (I) (OR) METHYL ALCOHOL (I)

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-8574
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator: Owner

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	616-494-7100
Owner/Operator Telephone Ext:	3504
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	616-494-7299
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	616-494-7100
Owner/Operator Telephone Ext:	3504
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-8574
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423
Owner/Operator Telephone:	616-494-7100
Owner/Operator Telephone Ext:	3504
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG CHEM MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	LG ENERGY SOLUTION MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-8574
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	LG ENERGY SOLUTION MICHIGAN INC
Legal Status:	Private
Date Became Current:	20110601
Date Ended Current:	Not reported
Owner/Operator Address:	1 LG WAY
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-8574
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20140228
Handler Name: LG CHEM MICHIGAN INC.	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	20160226
Handler Name: LG CHEM MICHIGAN INC	
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	20180228
Handler Name: LG CHEM MICHIGAN INC	
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20200226
Handler Name: LG CHEM MICHIGAN INC	
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20111003
Handler Name: LG CHEM MICHIGAN INC	
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	20120522

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20131112
Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20140225
Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20140826
Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20150528
Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20160211
Handler Name: LG CHEM MICHIGAN INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20210407
Handler Name: LG ENERGY SOLUTION MICHIGAN INC
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:
NAICS Code: 335911
NAICS Description: STORAGE BATTERY MANUFACTURING

Facility Has Received Notices of Violation:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

LG ENERGY SOLUTION MICHIGAN INC (Continued) **1014924020**

Evaluation Action Summary:

Evaluation Date:	20130129
Evaluation Responsible Agency:	EPA
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	BJI
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20150514
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

D11 **LG CHEM MICHIGAN INC** **SPILLS S111343395**
1 LG WAY **NPDES N/A**
< 1/8 **HOLLAND, MI 49423** **WDS**
1 ft.

Site 3 of 3 in cluster D

Relative: **Lower**

Actual: **676 ft.**

PEAS:

Name:	Not reported
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI
Incident Date:	2011-09-20 00:00:00

LG CHEM MICHIGAN INC (Continued) **S111343395**

Office Status:	OFFICE HOURS
Initials of Incoming Operator:	DNL
Time Received by DNRE Staff:	Not reported
Time Occur:	Not reported
Date Of PEAS Call:	Not reported
Complainant / Company:	Not reported
Complainant Address:	1 LG Way
Company Involved:	LG Chem
DEQ Division Involved:	Not reported
Incident Description:	There is a pipe from inside the building to the outside of the building and there is now a spot visible on the concrete where some acetone spilled out.
Incident Description:	Not reported
Incident Description:	Not reported
Incident Description:	Not reported
Description:	Not reported
Date Discovered:	9/20/2011
Time Discovered:	12:00pm
Office/After Hours:	Not reported
Party Involved - Phone 1:	Not reported
Party Involved - Phone 2:	Not reported
Ongoing?:	Not reported
Release Secured:	Not reported
Source:	Not reported
Source decode:	Not reported
Lead Division 2:	Not reported
Party Involved Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Release/Incident Ctrl:	Not reported
Release/Incident Ctrl Detail:	Not reported
Special Referral:	Not reported

MI NPDES:

Name:	LG CHEM MICH INC
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI 49423
Permit Number:	MIS220096
Permitee PO Box:	Not reported
Permitee Email:	Not reported
Issue Date:	09/26/2018
Effective Date:	09/26/2018
Expiration Date:	04/01/2022
Permittee Name:	LG Chem Michigan Incorporated
Permittee Address:	1 LG Way
Permittee Addr2:	Not reported
Permittee City,St,Zip:	Holland, MI 49423
Permit Type:	NPDES Certificate of Coverage under General Permit (COC)
Facility Name 2:	Not reported
Facility Name 3:	Not reported
Facility Name 4:	Not reported
Designed Name:	Not reported
Latitude:	42.7567
Lat Direction:	Not reported
Lat Type Code:	Not reported
Longitude:	-86.0748
Lon Direction:	Not reported

LG CHEM MICHIGAN INC (Continued) **S111343395**

Lon Type Code:	Not reported
Hydrologic Unit Code:	Not reported
Permit Status:	In Effect
COC Permit Category:	SW-Containment CY2
DEQ District Email:	Kalamazoo
DEQ Permit Compliance Manager:	Ryan Grant
DEQ Permit Compliance Manager Email:	grantr3@michigan.gov

WDS:

Name:	LG CHEM MICHIGAN INC
Address:	1 LG WAY
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MIK124722802
WMD Id:	490242
Site Specific Name:	LG CHEM MICHIGAN INC
Mailing Address:	1 LG WAY
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

12
West
< 1/8
0.108 mi.
569 ft.

Relative:
Higher

Actual:
706 ft.

VENNTIS TECHNOLOGIES LLC **RCRA-VSQG** **1014924210**
1261 S WAVERLY RD **MIK150398680**
HOLLAND, MI 49423

RCRA-VSQG:

Date Form Received by Agency:	20110510
Handler Name:	VENNTIS TECHNOLOGIES LLC
Handler Address:	1261 S WAVERLY RD
Handler City,State,Zip:	HOLLAND, MI 49423
EPA ID:	MIK150398680
Contact Name:	KATHERINE W BUEVE
Contact Address:	Not reported
Contact City,State,Zip:	Not reported
Contact Telephone:	616-395-8254 8254
Contact Fax:	616-395-2939
Contact Email:	KATEB@VENNTIS.COM
Contact Title:	Not reported
EPA Region:	05
Land Type:	Private
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	1261 S WAVERLY RD
Mailing City,State,Zip:	HOLLAND, MI 49423
Owner Name:	VENNTIS TECHNOLOGIES LLC
Owner Type:	Private
Operator Name:	VENNTIS TECHNOLOGIES LLC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No

VENNTIS TECHNOLOGIES LLC (Continued) **1014924210**

Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20111227
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

VENNTIS TECHNOLOGIES LLC (Continued) **1014924210**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	VENNTIS TECHNOLOGIES LLC
Legal Status:	Private
Date Became Current:	20110228
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	VENNTIS TECHNOLOGIES LLC
Legal Status:	Private
Date Became Current:	20110228
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20110510
Handler Name:	VENNTIS TECHNOLOGIES LLC
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	541712
NAICS Description:	RESEARCH AND DEVELOPMENT IN THE PHYSICAL, ENGINEERING, AND LIFE SCIENCES (EXCEPT BIOTECHNOLOGY)

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

13
NNW
1/8-1/4
0.150 mi.
790 ft.

40TH (1035) STREET, EAST
1035 E. 40TH STREET
HOLLAND, MI 49423

INVENTORY
BEA

S105768364
N/A

Relative:
Higher

Actual:
712 ft.

INVENTORY:

Name:	1035 E. 40TH STREET
Address:	1035 E. 40TH STREET
City,State,Zip:	MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69703
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Heywood, David
Latitude:	42.76208106
Longitude:	-86.06757663

BEA:

Name:	40TH (1035) STREET, EAST
Address:	1035 E. 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	591
District:	Kalamazoo
Date Received:	11/18/2002
Submitter Name:	Williamson's, L.L.C.
Petition Determination:	No Request
Petition Disclosure:	0
Category:	N
Determination 20107A:	No Request
Reviewer:	ducharmm
Division Assigned:	GSD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

Name:	1035 E. 40TH STREET
Address:	1035 E. 40TH STREET
City,State,Zip:	MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	11/18/2002
Submitter Name:	Not reported
Petition Determination:	Not reported

40TH (1035) STREET, EAST (Continued) **S105768364**

Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000269
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B200200591PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2004-01-31 07:29:04
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Disclosure was sent to OGS because this is a Oil & Gas Production site.
Organization:	Williamson's, L.L.C.
Contact:	Mr. Rick Mouw
Contact Type:	Submitter Contact

14
NW
1/8-1/4
0.160 mi.
845 ft.

GPM ACQUISITIONS LLC **RCRA NonGen / NLR** **1007095898**
935 E 40TH ST **MIK117224618**
HOLLAND, MI 49423

Relative:
Higher

Actual:
708 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		20071211
Handler Name:	GPM ACQUISITIONS LLC	
Handler Address:		935 E 40TH ST
Handler City,State,Zip:		HOLLAND, MI 49423
EPA ID:		MIK117224618
Contact Name:		DUNCAN MCCOLL
Contact Address:		935 E 40TH ST
Contact City,State,Zip:		HOLLAND, MI 49423
Contact Telephone:		616-871-3401
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		05
Land Type:		Other
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		Not reported
State District:		Not reported
Mailing Address:		935 E 40TH ST
Mailing City,State,Zip:		HOLLAND, MI 49423
Owner Name:		NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner Type:		Private
Operator Name:		NO ACTIVE O/OP AS NOT GENERATING WASTE
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No

GPM ACQUISITIONS LLC (Continued) **1007095898**

Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20110303
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

GPM ACQUISITIONS LLC (Continued) **1007095898**

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20071020
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20071020
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20071020
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20071020
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20071020
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported

GPM ACQUISITIONS LLC (Continued) **1007095898**

Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status: Private
Date Became Current: 20071020
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status: Private
Date Became Current: 20071020
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status: Private
Date Became Current: 20071020
Date Ended Current: Not reported
Owner/Operator Address: Not reported
Owner/Operator City,State,Zip: Not reported
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20020610
Handler Name: GPM ACQUISITIONS LLC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20060425
Handler Name: GPM ACQUISITIONS LLC
Federal Waste Generator Description: Small Quantity Generator

GPM ACQUISITIONS LLC (Continued) **1007095898**

State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20070409
Handler Name: GPM ACQUISITIONS LLC
Federal Waste Generator Description: Small Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20071211
Handler Name: GPM ACQUISITIONS LLC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 326191
NAICS Description: PLASTICS PLUMBING FIXTURE MANUFACTURING

Facility Has Received Notices of Violation:
Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 20040318
Actual Return to Compliance Date: 20040412
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: 20040506
Enforcement Identifier: 001
Date of Enforcement Action: 20040406
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported

GPM ACQUISITIONS LLC (Continued) **1007095898**

Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 20040318
Actual Return to Compliance Date: 20040412
Return to Compliance Qualifier: Documented
Violation Responsible Agency: State
Scheduled Compliance Date: 20040506
Enforcement Identifier: 001
Date of Enforcement Action: 20040406
Enforcement Responsible Agency: State
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported

GPM ACQUISITIONS LLC (Continued) **1007095898**

Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	20040318
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	20040412
Scheduled Compliance Date:	20040506
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20040318
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	20040412
Scheduled Compliance Date:	20040506
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

E15
WNW
1/8-1/4
0.160 mi.
846 ft.

L S MOLD INC **RCRA NonGen / NLR** **1015743765**
750 WAVERLY COURT **MIK104009716**
HOLLAND, MI 49423

Site 1 of 3 in cluster E

Relative:
Higher

Actual:
698 ft.

RCRA NonGen / NLR:

Date Form Received by Agency:		20120302
Handler Name:	L S MOLD INC	
Handler Address:		750 WAVERLY COURT
Handler City,State,Zip:		HOLLAND, MI 49423
EPA ID:		MIK104009716
Contact Name:		MICHAEL A RANNOW
Contact Address:		Not reported
Contact City,State,Zip:		Not reported
Contact Telephone:		616-392-5926 102
Contact Fax:		616-392-2661
Contact Email:		MIKER@LSMOLD.COM
Contact Title:		Not reported
EPA Region:		05
Land Type:		Private
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported

L S MOLD INC (Continued) **1015743765**

Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	750 WAVERLY COURT
Mailing City,State,Zip:	HOLLAND, MI 49423
Owner Name:	L S MOLD INC
Owner Type:	Private
Operator Name:	L S MOLD INC
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20120404

L S MOLD INC (Continued) **1015743765**

Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	Not reported
Manifest Broker:	Not reported
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	L S MOLD INC
Legal Status:	Private
Date Became Current:	20120301
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	L S MOLD INC
Legal Status:	Private
Date Became Current:	20120301
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20120302
Handler Name: L S MOLD INC	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	333511
NAICS Description:	INDUSTRIAL MOLD MANUFACTURING

L S MOLD INC (Continued) **1015743765**

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

E16 **GLW FINISHING LLC** **US BROWNFIELDS** **1004724991**
WNW **741 WAVERLY CT** **RCRA NonGen / NLR** **MIR000022194**
1/8-1/4 **HOLLAND, MI 49423** **US AIRS**
0.174 mi. **FINDS**
918 ft. **Site 2 of 3 in cluster E**

Relative: **Higher**
Actual: **698 ft.**

US BROWNFIELDS:

Name:	741 WAVERLY COURT
Address:	741 WAVERLY CT.
City,State,Zip:	HOLLAND, MI 49423
Recipient Name:	Macatawa Area Coordinating Council
Grant Type:	Assessment
Property Number:	03-02-03-303-010
Parcel size:	2.3
Latitude:	42.7589772
Longitude:	-86.07458429999997
HCM Label:	Address Matching-House Number
Map Scale:	-
Point of Reference:	Entrance Point of a Facility or Station
Highlights:	Former Use: The subject property consisted as unimproved agricultural land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.
Datum:	North American Datum of 1983
Acres Property ID:	135791
IC Data Access:	-
Start Date:	-
Redev Completition Date:	08/30/2011
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	2200
Assessment Funding Source:	EPA
Redevelopment Funding:	855000
Redev. Funding Source:	Waverly Ct LLC
Redev. Funding Entity Name:	Private/Other Funding
Redevelopment Start Date:	06/15/2010
Assessment Funding Entity:	US EPA - Brownfields Assessment Cooperative Agreement
Cleanup Funding Entity:	-
Grant Type:	Hazardous
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	Y
Cooperative Agreement Number:	00E43601
Start Date:	04/12/2010
Ownership Entity:	Private
Completion Date:	05/13/2010
Current Owner:	Waverly Ct LLC
Did Owner Change:	N

GLW FINISHING LLC (Continued) **1004724991**

Cleanup Required:	N
Video Available:	N
Photo Available:	Y
Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	N
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	-
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	-
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	20
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	2.3
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	2.3
Future use industrial acreage:	-
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	-

GLW FINISHING LLC (Continued) **1004724991**

Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	The subject property consisted as unimproved agricultural land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.
Below Poverty Number:	3
Below Poverty Percent:	23.08
Meidan Income:	27
Meidan Income Number:	8
Meidan Income Percent:	61.54
Vacant Housing Number:	1
Vacant Housing Percent:	19.4
Unemployed Number:	1
Unemployed Percent:	7.69

Name:	741 WAVERLY COURT
Address:	741 WAVERLY CT.
City,State,Zip:	HOLLAND, MI 49423
Recipient Name:	Macatawa Area Coordinating Council
Grant Type:	Assessment
Property Number:	03-02-03-303-010
Parcel size:	2.3
Latitude:	42.7589772
Longitude:	-86.07458429999997
HCM Label:	Address Matching-House Number
Map Scale:	-
Point of Reference:	Entrance Point of a Facility or Station
Highlights:	Former Use: The subject property consisted as unimproved agricultural

GLW FINISHING LLC (Continued) **1004724991**

land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.

Datum:	North American Datum of 1983
Acres Property ID:	135791
IC Data Access:	-
Start Date:	-
Redev Completition Date:	08/30/2011
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	2200
Assessment Funding Source:	EPA
Redevelopment Funding:	855000
Redev. Funding Source:	Waverly Ct LLC
Redev. Funding Entity Name:	Private/Other Funding
Redevelopment Start Date:	06/15/2010
Assessment Funding Entity:	US EPA - Brownfields Assessment Cooperative Agreement
Cleanup Funding Entity:	-
Grant Type:	Hazardous
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	Y
Cooperative Agreement Number:	00E43601
Start Date:	04/12/2010
Ownership Entity:	Private
Completion Date:	05/13/2010
Current Owner:	Waverly Ct LLC
Did Owner Change:	N
Cleanup Required:	N
Video Available:	N
Photo Available:	Y
Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	N
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-

GLW FINISHING LLC (Continued) **1004724991**

Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	-
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	-
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	20
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	2.3
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	2.3
Future use industrial acreage:	-
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-

GLW FINISHING LLC (Continued) **1004724991**

Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	The subject property consisted as unimproved agricultural land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.
Below Poverty Number:	3
Below Poverty Percent:	23.08
Meidan Income:	27
Meidan Income Number:	8
Meidan Income Percent:	61.54
Vacant Housing Number:	1
Vacant Housing Percent:	19.4
Unemployed Number:	1
Unemployed Percent:	7.69

Name:	741 WAVERLY COURT
Address:	741 WAVERLY CT.
City,State,Zip:	HOLLAND, MI 49423
Recipient Name:	Macatawa Area Coordinating Council
Grant Type:	Assessment
Property Number:	03-02-03-303-010
Parcel size:	2.3
Latitude:	42.7589772
Longitude:	-86.07458429999997
HCM Label:	Address Matching-House Number
Map Scale:	-
Point of Reference:	Entrance Point of a Facility or Station
Highlights:	Former Use: The subject property consisted as unimproved agricultural land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.
Datum:	North American Datum of 1983
Acres Property ID:	135791
IC Data Access:	-
Start Date:	-
Redev Completition Date:	08/30/2011
Completed Date:	-
Acres Cleaned Up:	-
Cleanup Funding:	-
Cleanup Funding Source:	-
Assessment Funding:	2200
Assessment Funding Source:	EPA
Redevelopment Funding:	855000
Redev. Funding Source:	Waverly Ct LLC
Redev. Funding Entity Name:	Private/Other Funding
Redevelopment Start Date:	06/15/2010
Assessment Funding Entity:	US EPA - Brownfields Assessment Cooperative Agreement
Cleanup Funding Entity:	-
Grant Type:	Hazardous
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	Y
Cooperative Agreement Number:	00E43601
Start Date:	04/12/2010
Ownership Entity:	Private

GLW FINISHING LLC (Continued) **1004724991**

Completion Date:	05/13/2010
Current Owner:	Waverly Ct LLC
Did Owner Change:	N
Cleanup Required:	N
Video Available:	N
Photo Available:	Y
Institutional Controls Required:	N
IC Category Proprietary Controls:	-
IC Cat. Info. Devices:	-
IC Cat. Gov. Controls:	-
IC Cat. Enforcement Permit Tools:	-
IC in place date:	-
IC in place:	N
State/tribal program date:	-
State/tribal program ID:	-
State/tribal NFA date:	-
Air cleaned:	-
Asbestos found:	-
Asbestos cleaned:	-
Controled substance found:	-
Controled substance cleaned:	-
Drinking water affected:	-
Drinking water cleaned:	-
Groundwater affected:	-
Groundwater cleaned:	-
Lead contaminant found:	-
Lead cleaned up:	-
No media affected:	Not reported
Unknown media affected:	-
Other cleaned up:	-
Other metals found:	-
Other metals cleaned:	-
Other contaminants found:	-
Other contams found description:	-
PAHs found:	-
PAHs cleaned up:	-
PCBs found:	-
PCBs cleaned up:	-
Petro products found:	-
Petro products cleaned:	-
Sediments found:	-
Sediments cleaned:	-
Soil affected:	-
Soil cleaned up:	-
Surface water cleaned:	-
VOCs found:	-
VOCs cleaned:	-
Cleanup other description:	-
Num. of cleanup and re-dev. jobs:	20
Past use greenspace acreage:	-
Past use residential acreage:	-
Surface Water:	-
Past use commercial acreage:	2.3
Past use industrial acreage:	-
Future use greenspace acreage:	-
Future use residential acreage:	-
Future use commercial acreage:	2.3

GLW FINISHING LLC (Continued) **1004724991**

Future use industrial acreage:	-
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	-
Cadmium cleaned up:	-
Chromium cleaned up:	-
Copper cleaned up:	-
Iron cleaned up:	-
mercury cleaned up:	-
Nickel Cleaned Up:	-
No clean up:	-
Pesticides cleaned up:	-
Selenium cleaned up:	-
SVOCs cleaned up:	-
Unknown clean up:	-
Arsenic contaminant found:	-
Cadmium contaminant found:	-
Chromium contaminant found:	-
Copper contaminant found:	-
Iron contaminant found:	-
Mercury contaminant found:	-
Nickel contaminant found:	-
No contaminant found:	-
Pesticides contaminant found:	-
Selenium contaminant found:	-
SVOCs contaminant found:	-
Unknown contaminant found:	-
Future Use: Multistory	-
Media affected Bluiding Material:	-
Media affected indoor air:	-
Building material media cleaned up:	-
Indoor air media cleaned up:	-
Unknown media cleaned up:	-
Past Use: Multistory	Not reported
Property Description:	The subject property consisted as unimproved agricultural land from at least 1938 until 1996 when the current light industrial building was constructed. Notable occupants have included KC Industries 1996-2005 and GLW Finishing 2005-present, wet coat finishing operations.
Below Poverty Number:	3
Below Poverty Percent:	23.08
Meidan Income:	27
Meidan Income Number:	8
Meidan Income Percent:	61.54
Vacant Housing Number:	1
Vacant Housing Percent:	19.4
Unemployed Number:	1
Unemployed Percent:	7.69

RCRA NonGen / NLR:

Date Form Received by Agency:		20180425
Handler Name:	GLW FINISHING LLC	
Handler Address:		741 WAVERLY CT
Handler City,State,Zip:		HOLLAND, MI 49423
EPA ID:		MIR000022194
Contact Name:		DOUG ISENGA
Contact Address:		Not reported
Contact City,State,Zip:		Not reported
Contact Telephone:		616-395-0112 103

GLW FINISHING LLC (Continued) **1004724991**

Contact Fax:	616-395-0067
Contact Email:	DOUGI@GLWFINISHING.COM
Contact Title:	Not reported
EPA Region:	05
Land Type:	Other
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	741 WAVERLY CT
Mailing City,State,Zip:	HOLLAND, MI 49423
Owner Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner Type:	Private
Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	NN
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A

GLW FINISHING LLC (Continued) **1004724991**

Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180917
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	KEITH MALMSTADT
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name:	KEITH MALMSTADT
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	KEITH MALMSTADT
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	KEITH MALMSTADT
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20171117
Date Ended Current:	Not reported
Owner/Operator Address:	741 WAVERLY CT
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-9387
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private

GLW FINISHING LLC (Continued) **1004724991**

Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOM GEBBEN
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	KEITH MALMSTADT
Legal Status:	Private
Date Became Current:	20050103
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Legal Status:	Private
Date Became Current:	20171117
Date Ended Current:	Not reported
Owner/Operator Address:	741 WAVERLY CT
Owner/Operator City,State,Zip:	HOLLAND, MI 49423-9387
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Historic Generators:

Receive Date:	20071008
Handler Name: GLW FINISHING LLC	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19970311
Handler Name: GLW FINISHING LLC	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20050118
Handler Name: GLW FINISHING LLC	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20090327
Handler Name: GLW FINISHING LLC	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20161122
Handler Name: GLW FINISHING LLC	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20180425
Handler Name:	GLW FINISHING LLC
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	337211
NAICS Description:	WOOD OFFICE FURNITURE MANUFACTURING

Facility Has Received Notices of Violation:

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	20090324
Actual Return to Compliance Date:	20090626
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	20090709
Enforcement Identifier:	001
Date of Enforcement Action:	20090610
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	20090324
Actual Return to Compliance Date:	20090626
Return to Compliance Qualifier:	Documented
Violation Responsible Agency:	State
Scheduled Compliance Date:	20090709
Enforcement Identifier:	001
Date of Enforcement Action:	20090610
Enforcement Responsible Agency:	State
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	20090324
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	20090626
Scheduled Compliance Date:	20090709
Date of Request:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	20090324
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	20090626
Scheduled Compliance Date:	20090709
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

US AIRS (AFS):

Envid:	1004724991
Region Code:	05
County Code:	MI005
Programmatic ID:	AIR MI00000000000N5962
Facility Registry ID:	110040858300
D and B Number:	Not reported
Facility Site Name:	GLW FINISHING, LLC
Primary SIC Code:	Not reported
NAICS Code:	337211
Default Air Classification Code:	SMI
Facility Type of Ownership Code:	Not reported
Air CMS Category Code:	SMI
HPV Status:	Not reported

US AIRS (AFS):

Region Code:	05
Programmatic ID:	AIR MI00000000000N5962
Facility Registry ID:	110040858300
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2016-01-26 00:00:00
Activity Status Date:	2016-02-16 17:17:18
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Active
Region Code:	05
Programmatic ID:	AIR MI00000000000N5962
Facility Registry ID:	110040858300
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	1998-09-15 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported

GLW FINISHING LLC (Continued) **1004724991**

Region Code:	05
Programmatic ID:	AIR MI00000000000N5962
Facility Registry ID:	110040858300
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2006-08-01 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported

Region Code:	05
Programmatic ID:	AIR MI00000000000N5962
Facility Registry ID:	110040858300
Air Operating Status Code:	OPR
Default Air Classification Code:	SMI
Air Program:	State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date:	2010-08-31 00:00:00
Activity Status Date:	Not reported
Activity Group:	Compliance Monitoring
Activity Type:	Inspection/Evaluation
Activity Status:	Not reported

FINDS:
Registry ID: 110044759829

Click Here:

Environmental Interest/Information System:
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

E17 **K C INDUSTRIES, INC** **INVENTORY** **S107702957**
WNW **741 WAVERLY COURT** **AIRS** **N/A**
1/8-1/4 **HOLLAND, MI 49423** **BEA**
0.174 mi. **WDS**
918 ft. **Site 3 of 3 in cluster E**

Relative: Higher

Actual: 698 ft.

INVENTORY:

Name:	741 WAVERLY COURT
Address:	741 WAVERLY COURT
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69797
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Heywood, David
Latitude:	42.75976137
Longitude:	-86.07447929

K C INDUSTRIES, INC (Continued) **S107702957**

AIRS:

Name:	K C INDUSTRIES, INC
Address:	741 WAVERLY COURT
City,State,Zip:	HOLLAND, MI 49423
State Registration Number:	N5962
Naics Code:	Not reported
Contact Email:	Not reported
Contact Name:	CARL KELCH
Contact Phone:	6163950112
Contact Address:	100 ANILINE AVENUE
Contact City,St,Zip:	HOLLAND, MI 49424
Permit Number:	328-96
Date Received:	07/09/1996
Application Reason:	COATING OPERATION
Record Type:	Not reported
State County FIPS:	Not reported
Facility Category:	Not reported
SIC Primary:	Not reported
Tribal Code:	Not reported
Facility Status Code:	Not reported
Facility Status:	InActive
Supplemental Location Text:	Not reported
Business Name:	Not reported
Principal Product:	Not reported
Principal Product Description:	Not reported
UTM Zone (Geo Coordinates Universal Transverse Mercator System):	Not reported
UTM Horizontal Coord:	Not reported
UTM Vertical Coord:	Not reported
Mailing Name:	Not reported
Mailing Contact Person:	Not reported
Mailing Street:	Not reported
Mailing City:	Not reported
Mailing State:	Not reported
Mailing Zip:	Not reported
Mailing Zip 4 Extension:	Not reported
Compliance Person:	Not reported
Compliance Area Code:	Not reported
Compliance Phone Number:	Not reported
Emission Inventory Contact Person:	Not reported
EI Contact Area Code:	Not reported
EI Contact Phone Number:	Not reported
Permit Contact Person:	Not reported
Permit Contact Person Area Code:	Not reported
Permit Contact Person Phone Number:	Not reported
Federal Employer Id Number:	Not reported
# Of Employees:	Not reported
Reporting Year:	Not reported
Date Record Was Created:	Not reported

BEA:

Name:	741 WAVERLY COURT
Address:	741 WAVERLY COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported

K C INDUSTRIES, INC (Continued) **S107702957**

Date Received:	05/24/2018
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000363
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201802742PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2018-05-24 16:27:12
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	741 Waverly Court, LLC
Contact:	Leslie DeBoer
Contact Type:	Submitter Contact

Name:	741 WAVERLY COURT
Address:	741 WAVERLY COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	05/18/2018
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000363
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201802743PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2018-05-24 16:47:21
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	GreenTrust Capital Management, LLC
Contact:	Leslie DeBoer
Contact Type:	Submitter Contact

WDS:

Name:	GLW FINISHING LLC
Address:	741 WAVERLY CT
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MIR000022194
WMD Id:	411394
Site Specific Name:	GLW FINISHING LLC

K C INDUSTRIES, INC (Continued) **S107702957**

Mailing Address: 741 WAVERLY CT
Mailing City/State/Zip: 49423
Mailing County: ALLEGAN

F18 **760 E. 40TH STREET** **INVENTORY** **S127500536**
NW **760 E. 40TH STREET** **BEA** **N/A**
1/8-1/4 **HOLLAND, MI 49423**
0.246 mi.
1301 ft. **Site 1 of 3 in cluster F**

Relative: Higher

Actual: 693 ft.

INVENTORY:

Name:	760 E. 40TH STREET
Address:	760 E. 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69799
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Heywood, David
Latitude:	42.76078693
Longitude:	-86.0737817

BEA:

Name:	760 E. 40TH STREET
Address:	760 E. 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	11/22/2016
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000365
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201602475PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2017-02-06 17:41:55
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B3 (Associated ID #s like ITS and Site ID go here.) REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates further follow up required. FURTHER ASSESSMENT, NOTIFICATION, AND/OR MITIGATION ACTION TO BE TAKEN: Historical RECs identify the site as a closed LUST site when two USTs (gasoline & diesel) were removed in 1989. Approximately 962 tons of impacted soils and 7000 gallons of perched water were removed f

760 E. 40TH STREET (Continued) **S127500536**

Organization: CSHD, LLC
Contact: Kirk Perschbacher, Lakeshore Env.
Contact Type: Submitter Contact

F19 **USF HOLLAND - HO** **LUST U003082407**
NW **750 E 40TH ST** **UST N/A**
1/4-1/2 **HOLLAND, MI 49423** **INVENTORY**
0.253 mi.
1337 ft. **Site 2 of 3 in cluster F**

Relative: Higher
Actual: 693 ft.

LUST:
Name: USF HOLLAND - HO
Address: 750 E 40TH ST
City,State,Zip: HOLLAND, MI 49423-
Facility ID: 00015916
Source: STATE OF MICHIGAN
Owner Name: YRCInc Environmental Services
Owner Address: Not reported
Owner City,St,Zip: UNKNOWN, MI
Owner Contact: Not reported
Owner Phone: Not reported
Country: USA
District: Kalamazoo
Site Name: Tnt Holland Motor Express
Latitude: 42.76196
Longitude: -86.07372
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)
Regulatory Program: Not reported
Risk Condition: Not reported
Project Manager: Not reported
Senate District: Not reported
House District: Not reported
US Congressional District: Not reported

Leak Number: C-1261-89
Release Date: 07/01/1989
Substance Released: Not reported
Release Status: Closed
Release Closed Date: 05/17/1991

UST:
Name: USF HOLLAND - HO
Address: 750 E 40TH ST
City,State,Zip: HOLLAND 49423-5342
Facility Type: CLOSED
Facility ID: 00015916
Owner Name: YRC INC ENVIRONMENTAL SERVICES
Owner Address: 10990 ROE AVE
Owner City: OVERLAND PARK
Owner State: KS
Owner Zip: 66211
Owner Contact: Not reported

USF HOLLAND - HO (Continued) **U003082407**

Owner Phone:	9133443000
Contact:	David Yost
Contact Phone:	(989) 772-2441
Date of Collection:	01/12/1998
Accuracy:	10
Horizontal Datum:	NAD83
Accuracy Value Unit:	METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
District:	Region 3 - Kalamazoo District Office
Tank ID:	5
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Diesel
Install Date:	08/01/1989
Remove Date:	09/08/2014
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76196
Longitude:	-86.07372

Name:	USF HOLLAND - HO
Address:	750 E 40TH ST
City,State,Zip:	HOLLAND 49423-5342
Facility Type:	CLOSED
Facility ID:	00015916
Owner Name:	YRC INC ENVIRONMENTAL SERVICES
Owner Address:	10990 ROE AVE
Owner City:	OVERLAND PARK
Owner State:	KS
Owner Zip:	66211
Owner Contact:	Not reported
Owner Phone:	9133443000
Contact:	David Yost
Contact Phone:	(989) 772-2441
Date of Collection:	01/12/1998
Accuracy:	10
Horizontal Datum:	NAD83
Accuracy Value Unit:	METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
District:	Region 3 - Kalamazoo District Office
Tank ID:	4
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Diesel
Install Date:	08/01/1989

USF HOLLAND - HO (Continued) **U003082407**

Remove Date:	09/08/2014
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76196
Longitude:	-86.07372

Name:	USF HOLLAND - HO
Address:	750 E 40TH ST
City,State,Zip:	HOLLAND 49423-5342
Facility Type:	CLOSED
Facility ID:	00015916
Owner Name:	YRC INC ENVIRONMENTAL SERVICES
Owner Address:	10990 ROE AVE
Owner City:	OVERLAND PARK
Owner State:	KS
Owner Zip:	66211
Owner Contact:	Not reported
Owner Phone:	9133443000
Contact:	David Yost
Contact Phone:	(989) 772-2441
Date of Collection:	01/12/1998
Accuracy:	10
Horizontal Datum:	NAD83
Accuracy Value Unit:	METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
District:	Region 3 - Kalamazoo District Office
Tank ID:	3
Capacity:	1000
Tank Status:	Removed from Ground
Substance:	Used Oil
Install Date:	03/17/1972
Remove Date:	09/08/1989
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76196
Longitude:	-86.07372

Name:	USF HOLLAND - HO
Address:	750 E 40TH ST
City,State,Zip:	HOLLAND 49423-5342
Facility Type:	CLOSED
Facility ID:	00015916

USF HOLLAND - HO (Continued) **U003082407**

Owner Name:	YRC INC ENVIRONMENTAL SERVICES
Owner Address:	10990 ROE AVE
Owner City:	OVERLAND PARK
Owner State:	KS
Owner Zip:	66211
Owner Contact:	Not reported
Owner Phone:	9133443000
Contact:	David Yost
Contact Phone:	(989) 772-2441
Date of Collection:	01/12/1998
Accuracy:	10
Horizontal Datum:	NAD83
Accuracy Value Unit:	METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
District:	Region 3 - Kalamazoo District Office
Tank ID:	2
Capacity:	10000
Tank Status:	Removed from Ground
Substance:	Used Oil
Install Date:	03/17/1972
Remove Date:	09/08/1990
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76196
Longitude:	-86.07372

Name:	USF HOLLAND - HO
Address:	750 E 40TH ST
City,State,Zip:	HOLLAND 49423-5342
Facility Type:	CLOSED
Facility ID:	00015916
Owner Name:	YRC INC ENVIRONMENTAL SERVICES
Owner Address:	10990 ROE AVE
Owner City:	OVERLAND PARK
Owner State:	KS
Owner Zip:	66211
Owner Contact:	Not reported
Owner Phone:	9133443000
Contact:	David Yost
Contact Phone:	(989) 772-2441
Date of Collection:	01/12/1998
Accuracy:	10
Horizontal Datum:	NAD83
Accuracy Value Unit:	METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off

USF HOLLAND - HO (Continued) **U003082407**

District:	Region 3 - Kalamazoo District Office
Tank ID:	1
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Diesel
Install Date:	03/17/1972
Remove Date:	09/08/1989
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76196
Longitude:	-86.07372

INVENTORY:

Name:	USF HOLLAND - HO
Address:	750 E 40TH ST
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Not reported
Location ID:	66202
Lust Name:	Tnt Holland Motor Express
Regulatory Program:	213
Release Status:	Closed
Project Manager:	Hauck, Timothy
Latitude:	42.761968
Longitude:	-86.07372

G20 **NABISCO BRANDS/LIFE SAVERS INC** **LUST** **U003082159**
WSW **635 E 48TH ST** **UST** **N/A**
1/4-1/2 **HOLLAND, MI 49423** **INVENTORY**
0.260 mi.
1374 ft. **Site 1 of 3 in cluster G**

Relative:
Higher

Actual:
700 ft.

LUST:

Name:	NABISCO BRANDS/LIFE SAVERS INC
Address:	635 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423-
Facility ID:	00011448
Source:	STATE OF MICHIGAN
Owner Name:	NabiscoBrands Inc
Owner Address:	Not reported
Owner City,St,Zip:	UNKNOWN, MI
Owner Contact:	Not reported
Owner Phone:	Not reported
Country:	USA
District:	Kalamazoo
Site Name:	Planters Life Savers
Latitude:	42.75475
Longitude:	-86.07588
Date of Collection:	01/11/2001
Method of Collection:	Address Matching-House Number

NABISCO BRANDS/LIFE SAVERS INC (Continued) **U003082159**

Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Regulatory Program:	Not reported
Risk Condition:	Not reported
Project Manager:	Not reported
Senate District:	Not reported
House District:	Not reported
US Congressional District:	Not reported

Leak Number:	C-0410-89
Release Date:	09/12/1989
Substance Released:	Not reported
Release Status:	Closed
Release Closed Date:	09/22/1989

UST:

Name:	NABISCO BRANDS/LIFE SAVERS INC
Address:	635 E 48TH ST
City,State,Zip:	HOLLAND 49423-7801
Facility Type:	CLOSED
Facility ID:	00011448
Owner Name:	NABISCO BRANDS INC
Owner Address:	500 LANIDEZ PLAZA
Owner City:	PARSIPPANY
Owner State:	NJ
Owner Zip:	07054
Owner Contact:	Not reported
Owner Phone:	2014285584
Contact:	DAVID WHITE
Contact Phone:	(616) 396-1411
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	1
Capacity:	440
Tank Status:	Removed from Ground
Substance:	Gasoline
Install Date:	04/30/1974
Remove Date:	09/01/1987
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.75475
Longitude:	-86.07588

NABISCO BRANDS/LIFE SAVERS INC (Continued) **U003082159**

INVENTORY:

Name:	NABISCO BRANDS/LIFE SAVERS INC
Address:	635 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Not reported
Location ID:	49870
Lust Name:	Planters Life Savers
Regulatory Program:	213
Release Status:	Closed
Project Manager:	Hauck, Timothy
Latitude:	42.754752
Longitude:	-86.075889

G21 **48TH (635) STREET, EAST** **BEA S106096559**
WSW **635 EAST 48TH STREET** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.260 mi.
1374 ft. **Site 2 of 3 in cluster G**

Relative:
Higher

Actual:
700 ft.

BEA:

Name:	48TH (635) STREET, EAST
Address:	635 EAST 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	676
District:	Kalamazoo
Date Received:	10/10/2003
Submitter Name:	East 48th Street Properties, LLC
Petition Determination:	Affirmed
Petition Disclosure:	1
Category:	N
Determination 20107A:	No Request
Reviewer:	clarkds
Division Assigned:	STD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

G22 **LIFESAVERS, INC** **PART 201** **S107696066**
WSW **635 E 48TH STREET** **INVENTORY** **N/A**
1/4-1/2 **HOLLAND, MI 49423** **AIRS**
0.260 mi. **BEA**
1374 ft. **Site 3 of 3 in cluster G** **WDS**

Relative: Higher

Actual: 700 ft.

PART 201:

Facility ID:	3000234
Facility Status:	**Interim Response conducted - No further activities anticipated**
Source:	Not reported
SAM Score:	36
SAM Score Date:	03/23/2005
Township:	04n
Range:	15w
Section:	4
Quarter:	SE
Quarter/Quarter:	SE
Pollutants:	Not reported

INVENTORY:

Name:	48TH STREET (635) E. (FMR. LIFESAVERS)
Address:	635 E. 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Present but Not Immediate
Location ID:	1241
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Spaulding, Evans Ray II
Latitude:	42.757098
Longitude:	-86.0797182

AIRS:

Name:	LIFESAVERS, INC
Address:	635 E 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
State Registration Number:	A0018
Naics Code:	Not reported
Contact Email:	Not reported
Contact Name:	Not reported
Contact Phone:	Not reported
Contact Address:	(same as site address)
Contact City,St,Zip:	Not reported
Permit Number:	602-77
Date Received:	10/14/1977
Application Reason:	CANDY & GUM MFG
Record Type:	Not reported
State County FIPS:	Not reported
Facility Category:	Not reported
SIC Primary:	Not reported
Tribal Code:	Not reported
Facility Status Code:	Not reported
Facility Status:	InActive
Supplemental Location Text:	Not reported
Business Name:	Not reported
Principal Product:	Not reported

LIFESAVERS, INC (Continued) **S107696066**

Principal Product Description:	Not reported
UTM Zone (Geo Coordinates Universal Transverse Mercator System):	Not reported
UTM Horizontal Coord:	Not reported
UTM Vertical Coord:	Not reported
Mailing Name:	Not reported
Mailing Contact Person:	Not reported
Mailing Street:	Not reported
Mailing City:	Not reported
Mailing State:	Not reported
Mailing Zip:	Not reported
Mailing Zip 4 Extension:	Not reported
Compliance Person:	Not reported
Compliance Area Code:	Not reported
Compliance Phone Number:	Not reported
Emission Inventory Contact Person:	Not reported
EI Contact Area Code:	Not reported
EI Contact Phone Number:	Not reported
Permit Contact Person:	Not reported
Permit Contact Person Area Code:	Not reported
Permit Contact Person Phone Number:	Not reported
Federal Employer Id Number:	Not reported
# Of Employees:	Not reported
Reporting Year:	Not reported
Date Record Was Created:	Not reported

BEA:

Name:	48TH STREET (635) E. (FMR. LIFESAVERS)
Address:	635 E. 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	10/10/2003
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000234
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	P200300676PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2004-01-31 07:29:04
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Contamination migrated from Sprayon/Guardsman/Sherwin Williams 636 48th Street. DuCharme contacted Mr. Doug Gulker on 01/09/04 to advise that all 3 environmental professionals affidavits include an incorrect BEA completion date. Same need to be corrected and resubmitted prior to affirmation of the BEA. Category A3 No Associated ID #s Identified REVIEW CONCLUSION: BEA is entirely of previously identified concerns, and further follow up is required. FURTHER ASSESSMENT, NOTIFICATI
Organization:	East 48th Street Properties, LLC

LIFESAVERS, INC (Continued) **S107696066**

Contact:	Mr. Doug Gulker
Contact Type:	Submitter Contact
Name:	48TH STREET (635) E. (FMR. LIFESAVERS)
Address:	635 E. 48TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	10/10/2003
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000234
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	P200300676PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2004-01-31 00:00:00
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Contamination migrated from Sprayon/Guardsman/Sherwin Williams 636 48th Street. DuCharme contacted Mr. Doug Gulker on 01/09/04 to advise that all 3 environmental professionals affidavits include an incorrect BEA completion date. Same need to be corrected and resubmitted prior to affirmation of the BEA. Category A3 No Associated ID #s Identified REVIEW CONCLUSION: BEA is entirely of previously identified concerns, and further follow up is required. FURTHER ASSESSMENT, NOTIFICATI
Organization:	Not reported
Contact:	Mr. Doug Gulker, Migrate from ERNIE
Contact Type:	Submitter Contact

WDS:

Name:	KRAFT FOODS GLOBAL INC
Address:	635 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MID147748792
WMD Id:	398688
Site Specific Name:	LIFESAVERS FACILITY
Mailing Address:	THREE LAKES DR
Mailing City/State/Zip:	60093
Mailing County:	Not reported

F23 **TIARA YACHTS (FORMERLY S-2)** **LUST** **U003081910**
NW **725 E 40TH ST** **UST** **N/A**
1/4-1/2 **HOLLAND, MI 49423** **AST**
0.275 mi. **INVENTORY**
1453 ft. **Site 3 of 3 in cluster F** **WDS**

Relative: Higher
Actual: 692 ft.

LUST:

Name:	TIARA YACHTS (FORMERLY S-2)
Address:	725 E 40TH ST
City,State,Zip:	HOLLAND, MI 49423-
Facility ID:	00007558
Source:	STATE OF MICHIGAN
Owner Name:	TiaraYachts (Formerly S-2)
Owner Address:	Not reported
Owner City,St,Zip:	UNKNOWN, MI
Owner Contact:	Not reported
Owner Phone:	Not reported
Country:	USA
District:	Kalamazoo
Site Name:	S-2 Yachts, Inc.
Latitude:	42.76224
Longitude:	-86.07433
Date of Collection:	01/11/2001
Method of Collection:	Address Matching-House Number
Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Regulatory Program:	Not reported
Risk Condition:	Not reported
Project Manager:	Not reported
Senate District:	Not reported
House District:	Not reported
US Congressional District:	Not reported

Leak Number:	C-1076-96
Release Date:	12/23/1996
Substance Released:	Unknown
Release Status:	Closed
Release Closed Date:	01/27/1997

Leak Number:	C-1305-95
Release Date:	12/19/1995
Substance Released:	Unknown
Release Status:	Closed
Release Closed Date:	03/22/1996

Leak Number:	C-3045-95
Release Date:	01/23/1995
Substance Released:	Gasoline
Release Status:	Closed
Release Closed Date:	05/04/1995

UST:

Name:	TIARA YACHTS (FORMERLY S-2)
Address:	725 E 40TH ST
City,State,Zip:	HOLLAND 49423-5315
Facility Type:	CLOSED
Facility ID:	00007558

TIARA YACHTS (FORMERLY S-2) (Continued) **U003081910**

Owner Name:	TIARA YACHTS (FORMERLY S-2)
Owner Address:	725 E 40TH ST
Owner City:	HOLLAND
Owner State:	MI
Owner Zip:	49423-5315
Owner Contact:	Not reported
Owner Phone:	6163927163
Contact:	JOHN BEZON
Contact Phone:	(616) 392-7163
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	3
Capacity:	2000
Tank Status:	Removed from Ground
Substance:	Gasoline
Install Date:	03/15/1975
Remove Date:	01/23/1995
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76224
Longitude:	-86.07433

Name:	TIARA YACHTS (FORMERLY S-2)
Address:	725 E 40TH ST
City,State,Zip:	HOLLAND 49423-5315
Facility Type:	CLOSED
Facility ID:	00007558
Owner Name:	TIARA YACHTS (FORMERLY S-2)
Owner Address:	725 E 40TH ST
Owner City:	HOLLAND
Owner State:	MI
Owner Zip:	49423-5315
Owner Contact:	Not reported
Owner Phone:	6163927163
Contact:	JOHN BEZON
Contact Phone:	(616) 392-7163
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number

TIARA YACHTS (FORMERLY S-2) (Continued) **U003081910**

District:	Region 3 - Kalamazoo District Office
Tank ID:	2
Capacity:	10000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(ACETONE)
Install Date:	03/14/1974
Remove Date:	12/06/1995
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76224
Longitude:	-86.07433

Name:	TIARA YACHTS (FORMERLY S-2)
Address:	725 E 40TH ST
City,State,Zip:	HOLLAND 49423-5315
Facility Type:	CLOSED
Facility ID:	00007558
Owner Name:	TIARA YACHTS (FORMERLY S-2)
Owner Address:	725 E 40TH ST
Owner City:	HOLLAND
Owner State:	MI
Owner Zip:	49423-5315
Owner Contact:	Not reported
Owner Phone:	6163927163
Contact:	JOHN BEZON
Contact Phone:	(616) 392-7163
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	1
Capacity:	10000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(ACETONE,6)
Install Date:	03/14/1978
Remove Date:	12/17/1996
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76224
Longitude:	-86.07433

TIARA YACHTS (FORMERLY S-2) (Continued) **U003081910**

AST:

Name:	TIARA YACHTS
Address:	725 E 40TH ST
City:	HOLLAND
Zip:	49423-5315
Facility ID:	91003142
Owner Name:	S-2 YACHTS, INC
Owner Address:	725 E 40TH ST
Owner City,St,Zip:	HOLLAND, MI 49423-5315
District:	3
Date of Collection:	12/20/2010
Accuracy:	10 METERS
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Description Category:	Not reported
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
Horizontal Datum:	NAD83
Latitude:	42.7626138
Longitude:	-86.076180

Tank Id:	ATK-004502-15
Tank Status:	Currently In Use
Capacity (in gallons):	10000
Installation Date:	02/11/1997
Substance Stored:	Other
Removed/Closed Date:	Not reported

Tank Id:	ATK-004501-15
Tank Status:	Closed in Ground
Capacity (in gallons):	6800
Installation Date:	12/13/1996
Substance Stored:	Other
Removed/Closed Date:	02/23/2018

Tank Id:	ATK-023119-15
Tank Status:	Currently In Use
Capacity (in gallons):	8000
Installation Date:	11/06/1985
Substance Stored:	FL/CL
Removed/Closed Date:	Not reported

INVENTORY:

Name:	TIARA YACHTS (FORMERLY S-2)
Address:	725 E 40TH ST
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Not reported
Location ID:	42446
Lust Name:	S-2 Yachts, Inc.
Regulatory Program:	213
Release Status:	Closed
Project Manager:	Hauck, Timothy
Latitude:	42.762245

TIARA YACHTS (FORMERLY S-2) (Continued) **U003081910**

Longitude: -86.074338

WDS:
Name: S 2 YACHTS INC
Address: 725 E 40TH ST
City,State,Zip: HOLLAND, MI 49423
Site Id: MID065877102
WMD Id: 396851
Site Specific Name: TIARA YACHTS DIV OF S 2 YACHTS INC
Mailing Address: 725 E 40TH ST
Mailing City/State/Zip: 49423
Mailing County: ALLEGAN

H24 **TOTAL J SERVICES** **DEL PART 201** **S105965521**
NW **1014 SOUTH WAVERLY ROAD** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.286 mi.
1512 ft. **Site 1 of 3 in cluster H**

Relative:
Higher

Actual:
692 ft.

DEL_PART201:
Facility ID: 03000065
Status: Deleted - available documentation does not support listing

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H25 **694 EAST 40TH STREET, HOLLAND MI 49423** **INVENTORY** **S111935191**
NW **694 EAST 40TH STREET** **BEA** **N/A**
1/4-1/2 **HOLLAND, MI 49423** **WDS**
0.302 mi.
1595 ft. **Site 2 of 3 in cluster H**

Relative:
Higher

Actual:
691 ft.

INVENTORY:
Name: 694 EAST 40TH STREET
Address: 694 EAST 40TH STREET
City,State,Zip: MI 49423
Township: Not reported
District: Kalamazoo
Data Source: Risks Not Determined
Location ID: 69791
Lust Name: Not reported
Regulatory Program: 201
Release Status: Not reported
Project Manager: Heywood, David
Latitude: 42.762
Longitude: -86.0769

Name: 694 EAST 40TH STREET, HOLLAND MI 49423
Address: 694 EAST 40TH STREET
City,State,Zip: HOLLAND, MI 49423
Township: Not reported
District: Kalamazoo
Data Source: Risks Not Determined
Location ID: 78253
Lust Name: Not reported
Regulatory Program: 201
Release Status: Not reported
Project Manager: Baranoski, Michael
Latitude: 42.7621699

694 EAST 40TH STREET, HOLLAND MI 49423 (Continued) **S111935191**

Longitude: -86.0763487

BEA:

Name:	694 EAST 40TH STREET
Address:	694 EAST 40TH STREET
City,State,Zip:	MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	05/24/2011
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000357
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201101614PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2011-05-27 09:30:49
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	Renewable Energy Technologies, LLC
Contact:	Mr. Ken Schewe, Senior Vice Preside
Contact Type:	Submitter Contact

Name:	694 EAST 40TH STREET
Address:	694 EAST 40TH STREET
City,State,Zip:	MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	03/25/2013
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000357
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201301844PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2013-03-27 10:11:24
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Also see BEAs B2005 00920PL & B2011 01614PL for same address. Category A1 (Associated ID #s like ITS and Site ID go here.) REVIEW CONCLUSION: BEA is entirely of previously identified concerns, and concerns have

694 EAST 40TH STREET, HOLLAND MI 49423 (Continued) **S111935191**

already been dealt with appropriately. FURTHER ASSESSMENT, NOTIFICATION, AND/OR MITIGATION ACTION TO BE TAKEN: (any other information is entered here) Notification provided to: Date: (Name here)

Organization:	Flat Lands 3, LLC
Contact:	Jeff Balgoyen, Nederveld Inc.
Contact Type:	Submitter Contact
Name:	694 EAST 40TH STREET
Address:	694 EAST 40TH STREET
City,State,Zip:	MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	11/23/2005
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000357
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B200500920PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2005-11-29 11:27:50
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B1 REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates no imminent, ongoing or evident future significant risk exists. FURTHER ASSESSMENT, NOTIFICATION, AND/OR MITIGATION ACTION TO BE TAKEN: NA Notification provided to: Date: NA Comments updated 10/23/07 - CW
Organization:	All Properties Unlimited, LLC
Contact:	Equity Resource Environmental
Contact Type:	Submitter Contact
Name:	694 EAST 40TH STREET, HOLLAND MI 49423
Address:	694 EAST 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	02/26/2020
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000408
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	03000408-BEA-1

694 EAST 40TH STREET, HOLLAND MI 49423 (Continued) **S111935191**

Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2020-04-13 14:36:07
Date Completed:	2/10/2020
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	ROL USA, Inc.
Contact:	Walburn, Mark
Contact Type:	Prospective Owner

WDS:

Name:	CYCLONE INTERNATIONAL INC
Address:	694 E 40TH ST
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MID072591621
WMD Id:	397060
Site Specific Name:	BIG DUTCHMAN INC
Mailing Address:	694 E 40TH ST
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

H26 **40TH (694) STREET, EAST** **BEA** **S107466552**
NW **694 EAST 40TH STREET** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.302 mi.
1595 ft. **Site 3 of 3 in cluster H**

Relative:
Higher

Actual:
691 ft.

BEA:

Name:	40TH (694) STREET, EAST
Address:	694 EAST 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1614
District:	Kalamazoo
Date Received:	05/24/2011
Submitter Name:	Renewable Energy Technologies, LLC
Petition Determination:	No Request
Petition Disclosure:	0
Category:	Not reported
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	RRD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

40TH (694) STREET, EAST (Continued) **S107466552**

Name:	40TH (694) STREET, EAST
Address:	694 EAST 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	920
District:	Kalamazoo
Date Received:	11/23/2005
Submitter Name:	All Properties Unlimited, LLC
Petition Determination:	No Request
Petition Disclosure:	0
Category:	D
Determination 20107A:	No Request
Reviewer:	weaverc1
Division Assigned:	ERD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

Name:	40TH (694) STREET, EAST
Address:	694 EAST 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1844
District:	Kalamazoo
Date Received:	03/25/2013
Submitter Name:	Flat Lands 3, LLC
Petition Determination:	No Request
Petition Disclosure:	0
Category:	Not reported
Determination 20107A:	No Request
Reviewer:	spauldie
Division Assigned:	RRD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

I27 **960 PRODUCTIONS COURT** **INVENTORY** **S114037859**
NNE **960 PRODUCTIONS COURT** **BEA** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.376 mi.
1987 ft. **Site 1 of 2 in cluster I**

Relative:
Lower

Actual:
663 ft.

INVENTORY:

Name:	960 PRODUCTIONS COURT
Address:	960 PRODUCTIONS COURT
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69815
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Heywood, David
Latitude:	42.76541636
Longitude:	-86.06547479

BEA:

Name:	960 PRODUCTIONS COURT
Address:	960 PRODUCTIONS COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	02/03/2012
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000381
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201201694PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2012-02-08 10:22:45
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	LH Partners, LLC
Contact:	Nederveld, Inc. Jeff Balgoyen
Contact Type:	Submitter Contact

Name:	960 PRODUCTIONS COURT
Address:	960 PRODUCTIONS COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	09/28/2009
Submitter Name:	Not reported
Petition Determination:	Not reported

960 PRODUCTIONS COURT (Continued) **S114037859**

Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000381
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B200901396PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2009-09-28 10:55:55
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B1 No other known site IDs REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates no imminent, ongoing or evident future significant risk exists. FURTHER ASSESSMENT, NOTIFICATION, AND/OR MITIGATION ACTION TO BE TAKEN: Investigation found: GW exceedences: - Lead at 23 and 31 ug/L in two monitor wells (DW criterion = 4; GSI criterion = 14) - Chloride at 53,000 ug/L in one monitor well (GSI criterion = 50,
Organization:	Fourteen Corporation, an Ohio Corp
Contact:	Traci Courter
Contact Type:	Submitter Contact

I28 **PRODUCTIONS (960) COURT** **BEA S110055480**
NNE **960 PRODUCTIONS COURT** **WDS N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.376 mi.
1987 ft. **Site 2 of 2 in cluster I**

Relative: **Lower**
Actual: **663 ft.**

BEA:

Name:	PRODUCTIONS (960) COURT
Address:	960 PRODUCTIONS COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1396
District:	Kalamazoo
Date Received:	09/28/2009
Submitter Name:	Fourteen Corporation, an Ohio Corp
Petition Determination:	No Request
Petition Disclosure:	0
Category:	N
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	RRD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported

PRODUCTIONS (960) COURT (Continued) **S110055480**

Contact:	Not reported
Contact Type:	Not reported
Name:	PRODUCTIONS (960) COURT
Address:	960 PRODUCTIONS COURT
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1694
District:	Kalamazoo
Date Received:	02/03/2012
Submitter Name:	LH Partners, LLC
Petition Determination:	No Request
Petition Disclosure:	0
Category:	Not reported
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	RD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

WDS:

Name:	TRUE FORM TOOL & ENGINEERING LLC
Address:	960 PRODUCTIONS CT
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MIK199806743
WMD Id:	494026
Site Specific Name:	TRUE FORM TOOL & ENGINEERING LLC
Mailing Address:	960 PRODUCTIONS CT
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

J29 **40TH (636) STREET, EAST** **INVENTORY** **S127818296**
WNW **636 EAST 40TH STREET; HOLLAND; MI** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.380 mi.
2008 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
686 ft.

INVENTORY:

Name:	40TH (636) STREET, EAST
Address:	636 EAST 40TH STREET; HOLLAND; MI
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Present and Immediate
Location ID:	38855
Lust Name:	Not reported

40TH (636) STREET, EAST (Continued) **S127818296**

Regulatory Program: 201
Release Status: Not reported
Project Manager: Spaulding, Evans Ray II
Latitude: 42.76130374
Longitude: -86.08027324

J30 **AMERICAN AEROSOLS** **LUST U003082441**
WNW **636 E 40TH ST** **UST N/A**
1/4-1/2 **HOLLAND, MI 49423** **AST**
0.380 mi. **INVENTORY**
2008 ft. **Site 2 of 2 in cluster J** **AIRS**
WDS
Relative: Higher **PFAS**

Actual: 686 ft.

LUST:
Name: AMERICAN AEROSOLS
Address: 636 E 40TH ST
City,State,Zip: HOLLAND, MI 49423-
Facility ID: 00016422
Source: STATE OF MICHIGAN
Owner Name: GuardsmanChemicals Inc
Owner Address: Not reported
Owner City,St,Zip: UNKNOWN, MI
Owner Contact: Not reported
Owner Phone: Not reported
Country: USA
District: Kalamazoo
Site Name: Sprayon (Guardsman)
Latitude: 42.76197
Longitude: -86.07644
Date of Collection: 01/11/2001
Method of Collection: Address Matching-House Number
Accuracy: 100
Accuracy Value Unit: FEET
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Regulatory Program: Not reported
Risk Condition: Not reported
Project Manager: Not reported
Senate District: Not reported
House District: Not reported
US Congressional District: Not reported

Leak Number: C-0279-91
Release Date: 02/26/1991
Substance Released: Not reported
Release Status: Open
Release Closed Date: Not reported

UST:
Name: AMERICAN AEROSOLS
Address: 636 E 40TH ST
City,State,Zip: HOLLAND 49423-5343
Facility Type: CLOSED
Facility ID: 00016422
Owner Name: GUARDSMAN CHEMICALS INC
Owner Address: PO BOX 1521

AMERICAN AEROSOLS (Continued) **U003082441**

Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	7
Capacity:	8000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(XYLENE,NAP/XYL,1),Other(NAP/XYL)
Install Date:	04/24/1968
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	6

AMERICAN AEROSOLS (Continued) **U003082441**

Capacity:	8000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(4,ETHANOL)
Install Date:	04/24/1968
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	5
Capacity:	6000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(XYLENE),Used Oil
Install Date:	04/24/1968
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS

AMERICAN AEROSOLS (Continued) **U003082441**

Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	4
Capacity:	4000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(8,MIN OIL)
Install Date:	04/24/1968
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET

AMERICAN AEROSOLS (Continued) **U003082441**

Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	3
Capacity:	4000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(XYLENE,1)
Install Date:	04/24/1968
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	26
Capacity:	8000
Tank Status:	Removed from Ground
Substance:	Diesel
Install Date:	04/24/1972
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	25
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(METHANOL,6)
Install Date:	04/24/1976
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600

AMERICAN AEROSOLS (Continued) **U003082441**

Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	24
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(METHANOL,6)
Install Date:	04/24/1976
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	23
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(METHANOL,6)
Install Date:	04/24/1976
Remove Date:	08/12/1991

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343
Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	22
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Other(FUEL OIL)
Install Date:	04/24/1976
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

Click this hyperlink while viewing on your computer to access
14 additional MI_UST: record(s) in the EDR Site Report.

Name:	AMERICAN AEROSOLS
Address:	636 E 40TH ST
City,State,Zip:	HOLLAND 49423-5343

AMERICAN AEROSOLS (Continued) **U003082441**

Facility Type:	CLOSED
Facility ID:	00016422
Owner Name:	GUARDSMAN CHEMICALS INC
Owner Address:	PO BOX 1521
Owner City:	GRAND RAPIDS
Owner State:	MI
Owner Zip:	49501-1521
Owner Contact:	Not reported
Owner Phone:	6169572600
Contact:	ROBERT RIPLEY
Contact Phone:	(616) 957-2600
Date of Collection:	01/11/2001
Accuracy:	100
Horizontal Datum:	NAD83
Accuracy Value Unit:	FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
District:	Region 3 - Kalamazoo District Office
Tank ID:	21
Capacity:	12000
Tank Status:	Removed from Ground
Substance:	Hazardous Substance(),Mixture,Other(ETH/HEPT, ETHER)
Install Date:	04/24/1972
Remove Date:	08/12/1991
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	42.76197
Longitude:	-86.07644

AST:

Name:	SHERWIN WILLIAMS
Address:	636 E 40TH ST
City:	HOLLAND
Zip:	49423-5343
Facility ID:	92003317
Owner Name:	SHERWIN WILLIAMS
Owner Address:	636 EAST 40TH STREET
Owner City,St,Zip:	HOLLAND, MI 49423
District:	3
Date of Collection:	01/25/2012
Accuracy:	10 FEET
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Description Category:	Not reported
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
Horizontal Datum:	NAD83
Latitude:	42.7619790
Longitude:	-86.076447

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Id: ATK-067033-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-014629-15
Tank Status: Currently In Use
Capacity (in gallons): 6016
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100570-15
Tank Status: Removed from Premises
Capacity (in gallons): 6000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-015331-15
Tank Status: Currently In Use
Capacity (in gallons): 5000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052288-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 08/05/1985
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052285-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052237-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-118960-15

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Status: Removed from Premises
Capacity (in gallons): 6640
Installation Date: 12/04/2002
Substance Stored: Other
Removed/Closed Date: 08/28/2006

Tank Id: ATK-032219-15
Tank Status: Currently In Use
Capacity (in gallons): 19500
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-083234-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-011769-15
Tank Status: Currently In Use
Capacity (in gallons): 7896
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100191-15
Tank Status: Currently In Use
Capacity (in gallons): 10000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-017845-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-024024-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100248-15
Tank Status: Currently In Use

AMERICAN AEROSOLS (Continued) **U003082441**

Capacity (in gallons): 7050
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-067015-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-002969-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 08/05/1982
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-026628-15
Tank Status: Currently In Use
Capacity (in gallons): 18000
Installation Date: 08/05/1982
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052279-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052267-15
Tank Status: Currently In Use
Capacity (in gallons): 5000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100558-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-118959-15
Tank Status: Removed from Premises
Capacity (in gallons): 6640

AMERICAN AEROSOLS (Continued) **U003082441**

Installation Date: 12/04/2002
Substance Stored: Other
Removed/Closed Date: 08/28/2006

Tank Id: ATK-100161-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-011768-15
Tank Status: Currently In Use
Capacity (in gallons): 7896
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100253-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-008613-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-009912-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-012091-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-040461-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 06/09/1981

AMERICAN AEROSOLS (Continued) **U003082441**

Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052271-15
Tank Status: Currently In Use
Capacity (in gallons): 12000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-014631-15
Tank Status: Currently In Use
Capacity (in gallons): 6016
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-083229-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100204-15
Tank Status: Currently In Use
Capacity (in gallons): 6016
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100225-15
Tank Status: Currently In Use
Capacity (in gallons): 7896
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-014219-15
Tank Status: Currently In Use
Capacity (in gallons): 8000
Installation Date: 07/24/1997
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-048861-15
Tank Status: Currently In Use
Capacity (in gallons): 7896
Installation Date: Not reported
Substance Stored: Other

AMERICAN AEROSOLS (Continued) **U003082441**

Removed/Closed Date: Not reported

Tank Id: ATK-100166-15
Tank Status: Removed from Premises
Capacity (in gallons): 4500
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/11/1997

Tank Id: ATK-100273-15
Tank Status: Currently In Use
Capacity (in gallons): 19500
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-067031-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-012875-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-042304-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-027267-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-100555-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Id: ATK-008619-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100181-15
Tank Status: Currently In Use
Capacity (in gallons): 25000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100551-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100198-15
Tank Status: Currently In Use
Capacity (in gallons): 7520
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-034478-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100208-15
Tank Status: Currently In Use
Capacity (in gallons): 6016
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-028692-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-046009-15

AMERICAN AEROSOLS (Continued) **U003082441**

Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-067026-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-006704-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-100561-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-045029-15
Tank Status: Removed from Premises
Capacity (in gallons): 6000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-017837-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-067022-15
Tank Status: Removed from Premises
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: LPG
Removed/Closed Date: 06/19/2006

Tank Id: ATK-037342-15
Tank Status: Currently In Use

AMERICAN AEROSOLS (Continued) **U003082441**

Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-052246-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-006140-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-046015-15
Tank Status: Currently In Use
Capacity (in gallons): 7050
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100588-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-023085-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-002335-15
Tank Status: Removed from Premises
Capacity (in gallons): 1500
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-083232-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000

AMERICAN AEROSOLS (Continued) **U003082441**

Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-013741-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-028694-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-011771-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-100174-15
Tank Status: Removed from Premises
Capacity (in gallons): 2500
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100258-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-040460-15
Tank Status: Currently In Use
Capacity (in gallons): 1000
Installation Date: 06/09/1981
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-025897-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported

AMERICAN AEROSOLS (Continued) **U003082441**

Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-083240-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-100178-15
Tank Status: Currently In Use
Capacity (in gallons): 10000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

Tank Id: ATK-013740-15
Tank Status: Removed from Premises
Capacity (in gallons): 4000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-043310-15
Tank Status: Removed from Premises
Capacity (in gallons): 8000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-043311-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: 03/01/1992

Tank Id: ATK-048863-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-100153-15
Tank Status: Removed from Premises
Capacity (in gallons): 12000
Installation Date: Not reported
Substance Stored: Other

AMERICAN AEROSOLS (Continued) **U003082441**

Removed/Closed Date: 03/01/1992

Tank Id: ATK-028695-15
Tank Status: Currently In Use
Capacity (in gallons): 10360
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-100269-15
Tank Status: Currently In Use
Capacity (in gallons): 19500
Installation Date: Not reported
Substance Stored: FL/CL
Removed/Closed Date: Not reported

Tank Id: ATK-019604-15
Tank Status: Currently In Use
Capacity (in gallons): 7520
Installation Date: Not reported
Substance Stored: Other
Removed/Closed Date: Not reported

INVENTORY:
Name: AMERICAN AEROSOLS
Address: 636 E 40TH ST
City,State,Zip: HOLLAND, MI 49423
Township: Not reported
District: Kalamazoo
Data Source: Not reported
Location ID: 59564
Lust Name: Sprayon (Guardsman)
Regulatory Program: 213
Release Status: Open
Project Manager: Powell, Anne
Latitude: 42.761979
Longitude: -86.076447

AIRS:
Name: VALSPAR CORPORATION
Address: 636 E 40TH STREET
City,State,Zip: HOLLAND, MI 49423
State Registration Number: B7711
Naics Code: Not reported
Contact Email: Not reported
Contact Name: ALLEN STEGMAN
Contact Phone: 6128517295
Contact Address: 1101 S 3RD STREET
Contact City,St,Zip: MINNEAPOLIS, MN 55440
Permit Number: 157-04
Date Received: 06/18/2004
Application Reason: AIR DIFFUSER SYSTEM
Record Type: Not reported

AMERICAN AEROSOLS (Continued) **U003082441**

State County FIPS: Not reported
Facility Category: Not reported
SIC Primary: Not reported
Tribal Code: Not reported
Facility Status Code: Not reported
Facility Status: Active
Supplemental Location Text: Not reported
Business Name: Not reported
Principal Product: Not reported
Principal Product Description: Not reported
UTM Zone (Geo Coordinates Universal Transverse Mercator System): Not reported
UTM Horizontal Coord: Not reported
UTM Vertical Coord: Not reported
Mailing Name: Not reported
Mailing Contact Person: Not reported
Mailing Street: Not reported
Mailing City: Not reported
Mailing State: Not reported
Mailing Zip: Not reported
Mailing Zip 4 Extension: Not reported
Compliance Person: Not reported
Compliance Area Code: Not reported
Compliance Phone Number: Not reported
Emission Inventory Contact Person: Not reported
EI Contact Area Code: Not reported
EI Contact Phone Number: Not reported
Permit Contact Person: Not reported
Permit Contact Person Area Code: Not reported
Permit Contact Person Phone Number: Not reported
Federal Employer Id Number: Not reported
Of Employees: Not reported
Reporting Year: Not reported
Date Record Was Created: Not reported

WDS:
Name: THE SHERWIN WILLIAMS CO
Address: 636 E 40TH ST
City,State,Zip: HOLLAND, MI 49423
Site Id: MID006020929
WMD Id: 394059
Site Specific Name: THE SHERWIN WILLIAMS CO
Mailing Address: 636 E 40TH ST
Mailing City/State/Zip: 49423
Mailing County: ALLEGAN

PFAS:
Name: 636 40TH STREET EAST
Address: 636 EAST 40TH STREET
City,State,Zip: HOLLAND, MI 49423
Latitude: 42.761355000000002
Longitude: -86.080006999999995
Hyperlink: https://www.michigan.gov/pfasresponse/0,9038,7-365-86511_82704-493753--,00.html
Residential Wells Sampled: Yes
Site Lead: Ray Spaulding
Site Lead Email: SpauldingR1@Michigan.gov
Site Lead Phone: 517-290-2401

AMERICAN AEROSOLS (Continued) **U003082441**

Category: Site
Type: Paint packaging facility

31
WSW
1/4-1/2
0.391 mi.
2062 ft.

HOLLAND ENERGY PARK
1 ENERGY PARK WAY
HOLLAND, MI 49423

LUST **U004225666**
UST **N/A**
INVENTORY

Relative:
Higher

Actual:
700 ft.

LUST:

Name:	HOLLAND ENERGY PARK
Address:	1 ENERGY PARK WAY
City,State,Zip:	HOLLAND, MI 49423-
Facility ID:	00042562
Source:	Not reported
Owner Name:	HollandBoard of Public Works
Owner Address:	Not reported
Owner City,St,Zip:	UNKNOWN, MI
Owner Contact:	Not reported
Owner Phone:	Not reported
Country:	USA
District:	Grand Rapids
Site Name:	Holland Energy Park
Latitude:	Not reported
Longitude:	Not reported
Date of Collection:	Not reported
Method of Collection:	Not reported
Accuracy:	Not reported
Accuracy Value Unit:	Not reported
Horizontal Data:	Not reported
Point Line Area:	Not reported
Desc Category:	Not reported
Regulatory Program:	Not reported
Risk Condition:	Not reported
Project Manager:	Not reported
Senate District:	Not reported
House District:	Not reported
US Congressional District:	Not reported
Leak Number:	C-0207-14
Release Date:	11/19/2014
Substance Released:	Unknown
Release Status:	Closed
Release Closed Date:	08/25/2015

UST:

Name:	HOLLAND ENERGY PARK
Address:	1 ENERGY PARK WAY
City,State,Zip:	HOLLAND 49423-2904
Facility Type:	CLOSED
Facility ID:	00042562
Owner Name:	HOLLAND BOARD OF PUBLIC WORKS
Owner Address:	625 HASTINGS AVE
Owner City:	HOLLAND
Owner State:	MI
Owner Zip:	49423-5427
Owner Contact:	Not reported
Owner Phone:	6163551520

HOLLAND ENERGY PARK (Continued) **U004225666**

Contact:	Don Steele
Contact Phone:	Not reported
Date of Collection:	Not reported
Accuracy:	Not reported
Horizontal Datum:	Not reported
Accuracy Value Unit:	Not reported
Source:	Not reported
Point Line Area:	Not reported
Desc Category:	Not reported
Method of Collection:	Not reported
District:	Region 3 - Grand Rapids District Office
Tank ID:	1
Capacity:	550
Tank Status:	Removed from Ground
Substance:	Diesel
Install Date:	Not reported
Remove Date:	11/19/2014
Tank Number:	Not reported
Tank Details Compartments:	Not reported
Tank Release Detection:	Not reported
Pipe Release Detection:	Not reported
Piping Material:	Not reported
Piping Type:	Not reported
Tank Construction:	Not reported
Impressed Device:	Not reported
Latitude:	Not reported
Longitude:	Not reported

INVENTORY:

Name:	HOLLAND ENERGY PARK
Address:	1 ENERGY PARK WAY
City,State,Zip:	HOLLAND, MI 49423
Township:	Holland
District:	Grand Rapids
Data Source:	Not reported
Location ID:	47689
Lust Name:	Holland Energy Park
Regulatory Program:	213
Release Status:	Closed
Project Manager:	Knoerr, Paul
Latitude:	NaN
Longitude:	NaN

32
WNW
1/4-1/2
0.418 mi.
2207 ft.

LITHI BAR MATIK **INVENTORY** **S111938589**
588 E 40TH ST **BEA** **N/A**
HOLLAND, MI 49423 **WDS**

Relative:
Higher

Actual:
680 ft.

INVENTORY:

Name:	588 E. 40TH STREET
Address:	588 E. 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	69775

LITHI BAR MATIK (Continued) **S111938589**

Lust Name: Not reported
Regulatory Program: 201
Release Status: Not reported
Project Manager: Heywood, David
Latitude: 42.76119588
Longitude: -86.08410788

BEA:

Name:	588 E. 40TH STREET
Address:	588 E. 40TH STREET
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	07/28/2017
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000341
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B201702591PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2017-07-28 12:43:12
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Closet Design: https://closetdesign.biz/ Phone: (616) 772-1119 Fax: (616) 879-0035 Email: mstrating@closetdesign.biz
Organization:	Strating Properties
Contact:	James Bresko Superior Environmenta
Contact Type:	Submitter Contact

WDS:

Name:	LITHI BAR MATIK
Address:	588 E 40TH ST
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MID985583103
WMD Id:	403152
Site Specific Name:	LITHI BAR MATIK
Mailing Address:	588 E 40TH ST
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

K33 **M-40 HIGHWAY (1750), HOLLAND** **INVENTORY** **S114024939**
SSW **1750 M-40** **BEA** **N/A**
1/4-1/2 **HOLLAND, MI 49423**
0.499 mi.
2636 ft. **Site 1 of 2 in cluster K**

Relative:
Lower

Actual:
663 ft.

INVENTORY:

Name:	M-40 HIGHWAY (1750), HOLLAND
Address:	1750 M-40
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported
District:	Kalamazoo
Data Source:	Risks Not Determined
Location ID:	7076
Lust Name:	Not reported
Regulatory Program:	201
Release Status:	Not reported
Project Manager:	Spaulding, Evans Ray II
Latitude:	42.739064
Longitude:	-86.067104

BEA:

Name:	M-40 HIGHWAY (1750), HOLLAND
Address:	1750 M-40
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	04/01/2008
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000240
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B200801235PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2008-04-01 14:47:36
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Category B1 No associated ID #s REVIEW CONCLUSION: BEA identifies a new concern, in whole or in part, and assessment of the available information indicates further follow up is needed, awaiting resources. FURTHER ASSESSMENT, NOTIFICATION, AND/OR MITIGATION ACTION TO BE TAKEN: Various soil samples exceeded criteria for Benzo(a)pyrene, Fluoranthene, Phenanthrene, and Selenium. BAZ 7/11/08.
Organization:	Ed Rietman
Contact:	Jeff Balgoyen
Contact Type:	Submitter Contact

K34
SSW
1/4-1/2
0.499 mi.
2636 ft.

M-40 (1750) HIGHWAY (VACANT LAND)
1750 M-40 HWY
HOLLAND, MI 49423

Site 2 of 2 in cluster K

BEA **S109093981**
N/A

Relative:
Lower

Actual:
663 ft.

BEA:

Name:	M-40 (1750) HIGHWAY (VACANT LAND)
Address:	1750 M-40 HWY
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	1235
District:	Kalamazoo
Date Received:	04/01/2008
Submitter Name:	Ed Rietman
Petition Determination:	No Request
Petition Disclosure:	0
Category:	N
Determination 20107A:	No Request
Reviewer:	zimontb
Division Assigned:	ERD
Location ID:	Not reported
Submittal Type:	Not reported
Submittal Number:	Not reported
Approval Status:	Not reported
Workflow Status:	Not reported
Date Submitted:	Not reported
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Not reported
Comments:	Not reported
Organization:	Not reported
Contact:	Not reported
Contact Type:	Not reported

35
West
1/2-1
0.738 mi.
3898 ft.

48TH STREET (345) E.
345 E. 48TH ST.
HOLLAND, MI 49423

PART 201 INVENTORY
BEA
NPDES
WDS

S108228748
N/A

Relative:
Higher

Actual:
686 ft.

PART 201:

Facility ID:	3000233
Facility Status:	**Inactive - no actions taken to address contamination**
Source:	Not reported
SAM Score:	32
SAM Score Date:	03/23/2005
Township:	4N
Range:	15W
Section:	9
Quarter:	NW
Quarter/Quarter:	NW
Pollutants:	Not reported

INVENTORY:

Name:	48TH STREET (345) E.
Address:	345 E. 48TH ST.
City,State,Zip:	HOLLAND, MI 49423
Township:	Not reported

48TH STREET (345) E. (Continued) **S108228748**

District: Kalamazoo
Data Source: Risks Not Determined
Location ID: 1240
Lust Name: Not reported
Regulatory Program: 201
Release Status: Not reported
Project Manager: Spaulding, Evans Ray II
Latitude: 42.755529
Longitude: -86.0911264

BEA:

Name:	48TH STREET (345) E.
Address:	345 E. 48TH ST.
City,State,Zip:	HOLLAND, MI 49423
Secondary Address:	Not reported
BEA Number:	Not reported
District:	Not reported
Date Received:	09/09/2002
Submitter Name:	Not reported
Petition Determination:	Not reported
Petition Disclosure:	Not reported
Category:	Not reported
Determination 20107A:	Not reported
Reviewer:	Not reported
Division Assigned:	Not reported
Location ID:	03000233
Submittal Type:	Baseline Environmental Assessment
Submittal Number:	B200200571PL
Approval Status:	RRD Received
Workflow Status:	Submitted
Date Submitted:	2004-01-31 07:29:04
Date Completed:	Not reported
Township:	Not reported
Work Unit:	Kalamazoo
Comments:	Not reported
Organization:	Kenni Properties, LLC
Contact:	Mr. Gary Genzink
Contact Type:	Submitter Contact

MI NPDES:

Name:	LANDMARK-HUDSONVILLE ICE CREAM
Address:	345 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423
Permit Number:	MIR115680
Permitee PO Box:	Not reported
Permitee Email:	Not reported
Issue Date:	07/31/2019
Effective Date:	07/13/2020
Expiration Date:	01/15/2021
Permittee Name:	Denny Ellens, Landmark Center LLC
Permittee Address:	345 E 48TH ST
Permittee Addr2:	Not reported
Permittee City,St,Zip:	HOLLAND, MI 49423
Permit Type:	NPDES Construction Storm Water Notice of Coverage (NOC)
Facility Name 2:	Not reported
Facility Name 3:	Not reported

48TH STREET (345) E. (Continued) **S108228748**

Facility Name 4:	Not reported
Designed Name:	Not reported
Latitude:	42.7561
Lat Direction:	Not reported
Lat Type Code:	Not reported
Longitude:	-86.0919
Lon Direction:	Not reported
Lon Type Code:	Not reported
Hydrologic Unit Code:	Not reported
Permit Status:	In Effect
COC Permit Category:	Not reported
DEQ District Email:	Kalamazoo
DEQ Permit Compliance Manager:	Janelle Hohm
DEQ Permit Compliance Manager Email:	hohmj@michigan.gov

WDS:

Name:	EST TESTING SOLUTIONS
Address:	345 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MID052493236
WMD Id:	396077
Site Specific Name:	EST EQUIPMENT
Mailing Address:	345 E 48TH ST
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

Name:	HUDSONVILLE CREAMERY & ICE CREAM LLC
Address:	345 E 48TH ST
City,State,Zip:	HOLLAND, MI 49423
Site Id:	MIK591282124
WMD Id:	482035
Site Specific Name:	HUDSONVILLE CREAMERY & ICE CREAM LLC
Mailing Address:	345 E 48TH ST
Mailing City/State/Zip:	49423
Mailing County:	ALLEGAN

Count: 1 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HOLLAND	S123336160		48TH ST	49423	CDL

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

Lists of Federal NPL (Superfund) sites

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: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: N/A
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/11/2022
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: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: N/A
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/11/2022
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: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

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: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: N/A
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/29/2021
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list 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). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS 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 the 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. The 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 potential NPL site.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, 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: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

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: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
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: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly 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). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

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: 11/15/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

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: 08/23/2021
Date Data Arrived at EDR: 08/23/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/18/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

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: 08/23/2021
Date Data Arrived at EDR: 08/23/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/19/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 09/13/2021
Date Data Arrived at EDR: 09/21/2021
Date Made Active in Reports: 12/15/2021
Number of Days to Update: 85

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/16/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Date of Government Version: N/A
Date Data Arrived at EDR: 10/31/2013
Date Made Active in Reports: 11/20/2013
Number of Days to Update: 20

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-284-5103
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: No Update Planned

Lists of state and tribal landfills and solid waste disposal facilities

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: 09/20/2021
Date Data Arrived at EDR: 09/21/2021
Date Made Active in Reports: 12/08/2021
Number of Days to Update: 78

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-335-4035
Last EDR Contact: 12/16/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks

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: 11/08/2021
Date Data Arrived at EDR: 11/11/2021
Date Made Active in Reports: 01/28/2022
Number of Days to Update: 78

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-9837
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Varies

UST 2: Underground Storage Tank Listing
A listing of underground storage tank site locations that have unknown owner information.

Date of Government Version: 07/21/2021
Date Data Arrived at EDR: 07/26/2021
Date Made Active in Reports: 10/20/2021
Number of Days to Update: 86
Source: Department of Licensing & Regulatory Affairs
Telephone: 517-373-1820
Last EDR Contact: 01/26/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Varies

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: 10/01/2021
Date Data Arrived at EDR: 11/02/2021
Date Made Active in Reports: 01/25/2022
Number of Days to Update: 84
Source: Department of Licensing & Regulatory Affairs
Telephone: 517-373-1820
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Annually

AST: Aboveground Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 08/06/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/03/2021
Number of Days to Update: 83
Source: Department of Licensing & Regulatory Affairs
Telephone: 517-373-1820
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/09/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 10/14/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 10/12/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 85

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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: 11/15/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 26
Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-4828
Last EDR Contact: 11/16/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Quarterly

Lists of 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: 07/08/2021
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: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/14/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Varies

Lists of state and tribal brownfield 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: 01/15/2016
Date Data Arrived at EDR: 02/02/2016
Date Made Active in Reports: 04/04/2016
Number of Days to Update: 62
Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-4805
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
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: 10/18/2021
Date Data Arrived at EDR: 10/20/2021
Date Made Active in Reports: 01/12/2022
Number of Days to Update: 84
Source: Economic Development Corporation
Telephone: 888-522-0103
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/10/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/08/2021
Next Scheduled EDR Contact: 03/28/2022
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities
A listing of recycling center locations.

Date of Government Version: 06/08/2021
Date Data Arrived at EDR: 06/09/2021
Date Made Active in Reports: 09/01/2021
Number of Days to Update: 84

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-241-5719
Last EDR Contact: 12/14/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Varies

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 Environment, Great Lakes, and Energy
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: 01/24/2022
Next Scheduled EDR Contact: 05/09/2022
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

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: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/13/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: No Update Planned

PART 201: Part 201 Site List

A Part 201 Listed site is a location that has been evaluated and scored by the DEQ using the Part 201 scoring model. The location is or includes a "facility" as defined by Part 201, where there has been a release of a hazardous substance(s) in excess of the Part 201 residential criteria, and/or where corrective actions have not been completed under Part 201 to meet the applicable cleanup criteria for unrestricted residential use. The Part 201 List does not include all of the sites of contamination that are subject to regulation under Part 201 because owners are not required to inform the DEQ about the sites and can pursue cleanup independently. Sites of environmental contamination that are not known to DEQ are not on the list, nor are sites with releases that resulted in low environmental impact.

Date of Government Version: 10/01/2013
Date Data Arrived at EDR: 10/03/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 0

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-284-5103
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: No Update Planned

INVENTORY: Inventory of Facilities

The Inventory of Facilities has three data sources: Facilities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) identified through state funded or private party response activities (Projects); Facilities under Part 213, Leaking Underground Storage Tanks of the NREPA; and Facilities identified through submittals of Baseline Environmental Assessments (BEA) submitted pursuant to Part 201 or Part 213 of the NREPA. The Part 201 Projects Inventory does not include all of the facilities that are subject to regulation under Part 201 because owners are not required to inform the Department of Environmental Quality (DEQ) about the facilities and can pursue cleanup independently. Facilities that are not known to DEQ are not on the Inventory, nor are locations with releases that resulted in low environmental impact. Part 213 facilities listed here may have more than one release; a list of releases for which corrective actions have been completed and list of releases for which corrective action has not been completed is located on the Leaking Underground Storage Tanks Site Search webpage. The DEQ may or may not have reviewed and concurred with the conclusion that the corrective actions described in a closure report meets criteria. A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

Date of Government Version: 10/18/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 12/02/2021
Number of Days to Update: 44

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-284-5136
Last EDR Contact: 01/19/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab locations.

Date of Government Version: 07/21/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/18/2021
Number of Days to Update: 86

Source: Department of Community Health
Telephone: 517-373-3740
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: No Update Planned

DEL PART 201: Delisted List of Contaminated Sites

A deleted site has been removed from the Part 201 List because information known to the DEQ at the time of the evaluation does not support inclusion on the Part 201 List. This designation is often applied to sites where changes in cleanup criteria resulted in a determination that the site no longer exceeds any applicable cleanup criterion. A delisted site has been removed from the Part 201 List because response actions have reduced the levels of contaminants to concentrations which meet or are below the criteria for unrestricted residential use.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/01/2013
Date Made Active in Reports: 09/11/2013
Number of Days to Update: 41

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-9541
Last EDR Contact: 07/22/2019
Next Scheduled EDR Contact: 11/04/2019
Data Release Frequency: Varies

US 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: 11/16/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Quarterly

PFAS: PFAS Contaminated Sites Listing

PFAS have been widely used in numerous industrial and residential applications since the 1950a??s. Their stability and unique chemical properties produce waterproof, stain resistant, and nonstick qualities in products. They are found in some firefighting foams and a wide range of consumer products such as carpet treatments, non-stick cookware, water-resistant fabrics, food packaging materials, and personal care products.

Date of Government Version: 11/12/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 01/31/2022
Number of Days to Update: 80

Source: Department of Environment, Great Lakes & Energy
Telephone: 517-284-9278
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

Local Land Records

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: 10/07/2021
Date Data Arrived at EDR: 10/08/2021
Date Made Active in Reports: 01/06/2022
Number of Days to Update: 90

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-241-7603
Last EDR Contact: 01/12/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Varies

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: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Semi-Annually

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: 09/12/2021
Date Data Arrived at EDR: 09/13/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 15

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/16/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

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: 06/30/2021
Date Data Arrived at EDR: 07/26/2021
Date Made Active in Reports: 10/20/2021
Number of Days to Update: 86

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-8427
Last EDR Contact: 02/04/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

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: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 10/12/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

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: 10/26/2021
Date Data Arrived at EDR: 11/16/2021
Date Made Active in Reports: 02/08/2022
Number of Days to Update: 84

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/16/2021
Next Scheduled EDR Contact: 02/28/2022
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: 888-275-8747
Last EDR Contact: 01/14/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Semi-Annually

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: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/07/2022
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: N/A

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: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/08/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/01/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 03/28/2022
Data Release Frequency: Every 4 Years

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: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2021
Next Scheduled EDR Contact: 02/28/2022
Data Release Frequency: Annually

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: 10/18/2021
Date Data Arrived at EDR: 10/20/2021
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 82

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/19/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Annually

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: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/12/2021
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Varies

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

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 12/15/2021
Number of Days to Update: 40

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/03/2022
Next Scheduled EDR Contact: 05/16/2022
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: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/07/2022
Next Scheduled EDR Contact: 04/18/2022
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: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/29/2021
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

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: 07/29/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/30/2021
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/02/2021
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/04/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

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: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/27/2021
Next Scheduled EDR Contact: 04/11/2022
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

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/24/2022
Next Scheduled EDR Contact: 05/08/2022
Data Release Frequency: Quarterly

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: 09/30/2021
Date Data Arrived at EDR: 10/13/2021
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 89

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2022
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Varies

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: 12/31/2019
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 12/14/2021
Number of Days to Update: 90

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/17/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Biennially

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: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/04/2022
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/31/2022
Next Scheduled EDR Contact: 05/16/2022
Data Release Frequency: Varies

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: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/09/2021
Next Scheduled EDR Contact: 02/28/2022
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/20/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 11/29/2021
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/03/2022
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US 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: 08/09/2021
Date Data Arrived at EDR: 08/24/2021
Date Made Active in Reports: 11/19/2021
Number of Days to Update: 87

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/22/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 89

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 12/20/2021
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/22/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/14/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 12/15/2021
Number of Days to Update: 91

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/14/2021
Next Scheduled EDR Contact: 03/21/2022
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: 05/05/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 91

Source: EPA
Telephone: (312) 353-2000
Last EDR Contact: 11/22/2021
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/11/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022
Date Data Arrived at EDR: 01/04/2022
Date Made Active in Reports: 01/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 01/04/2022
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/23/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/15/2021
Date Data Arrived at EDR: 11/15/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 78

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/15/2021
Next Scheduled EDR Contact: 02/28/2022
Data Release Frequency: Quarterly

AIRS: Permit and Emissions Inventory Data

Permit and emissions inventory data.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/10/2021
Number of Days to Update: 85

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-7074
Last EDR Contact: 12/09/2021
Next Scheduled EDR Contact: 03/28/2022
Data Release Frequency: Annually

ASBESTOS: Asbestos Notification Listing
Asbestos

Date of Government Version: 09/30/2021
Date Data Arrived at EDR: 10/12/2021
Date Made Active in Reports: 10/28/2021
Number of Days to Update: 16

Source: Department of Licensing & Regulatory Affairs
Telephone: 517-284-7699
Last EDR Contact: 02/01/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

BEA: Baseline Environmental Assessment Database
A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213. The Inventory of BEA Facilities overlaps in part with the Part 201 Projects facilities and Part 213 facilities. There may be more than one BEA for each facility.

Date of Government Version: 08/10/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 85

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-373-9541
Last EDR Contact: 02/07/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

COAL ASH: Coal Ash Disposal Sites
Coal fired power plants in Southeast Michigan that have coal ash handling on site.

Date of Government Version: 04/01/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 79

Source: Department of Environment, Great Lakes, and Energy
Telephone: 586-753-3754
Last EDR Contact: 12/20/2021
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Establishments
A listing of drycleaning facilities in Michigan.

Date of Government Version: 01/07/2021
Date Data Arrived at EDR: 01/13/2021
Date Made Active in Reports: 04/01/2021
Number of Days to Update: 78

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-335-4586
Last EDR Contact: 01/12/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing
Financial assurance information.

Date of Government Version: 06/29/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/23/2021
Number of Days to Update: 85

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-335-6610
Last EDR Contact: 12/20/2021
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Semi-Annually

FINANCIAL ASSURANCE 3: Financial Assurance Information Listing
Financial assurance information for underground storage tank facilities.

Date of Government Version: 07/16/2021
Date Data Arrived at EDR: 07/29/2021
Date Made Active in Reports: 10/21/2021
Number of Days to Update: 84

Source: Department of Licensing & Regulatory Affairs
Telephone: 517-335-7279
Last EDR Contact: 12/20/2021
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 09/16/2021
Date Data Arrived at EDR: 09/21/2021
Date Made Active in Reports: 12/08/2021
Number of Days to Update: 78

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-335-4034
Last EDR Contact: 12/14/2021
Next Scheduled EDR Contact: 04/04/2022
Data Release Frequency: Varies

LEAD CERT: Lead Safe Housing Registry

A listing of Michigan properties included in the Lead Safe Housing Registry.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 82

Source: Department of Community Health
Telephone: 517-335-9699
Last EDR Contact: 11/24/2021
Next Scheduled EDR Contact: 03/14/2022
Data Release Frequency: Quarterly

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: 10/22/2020
Date Data Arrived at EDR: 12/23/2020
Date Made Active in Reports: 03/16/2021
Number of Days to Update: 83

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-241-1300
Last EDR Contact: 12/21/2021
Next Scheduled EDR Contact: 04/11/2022
Data Release Frequency: Varies

UIC: Underground Injection Wells Database

A listing of underground injection well locations. The UIC Program is responsible for regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal.

Date of Government Version: 10/18/2021
Date Data Arrived at EDR: 10/26/2021
Date Made Active in Reports: 01/18/2022
Number of Days to Update: 84

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-241-1515
Last EDR Contact: 01/18/2022
Next Scheduled EDR Contact: 05/02/2022
Data Release Frequency: Quarterly

WDS: Waste Data System

The Waste Data System (WDS) tracks activities at facilities regulated by the Solid Waste, Scrap Tire, Hazardous Waste, and Liquid Industrial Waste programs.

Date of Government Version: 03/30/2021
Date Data Arrived at EDR: 03/31/2021
Date Made Active in Reports: 06/22/2021
Number of Days to Update: 83

Source: Department of Environment, Great Lakes, and Energy
Telephone: 517-284-6562
Last EDR Contact: 11/11/2021
Next Scheduled EDR Contact: 02/28/2022
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/23/2021
Next Scheduled EDR Contact: 03/07/2022
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 12/29/2021
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 12/29/2021
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 12/29/2021
Next Scheduled EDR Contact: 04/18/2022
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: 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

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA PART 201: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Great Lakes, and Energy
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environment, Great Lakes, and Energy
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Michigan.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Great Lakes, and Energy
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

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: 11/11/2021
Date Data Arrived at EDR: 11/12/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 81

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/11/2022
Next Scheduled EDR Contact: 05/23/2022
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/07/2022
Next Scheduled EDR Contact: 04/18/2022
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: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/28/2022
Next Scheduled EDR Contact: 05/09/2022
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/10/2022
Next Scheduled EDR Contact: 04/25/2022
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/29/2021
Next Scheduled EDR Contact: 02/28/2022
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/06/2021
Next Scheduled EDR Contact: 03/21/2022
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 517-241-2254

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

LG ENERGY SOLUTIONS EXPANSION
875 AND 901 E 48TH STREET
HOLLAND, MI 49423

TARGET PROPERTY COORDINATES

Latitude (North):	42.756705 - 42ˆ 45’ 24.14’’
Longitude (West):	86.068367 - 86ˆ 4’ 6.12’’
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	576237.2
UTM Y (Meters):	4734004.0
Elevation:	679 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	14457511 HOLLAND EAST, MI
Version Date:	2019
South Map:	14457507 HAMILTON WEST, MI
Version Date:	2019

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

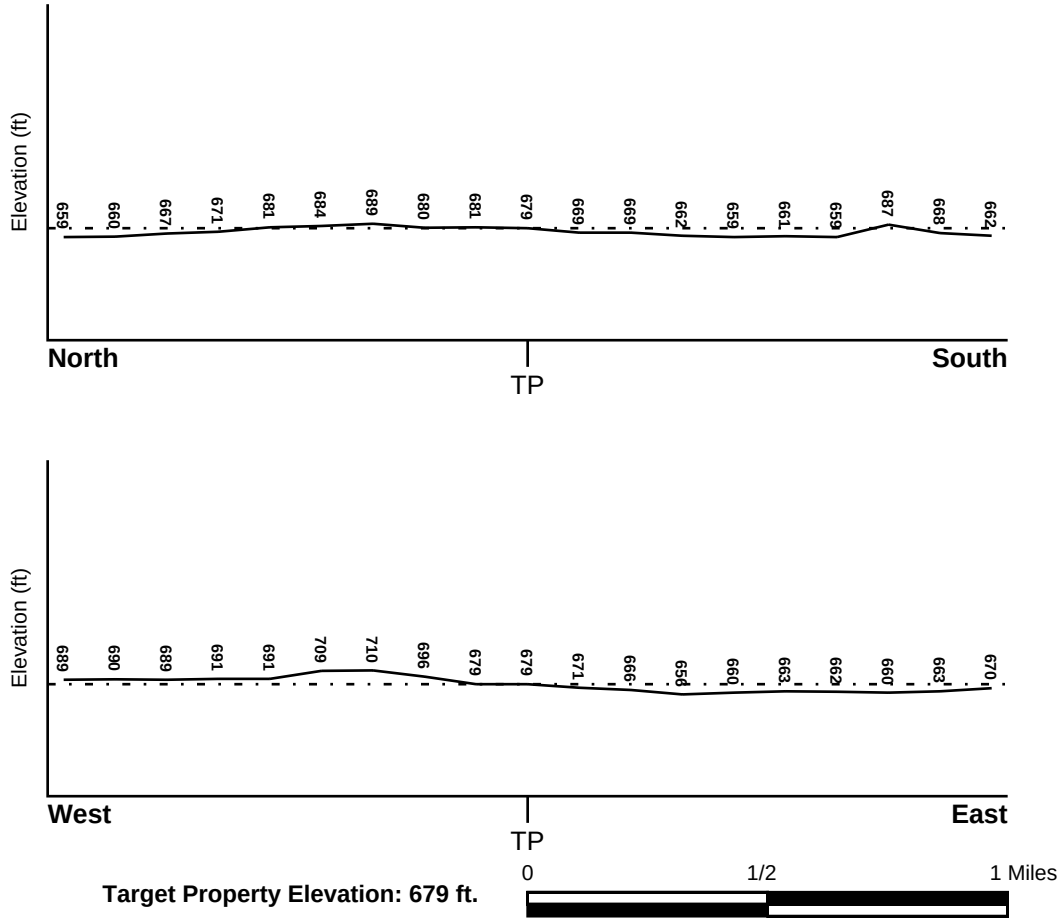
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' 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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
Not Reported	

Additional Panels in search area:	FEMA Source Type
26139C0318E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HOLLAND EAST	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

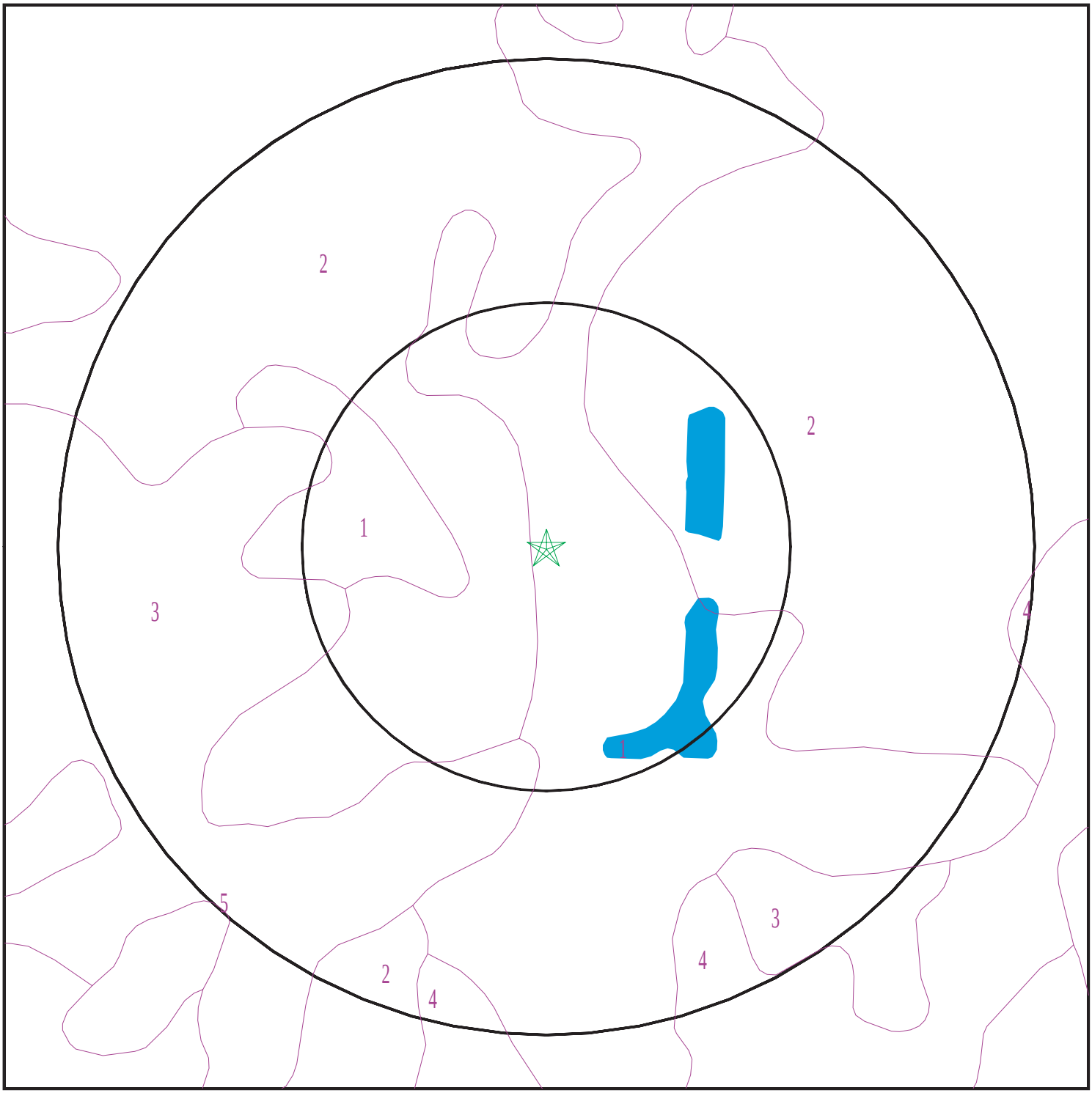
Era:	Paleozoic
System:	Mississippian
Series:	Osagean and Kinderhookian Series
Code:	M1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6857396.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	LG Energy Solutions Expansion	CLIENT:	Environmental Consulting Solutions, LLC
ADDRESS:	875 and 901 E 48th Street Holland MI 49423	CONTACT:	Julie Pratt
LAT/LONG:	42.756705 / 86.068367	INQUIRY #:	6857396.2s
		DATE:	February 14, 2022 10:15 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Corunna

Soil Surface Texture: sandy loam

Hydrologic Group: Class B/D - Drained/undrained hydrology class of soils that can be drained and are classified.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	11 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
3	33 inches	59 inches	clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: Blount

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 8.4 Min: 7.4
2	5 inches	26 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 8.4 Min: 7.4
3	26 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 8.4 Min: 7.4
4	29 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 0.42	Max: 8.4 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: Rimer

Soil Surface Texture: loamy sand

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 53 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.8
2	11 inches	22 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.8
3	22 inches	33 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.8
4	33 inches	59 inches	silty clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.8

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: Metamora

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
2	9 inches	20 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
3	20 inches	27 inches	clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6
4	27 inches	59 inches	loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 5

Soil Component Name: Belleville

Soil Surface Texture: loamy sand

Hydrologic Group: Class B/D - Drained/undrained hydrology class of soils that can be drained and are classified.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	12 inches	31 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	31 inches	59 inches	loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	MI5000000394852	1/4 - 1/2 Mile ESE
2	MI5000000399920	1/4 - 1/2 Mile North
3	MI5000000386004	1/4 - 1/2 Mile NE
4	MI5000000397322	1/4 - 1/2 Mile ESE
5	MI5000000391647	1/2 - 1 Mile East
6	MI5000000389329	1/2 - 1 Mile East
7	MI5000000391386	1/2 - 1 Mile ENE
8	MI5000000396302	1/2 - 1 Mile NE
A9	MI5000000390851	1/2 - 1 Mile NE
A10	MI5000000390860	1/2 - 1 Mile NE
B11	MI5000000390853	1/2 - 1 Mile NNE
B12	MI5000000390852	1/2 - 1 Mile NNE
13	MI5000000391150	1/2 - 1 Mile East
C14	MI5000000389973	1/2 - 1 Mile NE
C15	MI5000000389975	1/2 - 1 Mile NE
D16	MI5000000721729	1/2 - 1 Mile NNW
D17	MI5000000721728	1/2 - 1 Mile NNW

OTHER STATE DATABASE INFORMATION

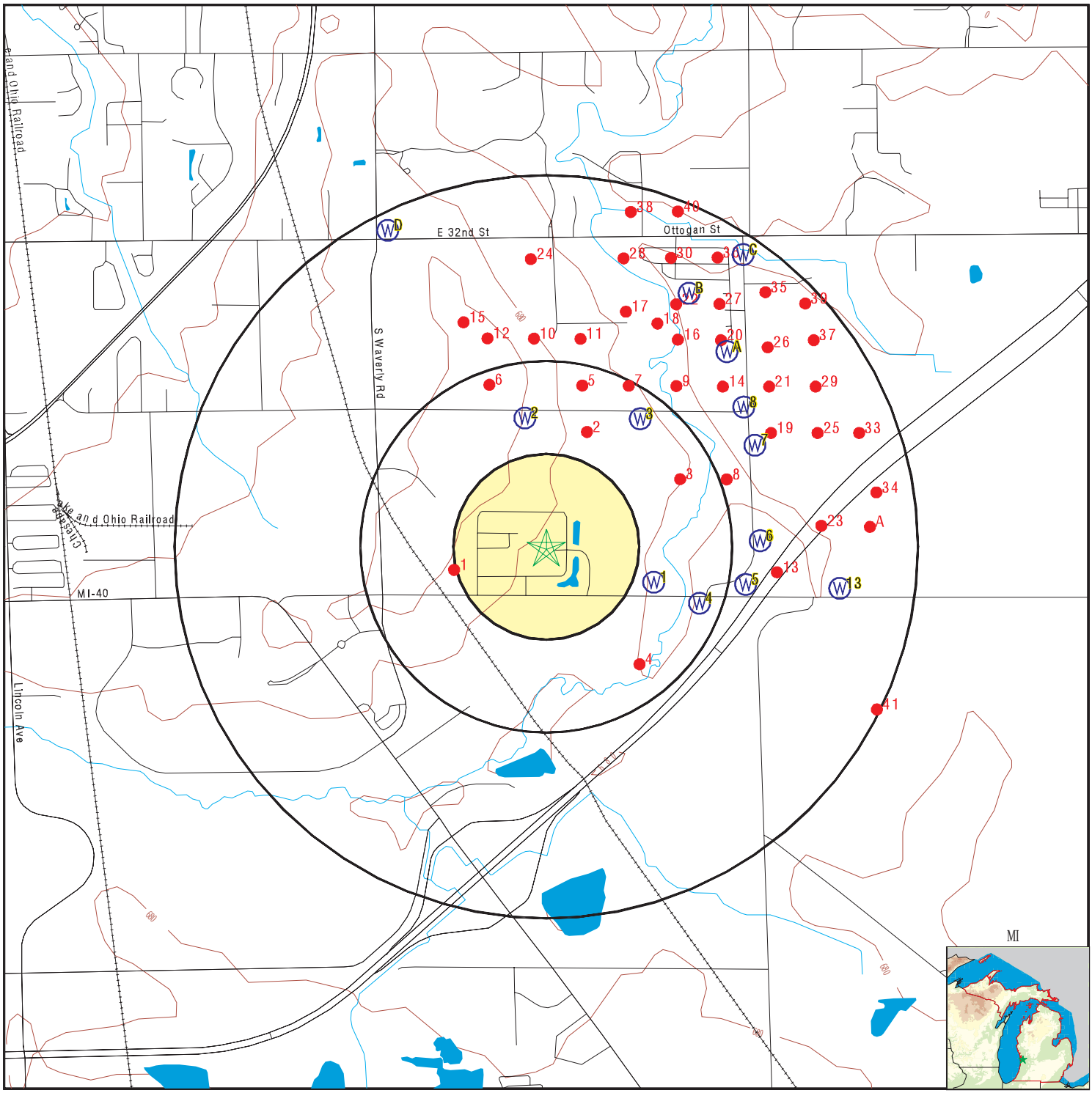
STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	MIOG12000001820	1/4 - 1/2 Mile WSW
2	MIOG12000002517	1/4 - 1/2 Mile NNE
3	MIOG12000004121	1/4 - 1/2 Mile ENE

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	MIOG12000002166	1/4 - 1/2 Mile SE
5	MIOG12000002497	1/4 - 1/2 Mile NNE
6	MIOG12000002460	1/4 - 1/2 Mile NNW
7	MIOG12000002472	1/4 - 1/2 Mile NNE
8	MIOG12000002315	1/2 - 1 Mile ENE
9	MIOG12000002484	1/2 - 1 Mile NE
10	MIOG12000002440	1/2 - 1 Mile North
11	MIOG12000002508	1/2 - 1 Mile North
12	MIOG12000004235	1/2 - 1 Mile NNW
13	MIOG12000001362	1/2 - 1 Mile East
14	MIOG12000002325	1/2 - 1 Mile NE
15	MIOG12000004490	1/2 - 1 Mile NNW
16	MIOG12000002454	1/2 - 1 Mile NNE
17	MIOG12000002434	1/2 - 1 Mile NNE
18	MIOG12000004083	1/2 - 1 Mile NNE
19	MIOG12000002308	1/2 - 1 Mile ENE
20	MIOG12000002450	1/2 - 1 Mile NE
21	MIOG12000002481	1/2 - 1 Mile NE
22	MIOG12000002436	1/2 - 1 Mile NNE
23	MIOG12000002397	1/2 - 1 Mile East
24	MIOG12000002441	1/2 - 1 Mile North
25	MIOG12000002492	1/2 - 1 Mile ENE
26	MIOG12000002331	1/2 - 1 Mile NE
27	MIOG12000002343	1/2 - 1 Mile NE
28	MIOG12000002419	1/2 - 1 Mile NNE
29	MIOG12000002358	1/2 - 1 Mile ENE
30	MIOG12000002382	1/2 - 1 Mile NNE
A31	MIOG12000002353	1/2 - 1 Mile East
A32	MIOG12000004119	1/2 - 1 Mile East
33	MIOG12000002400	1/2 - 1 Mile ENE
34	MIOG12000002647	1/2 - 1 Mile East
35	MIOG12000002415	1/2 - 1 Mile NE
36	MIOG12000002424	1/2 - 1 Mile NNE
37	MIOG12000002420	1/2 - 1 Mile NE
38	MIOG12000079193	1/2 - 1 Mile NNE
39	MIOG12000002344	1/2 - 1 Mile NE
40	MIOG12000079187	1/2 - 1 Mile NNE
41	MIOG12000004385	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 6857396.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

0 1/4 1/2 1 Miles

N

SITE NAME:	LG Energy Solutions Expansion	CLIENT:	Environmental Consulting Solutions, LLC
ADDRESS:	875 and 901 E 48th Street Holland MI 49423	CONTACT:	Julie Pratt
		INQUIRY #:	6857396.2s
LAT/LONG:	42.756705 / 86.068367	DATE:	February 14, 2022 10:15 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ESE
1/4 - 1/2 Mile
Lower

MI WELLS **MI5000000394852**

Well ID:	03000010650	Permit #:	None
Owner:	ELDON BRINK	Well Depth (ft):	89
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0458	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20081003
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	73
Screen Start Depth (ft):	73	Screen End Depth (ft):	81
Static Water Level (ft):	1	Flowing:	N
Test Drawdown Depth:	60	Test Hours:	1
Test Water Flow Rate:	6	Test Method:	TSTPUM
Well Grouted:	Y	Pump Capacity (gpm):	12
Elevation (ft):	0	Specific Capacity:	0.1
Rock Top (ft):	0		

2
North
1/4 - 1/2 Mile
Higher

MI WELLS **MI5000000399920**

Well ID:	03000016273	Permit #:	W19-197
Owner:	Jim & Amber Sebright	Well Depth (ft):	114
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-2342	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20190411
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	94
Screen Start Depth (ft):	94	Screen End Depth (ft):	114
Static Water Level (ft):	48	Flowing:	N
Test Drawdown Depth:	0	Test Hours:	1
Test Water Flow Rate:	75	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	10
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

3
NE
1/4 - 1/2 Mile
Lower

MI WELLS **MI5000000386004**

Well ID:	03000000791	Permit #:	Not Reported
Owner:	DEL GOORMAN	Well Depth (ft):	93
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Unknown	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20000516

Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	83
Screen Start Depth (ft):	83	Screen End Depth (ft):	93
Static Water Level (ft):	22	Flowing:	N
Test Drawdown Depth:	27	Test Hours:	1
Test Water Flow Rate:	35	Test Method:	OTH
Well Grouted:	Y	Pump Capacity (gpm):	12
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

4
ESE **MI WELLS** **MI5000000397322**
1/4 - 1/2 Mile
Lower

Well ID:	03000013425	Permit #:	Not Reported
Owner:	Cal VanOss	Well Depth (ft):	99
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-2342	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20140911
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	89
Screen Start Depth (ft):	89	Screen End Depth (ft):	99
Static Water Level (ft):	0	Flowing:	N
Test Drawdown Depth:	0	Test Hours:	1
Test Water Flow Rate:	100	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	10
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

5
East **MI WELLS** **MI5000000391647**
1/2 - 1 Mile
Lower

Well ID:	03000006990	Permit #:	Not Reported
Owner:	JACK DEWITT/LINDA SOUTH	Well Depth (ft):	77
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0458	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20041111
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	65
Screen Start Depth (ft):	65	Screen End Depth (ft):	77
Static Water Level (ft):	5	Flowing:	N
Test Drawdown Depth:	5	Test Hours:	1
Test Water Flow Rate:	70	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	12
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

6
East
1/2 - 1 Mile
Lower

MI WELLS **MI5000000389329**

Well ID:	03000004286	Permit #:	Not Reported
Owner:	STEVEN KEMPKERS	Well Depth (ft):	96
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0458	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	00000000
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	80
Screen Start Depth (ft):	80	Screen End Depth (ft):	96
Static Water Level (ft):	6	Flowing:	N
Test Drawdown Depth:	6	Test Hours:	1
Test Water Flow Rate:	50	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	20
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

7
ENE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000391386**

Well ID:	03000006717	Permit #:	Not Reported
Owner:	Howard Hulst	Well Depth (ft):	81
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-2342	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20041201
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	61
Screen Start Depth (ft):	61	Screen End Depth (ft):	81
Static Water Level (ft):	12	Flowing:	N
Test Drawdown Depth:	33	Test Hours:	1
Test Water Flow Rate:	30	Test Method:	TSTPUM
Well Grouted:	Y	Pump Capacity (gpm):	10
Elevation (ft):	0	Specific Capacity:	0.90909091
Rock Top (ft):	0		

8
NE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000396302**

Well ID:	03000012314	Permit #:	Not Reported
Owner:	Chad Jones	Well Depth (ft):	90
Well Type:	Household	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	70-1922	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20121112

Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	80
Screen Start Depth (ft):	80	Screen End Depth (ft):	90
Static Water Level (ft):	21	Flowing:	N
Test Drawdown Depth:	0	Test Hours:	1
Test Water Flow Rate:	50	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	20
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

A9
NE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000390851**

Well ID:	03000006082	Permit #:	Not Reported
Owner:	HIDDEN CREEK ESTATES	Well Depth (ft):	94
Well Type:	Type I Public	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	40682	Well #:	WELL 2
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20000413
Casing Type:	Steel-Unknown	Other Casing Info:	Not Reported
Casing Diameter (in):	8	Casing Depth (ft):	74
Screen Start Depth (ft):	74	Screen End Depth (ft):	94
Static Water Level (ft):	10	Flowing:	N
Test Drawdown Depth:	22	Test Hours:	1
Test Water Flow Rate:	35	Test Method:	AIR
Well Grouted:	Y	Pump Capacity (gpm):	0
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

A10
NE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000390860**

Well ID:	03000006103	Permit #:	Not Reported
Owner:	HIDDEN CREEK ESTATES	Well Depth (ft):	95
Well Type:	Type I Public	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	40682	Well #:	WELL 1
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	19940727
Casing Type:	Steel-Unknown	Other Casing Info:	Not Reported
Casing Diameter (in):	8	Casing Depth (ft):	80
Screen Start Depth (ft):	60	Screen End Depth (ft):	75
Static Water Level (ft):	10	Flowing:	N
Test Drawdown Depth:	33	Test Hours:	7
Test Water Flow Rate:	350	Test Method:	TSTPUM
Well Grouted:	Y	Pump Capacity (gpm):	0
Elevation (ft):	0	Specific Capacity:	10.60606061
Rock Top (ft):	0		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B11
NNE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000390853**

Well ID:	03000006084	Permit #:	Not Reported
Owner:	ELMER DEFRELL, HIDDEN CREEK		
Well Depth (ft):	0	Well Type:	Test Well
Other Type Info:	Not Reported	Well Status:	Active
Other Status Info:	Not Reported	Water Supply Serial #:	40682
Well #:	OW-2	Driller ID:	03-0764
Drill Method:	ROTARY	Other Method Info:	Not Reported
Construction Date:	19991207	Casing Type:	Unknown
Other Casing Info:	Not Reported	Casing Diameter (in):	0
Casing Depth (ft):	0	Screen Start Depth (ft):	0
Screen End Depth (ft):	0	Static Water Level (ft):	0
Flowing:	N	Test Drawdown Depth:	0
Test Hours:	0	Test Water Flow Rate:	0
Test Method:	UNK	Well Grouted:	Y
Pump Capacity (gpm):	0	Elevation (ft):	0
Specific Capacity:	0	Rock Top (ft):	0

B12
NNE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000390852**

Well ID:	03000006083	Permit #:	Not Reported
Owner:	DEFRELL HIDDEN CREEK	Well Depth (ft):	90
Well Type:	Test Well	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	40682	Well #:	OW-1
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	19940718
Casing Type:	PVC Plastic	Other Casing Info:	Not Reported
Casing Diameter (in):	5	Casing Depth (ft):	0
Screen Start Depth (ft):	70	Screen End Depth (ft):	90
Static Water Level (ft):	10	Flowing:	N
Test Drawdown Depth:	0	Test Hours:	0
Test Water Flow Rate:	0	Test Method:	UNK
Well Grouted:	Y	Pump Capacity (gpm):	0
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

13
East
1/2 - 1 Mile
Lower

MI WELLS **MI5000000391150**

Well ID:	03000006470	Permit #:	Not Reported
Owner:	Preferred Hog Farm--Russcher		
Well Depth (ft):	42	Well Type:	Household
Other Type Info:	Not Reported	Well Status:	Active
Other Status Info:	Not Reported	Water Supply Serial #:	0
Well #:	Not Reported	Driller ID:	03-2341
Drill Method:	ROTARY	Other Method Info:	Not Reported

Construction Date:	20040909	Casing Type:	PVC Plastic
Other Casing Info:	Not Reported	Casing Diameter (in):	5
Casing Depth (ft):	32	Screen Start Depth (ft):	32
Screen End Depth (ft):	42	Static Water Level (ft):	12
Flowing:	N	Test Drawdown Depth:	20
Test Hours:	1	Test Water Flow Rate:	35
Test Method:	TSTPUM	Well Grouted:	Y
Pump Capacity (gpm):	15	Elevation (ft):	656
Specific Capacity:	1.75	Rock Top (ft):	0

C14
NE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000389973**

Well ID:	03000005049	Permit #:	Not Reported
Owner:	HIDDEN CREEK M.H.P.	Well Depth (ft):	95
Well Type:	Type I Public	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	40682	Well #:	TPW-1
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	19940722
Casing Type:	Not Reported	Other Casing Info:	Not Reported
Casing Diameter (in):	0	Casing Depth (ft):	0
Screen Start Depth (ft):	0	Screen End Depth (ft):	0
Static Water Level (ft):	0	Flowing:	Not Reported
Test Drawdown Depth:	0	Test Hours:	0
Test Water Flow Rate:	0	Test Method:	Not Reported
Well Grouted:	Not Reported	Pump Capacity (gpm):	115
Elevation (ft):	650	Specific Capacity:	0
Rock Top (ft):	0		

C15
NE
1/2 - 1 Mile
Lower

MI WELLS **MI5000000389975**

Well ID:	03000005051	Permit #:	Not Reported
Owner:	HIDDEN CREEK M.H.P.	Well Depth (ft):	94
Well Type:	Type I Public	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	40682	Well #:	PW #2
Driller ID:	03-0764	Drill Method:	ROTARY
Other Method Info:	Not Reported	Construction Date:	20000413
Casing Type:	Not Reported	Other Casing Info:	Not Reported
Casing Diameter (in):	0	Casing Depth (ft):	0
Screen Start Depth (ft):	0	Screen End Depth (ft):	0
Static Water Level (ft):	0	Flowing:	Not Reported
Test Drawdown Depth:	0	Test Hours:	0
Test Water Flow Rate:	0	Test Method:	Not Reported
Well Grouted:	Not Reported	Pump Capacity (gpm):	115
Elevation (ft):	650	Specific Capacity:	0
Rock Top (ft):	0		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D16
NNW
1/2 - 1 Mile
Higher

MI WELLS **MI5000000721729**

Well ID:	70000017363	Permit #:	Not Reported
Owner:	PRINCE CORP R AND D	Well Depth (ft):	123
Well Type:	Test Well	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0764	Drill Method:	Unknown
Other Method Info:	Not Reported	Construction Date:	19880310
Casing Type:	Steel-Unknown	Other Casing Info:	Not Reported
Casing Diameter (in):	8	Casing Depth (ft):	83
Screen Start Depth (ft):	83	Screen End Depth (ft):	123
Static Water Level (ft):	51	Flowing:	U
Test Drawdown Depth:	81.5	Test Hours:	25
Test Water Flow Rate:	300	Test Method:	UNK
Well Grouted:	Y	Pump Capacity (gpm):	275
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

D17
NNW
1/2 - 1 Mile
Higher

MI WELLS **MI5000000721728**

Well ID:	70000017362	Permit #:	Not Reported
Owner:	PRINCE CORP R AND D	Well Depth (ft):	67
Well Type:	Test Well	Other Type Info:	Not Reported
Well Status:	Active	Other Status Info:	Not Reported
Water Supply Serial #:	0	Well #:	Not Reported
Driller ID:	03-0764	Drill Method:	Unknown
Other Method Info:	Not Reported	Construction Date:	19871101
Casing Type:	Steel-Unknown	Other Casing Info:	Not Reported
Casing Diameter (in):	8	Casing Depth (ft):	47
Screen Start Depth (ft):	47	Screen End Depth (ft):	67
Static Water Level (ft):	21	Flowing:	U
Test Drawdown Depth:	45	Test Hours:	24
Test Water Flow Rate:	160	Test Method:	UNK
Well Grouted:	Y	Pump Capacity (gpm):	100
Elevation (ft):	0	Specific Capacity:	0
Rock Top (ft):	0		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW **OIL_GAS** **MIOG12000001820**
1/4 - 1/2 Mile

API Well #:	21005074910000	Permit #:	7491
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1646
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Grotenhuis, William	Well #:	1
Operator #:	2560		
Company Name:	Vahue Oil Syndicate		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

2
NNE **OIL_GAS** **MIOG12000002517**
1/4 - 1/2 Mile

API Well #:	21005119330000	Permit #:	11933
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1552
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10761.00000000
Lease Name:	Fairbanks, Austin	Well #:	1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

3
ENE **OIL_GAS** **MIOG12000004121**
1/4 - 1/2 Mile

API Well #:	21005228550000	Permit #:	22855
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	2840
True Vertical Depth:	0	Deepest Formation:	BASS ISLANDS
Formation Tops:	K	Field Name:	Fillmore
Production Formation:	SALINA(G)	Production Unit #:	15094.00000000
Lease Name:	Rabbers, V Comm	Well #:	1
Operator #:	166		
Company Name:	Exxon Corp		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

4
SE
1/4 - 1/2 Mile

OIL_GAS **MIOG12000002166**

API Well #:	21005089500000	Permit #:	8950
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1635
True Vertical Depth:	0	Deepest Formation:	TRAVERSE FORMATION
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Vandenbelt, William And Martha	Well #:	1
Operator #:	824		
Company Name:	Fitchett J H Trustee		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

5
NNE
1/4 - 1/2 Mile

OIL_GAS **MIOG12000002497**

API Well #:	21005116990000	Permit #:	11699
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1544
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10778.00000000
Lease Name:	Welscott, James A & Anna	Well #:	4
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

6
NNW
1/4 - 1/2 Mile

OIL_GAS **MIOG12000002460**

API Well #:	21005114010000	Permit #:	11401
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1629
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Welscott, James A & Anna	Well #:	2
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

7
NNE **OIL_GAS** **MIOG12000002472**
1/4 - 1/2 Mile

API Well #:	21005114940000	Permit #:	11494
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1536
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10777.00000000
Lease Name:	Welscott, James A & Anna	Well #:	3
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

8
ENE **OIL_GAS** **MIOG12000002315**
1/2 - 1 Mile

API Well #:	21005103090000	Permit #:	10309
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1545
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10782.00000000
Lease Name:	Dykhuis, Alice	Well #:	1
Operator #:	2572		
Company Name:	Vandenberg William C		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

9
NE **OIL_GAS** **MIOG12000002484**
1/2 - 1 Mile

API Well #:	21005115960000	Permit #:	11596
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1529
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Dykhuis & Pelon Comm	Well #:	4
Operator #:	3493		
Company Name:	Marvel Production Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

10
North
1/2 - 1 Mile

OIL_GAS **MIOG12000002440**

API Well #:	21005112460000	Permit #:	11246
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1563
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10776.00000000
Lease Name:	Welscott, James A & Anna	Well #:	1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

11
North
1/2 - 1 Mile

OIL_GAS **MIOG12000002508**

API Well #:	21005118230000	Permit #:	11823
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1540
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10760.00000000
Lease Name:	Elferdink, Gerritt & Albert	Well #:	1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

12
NNW
1/2 - 1 Mile

OIL_GAS **MIOG12000004235**

API Well #:	21005242810000	Permit #:	24281
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	2886
True Vertical Depth:	0	Deepest Formation:	SYLVANIA SANDSTONE
Formation Tops:	K	Field Name:	Fillmore
Production Formation:	SALINA(G)	Production Unit #:	15091.00000000
Lease Name:	Boeve, W Comm	Well #:	1
Operator #:	3389		
Company Name:	Humble Oil And Refining Co Now Exxon		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

13
East **OIL_GAS** **MIOG12000001362**
1/2 - 1 Mile

API Well #:	21005053160000	Permit #:	5316
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1612
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Kortering, Herman	Well #:	1
Operator #:	2261		
Company Name:	Smith Petroleum Co And Wagner Gerald Trustee		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

14
NE **OIL_GAS** **MIOG12000002325**
1/2 - 1 Mile

API Well #:	21005104380000	Permit #:	10438
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1532
True Vertical Depth:	0	Deepest Formation:	TRAVERSE FORMATION
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10732.00000000
Lease Name:	Dykhuis & Pelon Comm	Well #:	1
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

15
NNW **OIL_GAS** **MIOG12000004490**
1/2 - 1 Mile

API Well #:	21005606337000	Permit #:	NP22029
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Mineral (Non-Confidential)
Slant:	V	Total Depth Drilled:	845
True Vertical Depth:	0	Deepest Formation:	COLDWATER SHALE
Formation Tops:	Not Reported	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Shell Petroleum	Well #:	K304
Operator #:	7384		
Company Name:	Shell Petroleum Corporation		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

16
NNE **OIL_GAS** **MIOG12000002454**
1/2 - 1 Mile

API Well #:	21005113620000	Permit #:	11362
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1539
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10747.00000000
Lease Name:	Dykhuis & Pelon Comm	Well #:	3
Operator #:	3493		
Company Name:	Marvel Production Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

17
NNE **OIL_GAS** **MIOG12000002434**
1/2 - 1 Mile

API Well #:	21005112080000	Permit #:	11208
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1537
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10733.00000000
Lease Name:	Elferdink, Albert & Gerrit	Well #:	2
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

18
NNE **OIL_GAS** **MIOG12000004083**
1/2 - 1 Mile

API Well #:	21005219960000	Permit #:	21996
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	2800
True Vertical Depth:	0	Deepest Formation:	BASS ISLANDS
Formation Tops:	K	Field Name:	Fillmore
Production Formation:	SALINA(G)	Production Unit #:	15092.00000000
Lease Name:	Dykhuis, P Community	Well #:	1
Operator #:	3389		
Company Name:	Humble Oil And Refining Co Now Exxon		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

19
ENE
1/2 - 1 Mile

OIL_GAS **MIOG12000002308**

API Well #:	21005102290000	Permit #:	10229
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1534
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10757.00000000
Lease Name:	Dykhuis	Well #:	A-1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

20
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002450**

API Well #:	21005113090000	Permit #:	11309
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1529
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10746.00000000
Lease Name:	Dykhuis & Pelon Comm	Well #:	2
Operator #:	3493		
Company Name:	Marvel Production Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

21
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002481**

API Well #:	21005115860000	Permit #:	11586
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1526
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10756.00000000
Lease Name:	Dykhuis, Nicholas	Well #:	1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

22
NNE **OIL_GAS** **MIOG12000002436**
1/2 - 1 Mile

API Well #:	21005112290000	Permit #:	11229
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1545
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10737.00000000
Lease Name:	Pelon, John	Well #:	4
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

23
East **OIL_GAS** **MIOG12000002397**
1/2 - 1 Mile

API Well #:	21005109460000	Permit #:	10946
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1548
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10741.00000000
Lease Name:	Kortering, Herman	Well #:	1
Operator #:	3207		
Company Name:	Lang J W Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

24
North **OIL_GAS** **MIOG12000002441**
1/2 - 1 Mile

API Well #:	21005112550000	Permit #:	11255
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1563
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Schaap, John & Hattie	Well #:	1
Operator #:	3398		
Company Name:	Harris Oil Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

25
ENE
1/2 - 1 Mile

OIL_GAS **MIOG12000002492**

API Well #:	21005116580000	Permit #:	11658
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1533
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10758.00000000
Lease Name:	Dykhuis, Nick	Well #:	A-2
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

26
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002331**

API Well #:	21005104910000	Permit #:	10491
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1521
True Vertical Depth:	0	Deepest Formation:	TRAVERSE FORMATION
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10728.00000000
Lease Name:	Dykhuis, Nickolas & Henrietta	Well #:	1
Operator #:	4120		
Company Name:	Breuker Esther		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

27
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002343**

API Well #:	21005106140000	Permit #:	10614
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1531
True Vertical Depth:	0	Deepest Formation:	TRAVERSE FORMATION
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10734.00000000
Lease Name:	Pelon, John	Well #:	1
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

28
NNE **OIL_GAS** **MIOG12000002419**
1/2 - 1 Mile

API Well #:	21005110890000	Permit #:	11089
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1504
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10781.00000000
Lease Name:	Elferdink	Well #:	1
Operator #:	2520		
Company Name:	Tucek Herbert W		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

29
ENE **OIL_GAS** **MIOG12000002358**
1/2 - 1 Mile

API Well #:	21005107420000	Permit #:	10742
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1530
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	7460.00000000
Lease Name:	Dykhuis, Nickolas & Henrietta	Well #:	2
Operator #:	3072		
Company Name:	Bruce Alan Enterprises Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

30
NNE **OIL_GAS** **MIOG12000002382**
1/2 - 1 Mile

API Well #:	21005108430000	Permit #:	10843
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1529
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10735.00000000
Lease Name:	Pelon, John	Well #:	2
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

A31
East
1/2 - 1 Mile

OIL_GAS **MIOG12000002353**

API Well #:	21005106930000	Permit #:	10693
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1550
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10725.00000000
Lease Name:	Mokma, Thomas	Well #:	1
Operator #:	332		
Company Name:	Boeve Russell		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

A32
East
1/2 - 1 Mile

OIL_GAS **MIOG12000004119**

API Well #:	21005228180000	Permit #:	22818
Completion:	0	Well Type:	Not Reported
Well Status:	Producing	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	2840
True Vertical Depth:	0	Deepest Formation:	BASS ISLANDS
Formation Tops:	K	Field Name:	Fillmore
Production Formation:	SALINA(G)	Production Unit #:	3036.00000000
Lease Name:	Mokma, T Comm	Well #:	1
Operator #:	5260		
Company Name:	Goodale Enterprises Llc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

33
ENE
1/2 - 1 Mile

OIL_GAS **MIOG12000002400**

API Well #:	21005109550000	Permit #:	10955
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1555
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10724.00000000
Lease Name:	Mokma, Thomas & Jennie; Dykhuis, N & H Com		
Well #:	1	Operator #:	3988
Company Name:	Blackburn Lowell And Mary		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

34
East
1/2 - 1 Mile

OIL_GAS **MIOG12000002647**

API Well #:	21005127500000	Permit #:	12750
Completion:	0	Well Type:	Not Reported
Well Status:	Producing	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1532
True Vertical Depth:	0	Deepest Formation:	TRAVERSE FORMATION
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	7459.00000000
Lease Name:	Mokma, Thomas & Jennie	Well #:	1
Operator #:	3072		
Company Name:	Bruce Alan Enterprises Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

35
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002415**

API Well #:	21005110560000	Permit #:	11056
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1540
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10729.00000000
Lease Name:	Ryzenga, H.	Well #:	2
Operator #:	577		
Company Name:	Cook Spencer W Trustee		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

36
NNE
1/2 - 1 Mile

OIL_GAS **MIOG12000002424**

API Well #:	21005111340000	Permit #:	11134
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1530
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10736.00000000
Lease Name:	Pelon, John	Well #:	3
Operator #:	3484		
Company Name:	Grimes Carl E		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

37
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002420**

API Well #:	21005111040000	Permit #:	11104
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1535
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10748.00000000
Lease Name:	Dykhuis, Nicholas And Henrietta	Well #:	3
Operator #:	1643		
Company Name:	Michigan Devonian Petroleum Co		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

38
NNE
1/2 - 1 Mile

OIL_GAS **MIOG12000079193**

API Well #:	21139112140000	Permit #:	11214
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1532
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	Not Reported
Lease Name:	Naber, John	Well #:	4
Operator #:	2478		
Company Name:	Thompson And Fitchett		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

39
NE
1/2 - 1 Mile

OIL_GAS **MIOG12000002344**

API Well #:	21005106270000	Permit #:	10627
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1516
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10774.00000000
Lease Name:	Ryzenga, H	Well #:	1
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

Map ID
Direction
Distance

Database EDR ID Number

40
NNE
1/2 - 1 Mile

OIL_GAS **MIOG12000079187**

API Well #:	21139111010000	Permit #:	11101
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	1540
True Vertical Depth:	0	Deepest Formation:	TRAVERSE LIMESTONE
Formation Tops:	G	Field Name:	Fillmore
Production Formation:	TRAVERSE GROUP(O)	Production Unit #:	10767.00000000
Lease Name:	Naber, John	Well #:	3
Operator #:	3478		
Company Name:	Oil Producers Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

41
ESE
1/2 - 1 Mile

OIL_GAS **MIOG12000004385**

API Well #:	21005343650000	Permit #:	34365
Completion:	0	Well Type:	Not Reported
Well Status:	Plugging Approved	Bore Type:	Oil and Gas Test
Slant:	V	Total Depth Drilled:	3031
True Vertical Depth:	0	Deepest Formation:	NIAGARAN BROWN
Formation Tops:	K	Field Name:	Not Reported
Production Formation:	Not Reported	Production Unit #:	Not Reported
Lease Name:	Dozeman Comm	Well #:	1
Operator #:	2691		
Company Name:	World Wide Investments Inc		
Surface Owner:	Not Reported	State Owned Land:	0
Federally Owned Land:	0	Permit Date:	Not Reported
Plug Date:	Not Reported	H2S Concentration:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MI Radon

Radon Test Results

Zipcode	Test Date	LT Sign	Result
49423	1/26/2007	<	0.3
49423	1/18/1996	<	0.3
49423	1/16/1996	<	0.3
49423	2/23/2004	<	0.3
49423	12/8/1998	<	0.3
49423	11/5/1998	<	0.3
49423	9/1/2005	<	0.3
49423	2/4/2006	<	0.3
49423	2/5/2007		0.5
49423	12/27/2005		0.5
49423	1/26/2006		0.5
49423	3/6/2006	<	0.3
49423	3/8/1999	<	0.3
49423	11/5/2007		0.5
49423	7/18/2008		0.5
49423	12/17/2002	<	0.3
49423	1/24/2005	<	0.3
49423	2/15/2007	<	0.3
49423	4/18/1994		0.5
49423	3/12/2008	<	0.3
49423	3/17/2008	<	0.3
49423	12/24/2008	<	0.3
49423	4/3/1995		0.5
49423	2/17/2003	<	0.3
49423	1/7/1995		0.4
49423	3/31/2003	<	0.3
49423	5/10/2005	<	0.3
49423	11/20/1998	<	0.3
49423	1/16/1995	<	0.3
49423	10/30/1998	<	0.3
49423	6/26/1995	<	0.3
49423	10/14/2003	<	0.3
49423	2/7/2004	<	0.3
49423	3/10/2004	<	0.3
49423	1/2/2008	<	0.3
49423	11/5/1998	<	0.3
49423	12/21/1996	<	0.3
49423	5/17/2003	<	0.3
49423	5/13/2003	<	0.3
49423	2/1/2006	<	0.3
49423	4/28/2006	<	0.3
49423	1/20/2007	<	0.3
49423	12/18/1998	<	0.3
49423	2/23/2004	<	0.3
49423	2/23/2004	<	0.3
49423	2/28/2007	<	0.3
49423			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	1/3/1995	0.8
49423	5/22/2002	0.5
49423	2/21/1995	0.8
49423	12/27/1994	0.8
49423	3/2/1998	0.8
49423	11/6/1998	0.9
49423	3/5/2005	0.6
49423	8/4/2003	0.8
49423	2/21/2004	0.7
49423	11/10/2005	0.7
49423	12/24/1994	0.9
49423	11/13/1998	0.9
49423	11/9/1998	0.9
49423	10/29/1998	0.9
49423	3/24/2005	0.6
49423	6/14/2004	0.8
49423	2/27/2006	0.7
49423	4/21/2005	0.6
49423	10/1/2005	0.8
49423	4/11/2006	0.8
49423	6/7/2006	0.7
49423	9/27/2001	0.9
49423	1/30/2006	0.6
49423	12/22/2005	0.6
49423	3/26/2007	0.7
49423	2/13/2006	0.6
49423	2/6/2006	0.6
49423	6/12/2006	0.8
49423	12/24/2008	0.8
49423	7/20/2007	0.8
49423	12/23/1999	0.7
49423	2/22/2006	0.9
49423	2/15/2007	0.9
49423	2/5/2007	0.9
49423	3/21/2000	0.6
49423	1/25/2000	0.7
49423	3/5/2007	0.9
49423	3/10/2007	0.9
49423	1/25/2000	0.8
49423	1/23/2001	0.8
49423	3/9/2009	0.7
49423	5/26/2009	0.7
49423	10/29/1998	0.6
49423	2/11/2000	0.9
49423	2/5/2000	0.9
49423	2/23/2009	0.6
49423	3/23/2009	0.6
49423	11/27/1998	0.5
49423	11/3/2009	0.8
49423	1/11/1999	0.6
49423	11/2/1998	0.6
49423	10/29/1998	0.6
49423	1/16/1996	0.6
49423	4/20/1998	0.6
49423	12/4/1998	0.6
49423	10/29/1998	0.5
49423		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	12/5/1998	0.5
49423	11/28/1998	0.5
49423	2/14/2009	0.8
49423	11/2/1998	0.6
49423	3/17/1995	0.6
49423	2/3/1995	0.6
49423	10/29/1998	0.5
49423	11/7/1998	0.5
49423	11/26/1994	0.5
49423	10/29/1998	0.5
49423	1/21/1995	0.5
49423	12/26/1998	0.6
49423	12/26/1998	0.6
49423	11/3/1995	0.7
49423	9/25/2002	0.7
49423	1/8/2003	0.6
49423	4/13/2009	0.9
49423	3/17/2009	1.6
49423	2/22/1995	1.5
49423	10/29/1998	1.5
49423	1/23/2006	1.6
49423	2/3/2007	1.6
49423	4/30/2007	1.5
49423	3/18/2008	1.5
49423	1/22/2000	1.5
49423	10/22/2002	1.5
49423	2/8/2003	1.5
49423	11/5/2003	1.5
49423	1/11/1999	1.4
49423	11/6/1995	1.4
49423	3/19/1998	1.4
49423	1/3/1995	1.4
49423	11/5/1998	1.4
49423	4/11/2008	1.4
49423	3/23/1994	1.4
49423	11/22/1999	1.4
49423	3/4/2006	1.4
49423	2/3/2007	1.4
49423	1/22/2007	1.3
49423	1/22/2007	1.3
49423	11/16/1998	1.3
49423	11/6/1998	1.3
49423	12/12/1995	1.3
49423	11/9/1998	1.3
49423	2/8/2003	1.3
49423	1/7/1995	1.2
49423	11/16/1998	1.2
49423	11/14/1998	1.2
49423	3/16/2007	1.3
49423	3/20/2000	1.3
49423	2/19/2000	1.3
49423	3/30/1994	1.3
49423	1/22/2000	1.3
49423	3/24/2001	1.3
49423	5/1/1999	1.3
49423	4/2/2009	1.3
49423		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	11/12/1999	1.2
49423	6/16/2001	1.2
49423	5/20/1999	1.2
49423	5/9/1994	1.2
49423	11/25/1998	1.2
49423	5/31/2005	1.2
49423	1/21/1995	1.1
49423	11/5/1998	1.1
49423	10/29/1998	1.1
49423	11/7/1995	1.1
49423	11/24/1998	1.1
49423	1/25/2000	1.1
49423	1/26/2007	1.1
49423	1/25/2007	1.1
49423	2/28/2006	1.1
49423	10/31/2006	1.1
49423	10/12/2007	1.1
49423	11/2/1998	1.0
49423	10/31/1998	1.0
49423	2/12/2004	1.0
49423	11/12/1998	1.0
49423	10/29/1998	1.0
49423	6/15/2000	1.0
49423	2/6/2006	1.0
49423	1/15/2007	1.0
49423	5/16/2007	1.0
49423	11/5/1998	2.0
49423	2/16/1996	4.0
49423	1/22/2002	4.1
49423	11/2/1998	4.2
49423	12/11/2009	4.6
49423	11/10/1995	4.5
49423	12/26/2006	4.5
49423	3/28/2008	4.2
49423	4/15/1999	4.1
49423	6/1/2004	1.9
49423	4/25/2005	1.9
49423	1/27/1995	1.9
49423	11/16/1998	1.9
49423	10/29/1998	1.9
49423	10/31/1998	1.9
49423	10/31/1998	1.9
49423	4/26/1996	1.9
49423	11/20/1998	1.9
49423	12/31/2005	1.9
49423	8/24/2005	1.9
49423	2/1/1999	1.8
49423	11/4/1998	1.8
49423	11/5/1998	1.8
49423	12/7/1996	1.8
49423	1/23/2006	1.9
49423	2/6/2006	1.9
49423	4/19/2008	1.8
49423	2/18/2000	1.8
49423	2/24/1999	1.7
49423	2/2/2007	1.8
49423		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	11/9/1999		1.7
49423	2/7/2000		1.7
49423	11/16/1998		1.7
49423	11/7/1998		1.7
49423	1/23/2007		1.7
49423	10/29/1998		1.6
49423	1/19/2007		1.6
49423	1/31/2009	<	0.3
49423	9/21/2009	<	0.3
49423	9/8/2009	<	0.3
49423	1/14/2000		6.4
49423	1/22/2002		5.9
49423	11/2/1998		4.7
49423	2/3/2003		5.4
49423	1/17/2000		5.1
49423	1/17/2000		5.8
49423	1/22/2007		4.7
49423	5/30/2008		5.3
49423	6/29/2009		6.7
49423	12/7/1998		14.7
49423	1/29/2010		12.4
49423	11/17/2000		10.0
49423	1/22/2007		2.1
49423	11/3/2009		8.3
49423	2/24/2007		2.1
49423	8/11/2006		2.0
49423	9/1/2006		2.0
49423	4/2/1999		2.0
49423	10/31/1998		0.8
49423	11/5/1998		0.8
49423	10/30/1998		2.6
49423	2/2/2000		2.9
49423	2/25/1999		2.5
49423	11/10/1998		2.4
49423	11/2/2002		2.4
49423	3/30/2004		2.4
49423	1/25/2007		2.4
49423	2/28/2007		2.4
49423	8/13/2007		2.4
49423	7/9/2007		2.3
49423	1/25/2007		2.2
49423	2/11/2008		2.2
49423	3/7/2008		2.2
49423	11/9/1998		2.3
49423	3/17/2007		2.2
49423	1/18/2000		2.2
49423	3/28/1994		2.2
49423	11/23/1998		2.3
49423	1/11/1999		2.2
49423	12/13/1995		2.2
49423	3/6/2001		2.2
49423	1/29/1999		2.2
49423	2/6/2006		2.2
49423	4/7/2006		3.0
49423	1/28/2000		3.0
49423	11/25/2000		3.0
49423			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	10/29/1998		2.8
49423	10/14/2003		2.8
49423	8/29/2002		2.8
49423	11/12/1998		2.9
49423	3/17/2008		2.7
49423	3/16/2009	<	0.3
49423	11/4/2008		3.8
49423	2/21/2009	<	0.3
49423	1/19/2010		3.8
49423	11/2/1998		3.5
49423	1/29/2000	<	0.3
49423	1/28/2000	<	0.3
49423	1/29/2000	<	0.3
49423	4/21/1994	<	0.3
49423	11/30/1993	<	0.3
49423	11/12/1998		3.4
49423	11/9/1998		3.4
49423	2/14/2000	<	0.3
49423	11/9/1998		3.2
49423	10/9/2006		3.1
49423	3/23/1994	<	0.3
49423	11/5/1998		3.3
49423	12/28/1999		3.1
49423	1/30/2007		3.2
49423	3/25/1994	<	0.3
49423	3/29/1994	<	0.3
49423	3/31/1994	<	0.3
49423	7/19/2006		3.3
49423	1/23/1996		3.0
49423	1/21/2009	<	0.3
49423	11/2/1998		3.1
49423	7/24/2009	<	0.3
49423	11/21/1998		3.9
49423	3/28/2003		3.9
49423	3/20/1999		3.7
49423	10/6/2009	<	0.3
49423	7/11/2009	<	0.3
49423	10/16/2009	<	0.3
49423	12/7/1999		3.9
49423	4/13/2009	<	0.3
49423	6/25/2007		3.4

Federal EPA Radon Zone for ALLEGAN County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 49423

Number of sites tested: 6

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.467 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 517-241-2254

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Data
Source: Department of Environmental Quality
Telephone: 517-335-9218
The data in this file was obtained from Wellogic, the Michigan Department of Environmental Quality Statewide Groundwater Database (SGWD). Wellogic contains approximately 425,000 water well records found within the State of Michigan, and although it represents the best available data, it cannot be considered a complete database of all the wells or well records in existence. Locations of verified municipal and private water well sites compiled from Michigan Department of Public Health, Water Well and Pump Records. Available in the following MI counties: Calhoun, Eaton, Genesee, Ingham, Jackson, Kalamazoo, Kent, Midland, Muskegon, Oakland, Ottawaw, Saginaw, St. Clair, Washtenaw.

OTHER STATE DATABASE INFORMATION

Michigan Oil and Gas Wells
Source: Department of Environmental Quality
Telephone: 517-241-1528
Locations of oil and gas wells are compiled from permit records on file at the Geological Survey Division (GSD), Michigan Department of Natural Resources.

RADON

State Database: MI Radon
Source: Department of Environmental Quality
Telephone: 517-335-9551
Radon Test Results

Michigan Radon Test Results
Source: Department of Environmental Quality
Telephone: 517-335-8037
These results are from test kits distributed by the local health departments and used by Michigan residents. There is no way of knowing whether the devices were used properly, whether there are duplicates (or repeat verification) test (i.e., more than one sample per home), etc.

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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APPENDIX D

Municipal Documentation

Parcel Number: 03-02-03-300-018 Jurisdiction: CITY OF HOLLAND - ALLEGAN County: Printed on 02/09/2022

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
PHC LLC	COMPACT POWER INC	1,504,800	05/21/2010	WD	32-SPLIT VACANT	3421/427	BUYER/SELLER	100.0
CITY OF HOLLAND	COMPACT POWER INC	228,800	05/21/2010	WD	32-SPLIT VACANT	3423/26	BUYER/SELLER	100.0
WELSCOTT RAYMOND J & BERNI	CITY OF HOLLAND	0	03/10/2010	WD	21-NOT USED	3403/789	BUYER/SELLER	0.0
RABBERS VINA I DECLARATION	CITY OF HOLLAND	0	03/10/2010	WD	21-NOT USED	3403/799	BUYER/SELLER	0.0

Property Address

875 E 48TH ST

Owner's Name/Address

COMPACT POWER INC
875 E 48TH ST
HOLLAND MI 49423

Tax Description

BEGINNING AT THE SOUTH ¼ CORNER OF SECTION 3; THENCE NORTH 88° 56′ 10″ WEST 1599.61′ FEET ALONG THE SOUTH LINE OF THE SOUTHWEST ¼ THENCE NORTH 34° 42′ 33″ WEST 176.72 FEET THENCE SOUTH 55° 17′ 27″ WEST 100.00 FEET THENCE NORTH 34° 42′ 33″ WEST 659.32 FEET ALONG EASTERLY LINE OF THE C&O RAILROAD THENCE NORTHWESTERLY 275.95 FEET ON A 5679.65 FOOT RADIUS NON-TANGENTIAL CURVE TO THE RIGHT, THE CHORD OF WHICH BEARS NORTH 33° 24′ 23″ WEST 275.93 FEET TO THE SOUTH LINE OF SOUTH WAVERLY INDUSTRIAL PLAT THENCE



The Equalizer. Copyright (c) 1999 - 2009. Licensed To: City of Holland, County of Ottawa, Michigan

Class: INDUSTRIAL-IMPROVE Zoning: I

School: HAMILTON COMMUNITY SCHOOLS

P.R.E. 0%

DESC: IND REN ZONE REAL

2022 Est TCV Tentative

Building Permit(s)	Date	Number	Status
11Industrial - Alt/Add	11/23/2021	PBD210654	NO CHANGE
11Industrial - Alt/Add	10/29/2021	PMC210580	SECONDARY
11Industrial - Alt/Add	10/21/2021	PBD210215	NO CHANGE
13Other - Signs (number)	09/21/2021	PLU21163	SECONDARY

X Improved | Vacant

Public Improvements

- Dirt Road
- Gravel Road
- X Paved Road
- X Storm Sewer
- Sidewalk
- X Water
- X Sewer
- X Electric
- X Gas
- Curb
- Street Lights
- X Standard Utilities
- Underground Utils.

Topography of Site

- X Level
- Rolling
- Low
- High
- Landscaped
- Swamp
- Wooded
- Pond
- Waterfront
- Ravine
- Wetland
- Flood Plain

Who	When	What
JA	12/19/2020	H.NO MEAS-
JA	01/29/2020	H.NO MEAS-
JA	01/22/2019	F.NO MEAS-

Land Value Estimates for Land Table IND03.IND03 ALG IND LAND

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
ALLEGAN IN 25+ ACRES	78.52 Acres		22000	80			SIZE DISCOUNT	1,381,952
ALLEGAN IN ROW/DRAIN/EXEMP	1.48 Acres		0	100				0
	80.00 Total Acres						Total Est. Land Value =	1,381,952

Land Improvement Cost Estimates

Description	Rate	Size	% Good	Cash Value
Fencing: Wrought iron	10.61	8280	85	74,673
D/W/P: Asphalt Paving	2.49	287440	83	594,053
D/W/P: 4in Concrete	5.58	129345	83	599,048
D/W/P: Asphalt Paving	2.49	59505	94	139,277
D/W/P: 4in Concrete	5.58	491	94	2,576

Ad-Hoc Unit-In-Place Items

Description	Rate	Size	% Good	Cash Value
/CI16/YARI/OUTL/2AVG/FLO	1,585.00	89	91	128,369
/CI16/YARI/OUTL/2AVG/POLS	91.50	2015	91	167,779
/CI16/YARI/FLAP/30A	2,347.50	4	91	8,545
/CI16/YARI/SECGT/ONEMOGA	6,400.00	4	91	23,296
/CI16/YARI/RAIPD/OVES/DECCROMA	10.25	4455	91	41,554
Total Estimated Land Improvements True Cash Value =				1,779,170

Work Description for Permit PBD210654, Issued 11/23/2021: Create new disassembly room. Installation of new HVAC Munter unit for a safety lab. Work includes modification to an existing space to accommodate insulated metal panels walls &

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
2022	Tentative	Tentative	Tentative			Tentative
2021	805,600	14,959,700	15,765,300			11,609,230C
2020	235,600	15,626,700	15,862,300			11,210,484C
2019	235,600	13,664,200	13,899,800			10,982,909C

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #1 & UIPS
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 202,144
Gross Bldg Area: 613,660
Stories Above Grd: 2
Average Sty Hght : 23
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 11
Physical %Good: 72
Func. %Good : 50
Economic %Good: 100

2011 Year Built
2020 Remodeled

45 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS
2020 : 10K SF OF OFFICE

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Package Heating & Cooling 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 1950
Has Elevators: X

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 202144
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 2 Story Height: 23 Perimeter: 1950
Overall Building Height: 45

Base Rate for Upper Floors = 71.44

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 36.25 100%
Adjusted Square Foot Cost for Upper Floors = 107.69

Total Floor Area: 202,144 Base Cost New of Upper Floors = 21,768,887

202,144 Sq.Ft. of Sprinklers @ 2.69, Cost New = 543,767

Reproduction/Replacement Cost = 22,312,654
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 72 /100/50 /100/36.0
Total Depreciated Cost = 8,032,555

<<<<< Segregated Cost Computations >>>>>
Costs taken from Segregated Cost Section 4: Garages, Industrials, Warehouses

Item Desciption	Cost Col.	Rate	# or SqFt	Height Storys Adj.	Adj.	Cost

Total Cost New = 0

Architectural Multiplier: 1.00

Reproduction/Replacement Cost = 0
<<<<< Calculations too long. See Valuation printout for complete pricing. >>>>>

(1) Excavation/Site Prep:

(2) Foundation:

	Footings				
X	Poured Conc.		Brick/Stone		Block

X Class C, D, S, Perimeter Foundation

(3) Frame:
X Steel, Class S

(4) Floor Structure:
X Concrete, On Ground

(5) Floor Cover:
X Tile, Ceramic or Quarry
X Vinyl Tile
X Carpet and Pad
X Hardener and Sealer, Concrete

(6) Ceiling:

(7) Interior:
X Frame, Industrials, Manufacturing

(8) Plumbing:

	Many Above Ave.	X	Average Typical		Few None

	Total Fixtures		Urinals
	3-Piece Baths		Wash Bowls
	2-Piece Baths		Water Heaters
	Shower Stalls		Wash Fountains
	Toilets		Water Softeners

X Typical, Industrial, Manufacturing

(9) Sprinklers:
X Standard, @ 400,000 SqFt

(10) Heating and Cooling:

X	Gas		Coal		Hand Fired
	Oil		Stoker		Boiler

X Zoned A.C., Hot and Chilled Water

(11) Electric and Lighting:
X Typical, Industrials, Manufacturi

Outlets:		Fixtures:	
	Few		Few
	Average		Average
	Many		Many
	Unfinished		Unfinished
X	Typical	X	Typical
	Flex Conduit		Incandescent
	Rigid Conduit	X	Fluorescent
	Armored Cable		Mercury
	Non-Metalic		Sodium Vapor
	Bus Duct		Transformer

(13) Roof Structure: Slope=0
X Open Steel System for Corrugated
X Steel Trusses or Longspan Girders

(14) Roof Cover:
X Alum./Steel Sandwich Panels, Pre-

(39) Miscellaneous:

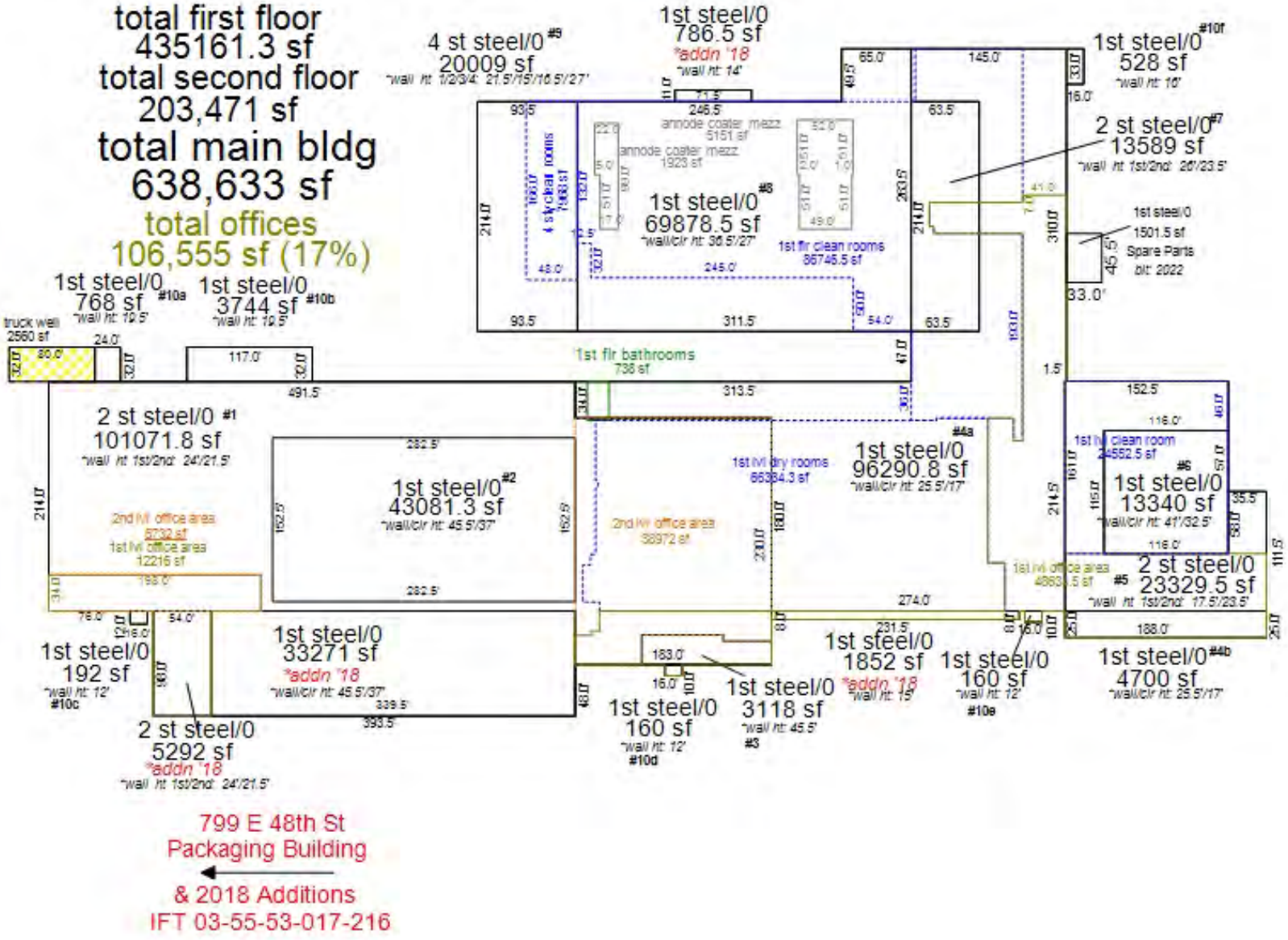
X Mezzanines, Open Area
X Steel Frame
X Clean Rooms, Class 100,000 to 10,

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

X Sandwich Panels, Aluminum or Stee

*** Information herein deemed reliable but not guaranteed***



*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #2
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 43,081
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 45
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

45 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 870
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 43081
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 45 Perimeter: 870
Overall Building Height: 45

Base Rate for Upper Floors = 106.28

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 53.93 100%
Adjusted Square Foot Cost for Upper Floors = 160.21

Total Floor Area: 43,081 Base Cost New of Upper Floors = 6,902,006

43,081 Sq.Ft. of Sprinklers @ 3.57, Cost New = 153,799

Reproduction/Replacement Cost = 7,055,805
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 2,610,648

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 2 = 2,409,628
Replacement Cost/Floor Area= 163.78 Est. TCV/Floor Area= 55.93

(1) Excavation/Site Prep:

(2) Foundation:

	Footings				
X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #3
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 3,118
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 45
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

45 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 298
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 3118
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 45 Perimeter: 298
Overall Building Height: 45

Base Rate for Upper Floors = 144.73

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 73.45 100%
Adjusted Square Foot Cost for Upper Floors = 218.18

Total Floor Area: 3,118 Base Cost New of Upper Floors = 680,285

3,118 Sq.Ft. of Sprinklers @ 5.33, Cost New = 16,619

Reproduction/Replacement Cost = 696,904
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 257,854

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 3 = 238,000
Replacement Cost/Floor Area= 223.51 Est. TCV/Floor Area= 76.33

(1) Excavation/Site Prep:

(2) Foundation:

	Footings						
X	Poured Conc.		Brick/Stone		Block		

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #4
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 100,991
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 25
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 11
Physical %Good: 76
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

25 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS
2020: ~8,840 SF VACUUM

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 1260
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 100991
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 25 Perimeter: 1260
Overall Building Height: 25

Base Rate for Upper Floors = 71.95

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 36.51 100%
Adjusted Square Foot Cost for Upper Floors = 108.46

Total Floor Area: 100,991 Base Cost New of Upper Floors = 10,953,484

100,991 Sq.Ft. of Sprinklers @ 3.03, Cost New = 306,003

Reproduction/Replacement Cost = 11,259,487
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 76 /100/50 /100/38.0
Total Depreciated Cost = 4,278,605

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 4 = 3,949,152
Replacement Cost/Floor Area= 111.49 Est. TCV/Floor Area= 39.10

(1) Excavation/Site Prep:

(2) Foundation:

	Footings	X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None		
	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners				

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #5
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 46,660
Gross Bldg Area: 613,660
Stories Above Grd: 2
Average Sty Hght : 20
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

41 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 1102
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 46660
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 2 Story Height: 20 Perimeter: 1102
Overall Building Height: 41

Base Rate for Upper Floors = 76.34

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 38.74 100%
Adjusted Square Foot Cost for Upper Floors = 115.08

Total Floor Area: 46,660 Base Cost New of Upper Floors = 5,369,633

46,660 Sq.Ft. of Sprinklers @ 3.57, Cost New = 166,576

Reproduction/Replacement Cost = 5,536,209
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 2,048,397

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 5 = 1,890,671
Replacement Cost/Floor Area= 118.65 Est. TCV/Floor Area= 40.52

(1) Excavation/Site Prep:

(2) Foundation:

	Footings	X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:
Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #6
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 13,340
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 41
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

41 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 462
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 13340
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 41 Perimeter: 462
Overall Building Height: 41

Base Rate for Upper Floors = 106.82

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 54.21 100%
Adjusted Square Foot Cost for Upper Floors = 161.03

Total Floor Area: 13,340 Base Cost New of Upper Floors = 2,148,139

13,340 Sq.Ft. of Sprinklers @ 4.40, Cost New = 58,696

Reproduction/Replacement Cost = 2,206,835
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 816,529

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 6 = 753,656
Replacement Cost/Floor Area= 165.43 Est. TCV/Floor Area= 56.50

(1) Excavation/Site Prep:

(2) Foundation:

	Footings				
X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #7
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 27,178
Gross Bldg Area: 613,660
Stories Above Grd: 2
Average Sty Hght : 25
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

49 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 553
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 27178
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 2 Story Height: 25 Perimeter: 553
Overall Building Height: 49

Base Rate for Upper Floors = 82.16

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 41.69 100%
Adjusted Square Foot Cost for Upper Floors = 123.85

Total Floor Area: 27,178 Base Cost New of Upper Floors = 3,365,996

27,178 Sq.Ft. of Sprinklers @ 3.90, Cost New = 105,994

Reproduction/Replacement Cost = 3,471,990
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 1,284,636

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 7 = 1,185,719
Replacement Cost/Floor Area= 127.75 Est. TCV/Floor Area= 43.63

(1) Excavation/Site Prep:

(2) Foundation:

	Footings	X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:
Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #8
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 69,879
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 36
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

36 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 1150
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1: 7074
Type #1: Good Storage (No Rates)
Area #2:
Type #2:

* Sprinkler Info *
Area: 69879
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 36 Perimeter: 1150
Overall Building Height: 36

Base Rate for Upper Floors = 90.26
Mezzanine 1 Storage Base Rate = 30.21

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 45.81 100%
Adjusted Square Foot Cost for Upper Floors = 136.07

Total Floor Area: 69,879 Base Cost New of Upper Floors = 9,508,436
Mezzanine 1 Area: 7,074 Base Cost New of Mezzanine = 213,706

69,879 Sq.Ft. of Sprinklers @ 3.31, Cost New = 231,299

Reproduction/Replacement Cost = 9,953,441
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 3,682,773

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 8 = 3,399,200
Replacement Cost/Floor Area= 142.44 Est. TCV/Floor Area= 48.64

(1) Excavation/Site Prep:

(2) Foundation: Footings

X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #9
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 80,036
Gross Bldg Area: 613,660
Stories Above Grd: 4
Average Sty Hght : 20
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

80 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 615
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 80036
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 4 Story Height: 20 Perimeter: 615
Overall Building Height: 80

Base Rate for Upper Floors = 71.19

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 36.13 100%
Adjusted Square Foot Cost for Upper Floors = 107.32

Total Floor Area: 80,036 Base Cost New of Upper Floors = 8,589,464

80,036 Sq.Ft. of Sprinklers @ 3.16, Cost New = 252,914

Reproduction/Replacement Cost = 8,842,378
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 3,271,680

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 9 = 3,019,761
Replacement Cost/Floor Area= 110.48 Est. TCV/Floor Area= 37.73

(1) Excavation/Site Prep:

(2) Foundation:

	Footings						
X	Poured Conc.		Brick/Stone		Block		

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None
	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners		

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

	Outlets:		Fixtures:
	Few Average Many Unfinished Typical		Few Average Many Unfinished Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: MAIN MFG BLDG - PT #10
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 5,552
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 18
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 12
Physical %Good: 74
Func. %Good : 50
Economic %Good: 100

2011 Year Built Remodeled

20 Overall Bldg Height

Comments:
*FUNCTIONAL OBS FOR OVERALL BLDG SIZE & HIGHLY CUSTOMIZED DESIGN W/LIMITED UTILITY FOR MOST USERS

Construction Cost

	High		Above Ave.		Ave.	X	Low

** ** Calculator Cost Data ** **
Quality: Good
Heat#1: Zoned A.C. Hot & Chilled Wat 100%
Heat#2: Electric, Cable or Baseboard 0%
Ave. SqFt/Story: 435161
Ave. Perimeter: 231
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat:

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 5552
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Good
Stories: 1 Story Height: 18 Perimeter: 231
Overall Building Height: 20

Base Rate for Upper Floors = 71.29

(10) Heating system: Zoned A.C. Hot & Chilled Water Cost/SqFt: 36.18 100%
Adjusted Square Foot Cost for Upper Floors = 107.47

Total Floor Area: 5,552 Base Cost New of Upper Floors = 596,673

5,552 Sq.Ft. of Sprinklers @ 4.96, Cost New = 27,538

Reproduction/Replacement Cost = 624,211
Eff.Age:12 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 74 /100/50 /100/37.0
Total Depreciated Cost = 230,958

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 10 = 213,174
Replacement Cost/Floor Area= 112.43 Est. TCV/Floor Area= 38.40

(1) Excavation/Site Prep:

(2) Foundation: | | Footings | X | Poured Conc. | | Brick/Stone | | Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.		Average Typical		Few None

	Total Fixtures		Urinals
	3-Piece Baths		Wash Bowls
	2-Piece Baths		Water Heaters
	Shower Stalls		Wash Fountains
	Toilets		Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:
Few		Few
Average		Average
Many		Many
Unfinished		Unfinished
Typical		Typical
Flex Conduit		Incandescent
Rigid Conduit		Fluorescent
Armored Cable		Mercury
Non-Metalic		Sodium Vapor
Bus Duct		Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: HAZARDOUS STORAGE BLDG
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 6,784
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 19
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 11
Physical %Good: 72
Func. %Good : 60
Economic %Good: 100

2011 Year Built Remodeled

19 Overall Bldg Height

Comments:
*FUNC OBS FOR BEING SECONDARY BLDG FOR HUGE BLDG

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average
Heat#1: Package Heating & Cooling 100%
Heat#2: Space Heaters, Gas with Fan 0%
Ave. SqFt/Story: 6784
Ave. Perimeter: 336
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 6784
Type: Good

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Average
Stories: 1 Story Height: 19 Perimeter: 336
Overall Building Height: 19

Base Rate for Upper Floors = 52.47

(10) Heating system: Package Heating & Cooling Cost/SqFt: 16.58 100%
Adjusted Square Foot Cost for Upper Floors = 69.05

Total Floor Area: 6,784 Base Cost New of Upper Floors = 468,435

6,784 Sq.Ft. of Sprinklers @ 4.96, Cost New = 33,649

Reproduction/Replacement Cost = 502,084
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 72 /100/60 /100/43.2
Total Depreciated Cost = 216,900

Unit in Place Items	Rate	Quantity	Arch	%Good	Depr.Cost
CANOPIES	8.48	256	1.00	75	1,628

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 11 = 201,702
Replacement Cost/Floor Area= 74.33 Est. TCV/Floor Area= 29.73

(1) Excavation/Site Prep:

(2) Foundation: | | Footings | X | Poured Conc. | | Brick/Stone | | Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many		Average		Few
	Above Ave.	X	Typical		None

	Total Fixtures		Urinals
	3-Piece Baths		Wash Bowls
	2-Piece Baths		Water Heaters
	Shower Stalls		Wash Fountains
	Toilets		Water Softeners

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas		Coal		Hand Fired
	Oil		Stoker		Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:	
	Few		Few
	Average		Average
	Many		Many
	Unfinished		Unfinished
X	Typical	X	Typical

	Flex Conduit		Incandescent
	Rigid Conduit	X	Fluorescent
	Armored Cable		Mercury
	Non-Metalic		Sodium Vapor
	Bus Duct		Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

X Block, Concrete, 8"

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: SAFETY BUILDING
Calculator Occupancy: Industrial - Engineering

Class: S
Floor Area: 6,700
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 19
Bsmnt Wall Hght

Depr. Table : 2.5%
Effective Age : 11
Physical %Good: 76
Func. %Good : 60
Economic %Good: 100

2011 Year Built Remodeled

19 Overall Bldg Height

Comments:
*FUNC OBS FOR BEING SECONDARY BLDG FOR HUGE BLDG

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average
Heat#1: Package Heating & Cooling 100%
Heat#2: Space Heaters, Gas with Fan 0%
Ave. SqFt/Story: 6700
Ave. Perimeter: 334
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 6700
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Average
Stories: 1 Story Height: 19 Perimeter: 334
Overall Building Height: 19

Base Rate for Upper Floors = 69.03

(10) Heating system: Package Heating & Cooling Cost/SqFt: 16.60 100%
Adjusted Square Foot Cost for Upper Floors = 85.63

Total Floor Area: 6,700 Base Cost New of Upper Floors = 573,721

6,700 Sq.Ft. of Sprinklers @ 3.77, Cost New = 25,259

Reproduction/Replacement Cost = 598,980
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 76 /100/60 /100/45.6
Total Depreciated Cost = 273,135

Unit in Place Items	Rate	Quantity	Arch	%Good	Depr.Cost
CANOPY	8.48	1010	1.00	75	6,424

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 12 = 258,033
Replacement Cost/Floor Area= 90.68 Est. TCV/Floor Area= 38.51

(1) Excavation/Site Prep:

(2) Foundation:

	Footings						
X	Poured Conc.		Brick/Stone		Block		

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.	X	Average Typical		Few None
	Total Fixtures		Urinals		
	3-Piece Baths		Wash Bowls		
	2-Piece Baths		Water Heaters		
	Shower Stalls		Wash Fountains		
	Toilets		Water Softeners		

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:		Fixtures:	
	Few		Few
	Average		Average
	Many		Many
	Unfinished		Unfinished
X	Typical	X	Typical
	Flex Conduit		Incandescent
	Rigid Conduit	X	Fluorescent
	Armored Cable		Mercury
	Non-Metalic		Sodium Vapor
	Bus Duct		Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.
X	Block, Concrete, 8"		

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: GENERAL STORAGE BLDG
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 7,335
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 19
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 11
Physical %Good: 72
Func. %Good : 60
Economic %Good: 100

2011 Year Built Remodeled

19 Overall Bldg Height

Comments:
*FUNC OBS FOR BEING SECONDARY BLDG FOR HUGE BLDG

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average
Heat#1: Ventilation only, Ducts/Blow 100%
Heat#2: Space Heaters, Gas with Fan 0%
Ave. SqFt/Story: 7335
Ave. Perimeter: 388
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 7335
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Average
Stories: 1 Story Height: 19 Perimeter: 388
Overall Building Height: 19

Base Rate for Upper Floors = 53.35

(10) Heating system: Ventilation only, Ducts/Blowers Cost/SqFt: 2.53 100%
Adjusted Square Foot Cost for Upper Floors = 55.88

Total Floor Area: 7,335 Base Cost New of Upper Floors = 409,880

7,335 Sq.Ft. of Sprinklers @ 3.77, Cost New = 27,653

Reproduction/Replacement Cost = 437,533
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 72 /100/60 /100/43.2
Total Depreciated Cost = 189,014

Unit in Place Items	Rate	Quantity	Arch	%Good	Depr.Cost
CANOPIES	8.48	256	1.00	75	1,628

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 13 = 175,963
Replacement Cost/Floor Area= 59.95 Est. TCV/Floor Area= 23.99

(1) Excavation/Site Prep:

(2) Foundation:

	Footings				
X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.	X	Average Typical		Few None
	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners		

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:			Fixtures:
	Few Average Many Unfinished		Few Average Many Unfinished
X	Typical	X	Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct	X	Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

X Block, Concrete, 8"

*** Information herein deemed reliable but not guaranteed***

Desc. of Bldg/Section: SECURITY BUILDING
Calculator Occupancy: Industrial - Light Manufacturing

Class: S
Floor Area: 862
Gross Bldg Area: 613,660
Stories Above Grd: 1
Average Sty Hght : 12
Bsmnt Wall Hght

Depr. Table : 3%
Effective Age : 11
Physical %Good: 72
Func. %Good : 75
Economic %Good: 100

2011 Year Built Remodeled

12 Overall Bldg Height

Comments:
*FUNC OBS FOR BEING SECONDARY BLDG FOR HUGE BLDG

Construction Cost

	High		Above Ave.	X	Ave.		Low

** ** Calculator Cost Data ** **
Quality: Average
Heat#1: Package Heating & Cooling 100%
Heat#2: Space Heaters, Gas with Fan 0%
Ave. SqFt/Story: 862
Ave. Perimeter: 118
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type:
Heat: Hot Water, Radiant Floor

* Mezzanine Info *
Area #1:
Type #1:
Area #2:
Type #2:

* Sprinkler Info *
Area: 862
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: S Quality: Average
Stories: 1 Story Height: 12 Perimeter: 118
Overall Building Height: 12

Base Rate for Upper Floors = 61.87

(10) Heating system: Package Heating & Cooling Cost/SqFt: 19.55 100%
Adjusted Square Foot Cost for Upper Floors = 81.42

Total Floor Area: 862 Base Cost New of Upper Floors = 70,184

862 Sq.Ft. of Sprinklers @ 5.24, Cost New = 4,517

Reproduction/Replacement Cost = 74,701
Eff.Age:11 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 72 /100/75 /100/54.0
Total Depreciated Cost = 40,339

ECF (IND03 INDUSTRAL ALG COUNTY) 0.923 => TCV of Bldg: 14 = 37,232
Replacement Cost/Floor Area= 86.66 Est. TCV/Floor Area= 43.19

(1) Excavation/Site Prep:

(2) Foundation:

	Footings				
X	Poured Conc.		Brick/Stone		Block

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

	Many Above Ave.	X	Average Typical		Few None
	Total Fixtures 3-Piece Baths 2-Piece Baths Shower Stalls Toilets		Urinals Wash Bowls Water Heaters Wash Fountains Water Softeners		

(9) Sprinklers:

(10) Heating and Cooling:

X	Gas Oil		Coal Stoker		Hand Fired Boiler

(11) Electric and Lighting:

Outlets:			Fixtures:	
	Few Average Many Unfinished			Few Average Many Unfinished
X	Typical		X	Typical
	Flex Conduit Rigid Conduit Armored Cable Non-Metalic Bus Duct		X	Incandescent Fluorescent Mercury Sodium Vapor Transformer

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

	Thickness		Bsmnt Insul.

X Block, Concrete, 8"

*** Information herein deemed reliable but not guaranteed***

Parcel Number: 03-02-03-300-019 Jurisdiction: CITY OF HOLLAND - ALLEGAN County: Printed on 02/09/2022

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
CITY OF HOLLAND	COMPACT POWER INC	567,560	05/21/2010	WD	32-SPLIT VACANT	3421/423	BUYER/SELLER	100.0
CITY OF HOLLAND	COMPACT POWER INC	228,800	05/21/2010	WD	32-SPLIT VACANT	3423/26	BUYER/SELLER	100.0
WELSCOTT RAYMOND J & BERNI	CITY OF HOLLAND	0	03/10/2010	WD	21-NOT USED	3403/789	BUYER/SELLER	0.0
RABBERS VINA I DECLARATION	CITY OF HOLLAND	0	03/10/2010	WD	21-NOT USED	3403/799	BUYER/SELLER	0.0

Property Address

901 E 48TH ST

Owner's Name/Address

COMPACT POWER INC
875 E 48TH ST
HOLLAND MI 49423

Tax Description

COM AT THE SOUTH ¼ CORNER OF SECTION 3; THENCE SOUTH 88° 25′ 01″ EAST 203.00 FEET ALONG THE SOUTH LINE OF THE SOUTHEAST ¼ TO THE POINT OF BEGINNING THENCE NORTH 01° 34′ 56″ EAST 1845.42 FEET THENCE SOUTH 88° 44′ 02″ EAST 555.63 FEET THENCE SOUTH 01° 31′ 09″ EAST 529.30 FEET THENCE SOUTH 88° 34′ 20″ EAST 764.68 FEET THENCE SOUTH 08° 30′ 38″ WEST 406.93 FEET THENCE SOUTH 48° 49′ 05″ WEST 296.89 FEET THENCE SOUTH 01° 33′ 18″ EAST 414.58 FEET THENCE NORTH 88° 25′ 01″ WEST 365 FEET THENCE SOUTH 01° 33′ 18″ EAST 303.00 FEET TO THE



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Class: INDUSTRIAL-IMPROVE Zoning: I

School: HAMILTON COMMUNITY SCHOOLS

P.R.E. 0%

DESC: IND REN ZONE VACANT REAL

2022 Est TCV Tentative

Building Permit(s)	Date	Number	Status
11Industrial - Alt/Add	06/13/2012	PEL120122	COMPLETE

	Improved	X	Vacant

	Public Improvements
	Dirt Road
	Gravel Road
X	Paved Road
X	Storm Sewer
	Sidewalk
X	Water
X	Sewer
X	Electric
X	Gas
	Curb
	Street Lights
X	Standard Utilities
	Underground Utils.

	Topography of Site
X	Level
	Rolling
	Low
	High
	Landscaped
	Swamp
	Wooded
	Pond
	Waterfront
	Ravine
	Wetland
	Flood Plain

Who	When	What

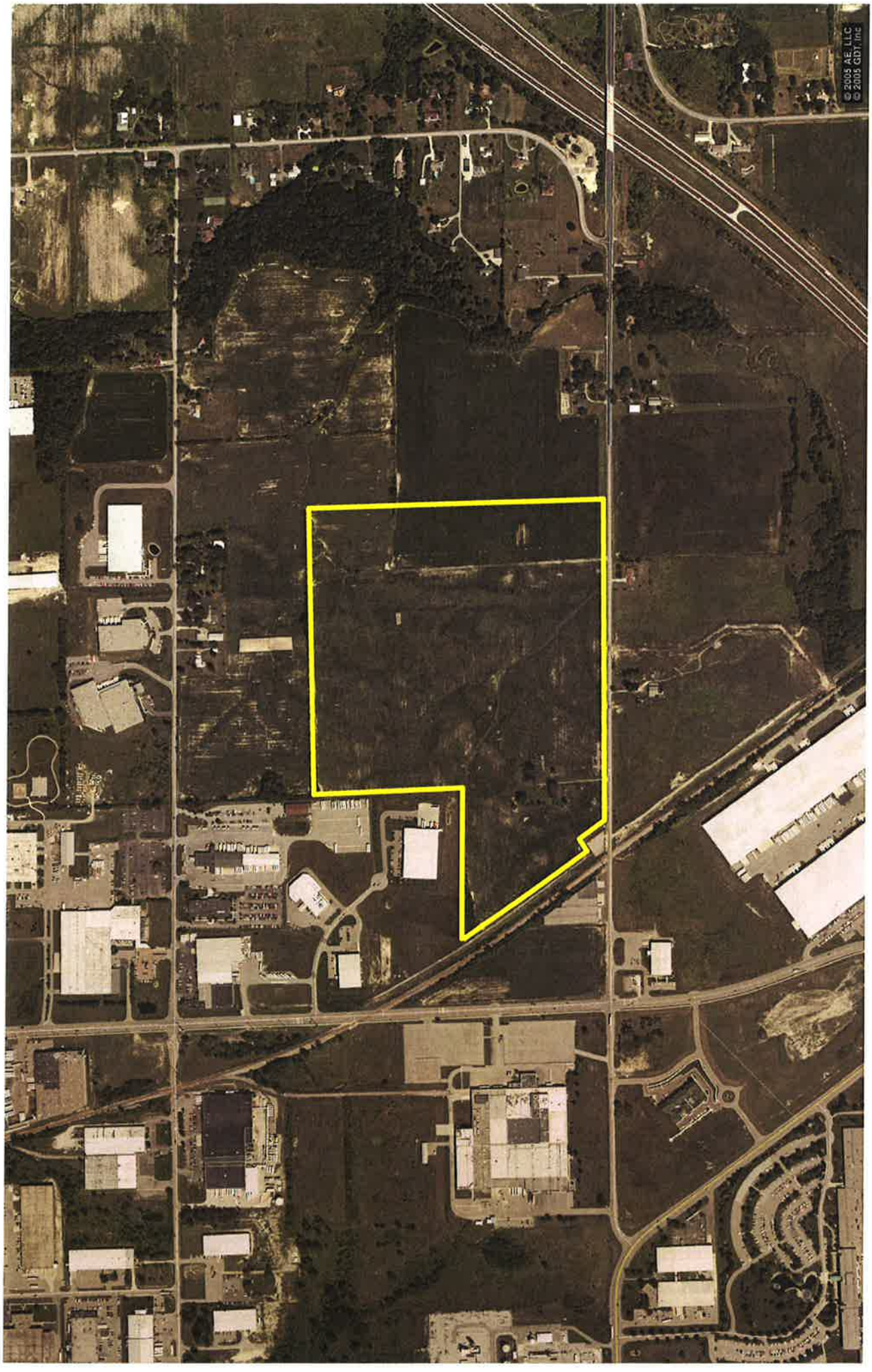
Land Value Estimates for Land Table IND03.IND03 ALG IND LAND

Description	Frontage	Depth	* Factors * Front	Depth	Rate	%Adj.	Reason	Value
ALLEGAN IN 25+ ACRES			36.12 Acres		22000	70	SHAPE	556,248
ALLEGAN IN 25+ ACRES			3.25 Acres		22000	10	EASTERNMOST AREA, USE LMTD BY	
ALLEGAN IN ROW/DRAIN/EXEMP			0.83 Acres		0	100		0
			40.20 Total Acres		Total Est. Land Value =			563,398

Work Description for Permit PEL120122, Issued 06/13/2012: Temporary panel for office trailer - pulling new wire to meter

Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/ Other	Taxable Value
2022	Tentative	Tentative	Tentative			Tentative
2021	291,900	0	291,900			239,506C
2020	236,200	0	236,200			236,200S
2019	236,200	0	236,200			236,200S

*** Information herein deemed reliable but not guaranteed***


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LG Site
68 acres +/-
1885 ft +/-
1375 ft +/-
250 ft +/-
Future Expansion
Future Expansion

G2 CONSULTING GROUP

Report of
Geotechnical Investigation

Proposed LGC – Battery Project
48th Street, East of Waverly Road
Holland, Michigan

Prepared for:

Atwell, LLC
4750 Venture Drive, Suite 101
Ann Arbor, Michigan 48108

G2 Project No. 090845
January 21, 2010

G2 CONSULTING GROUP

January 21, 2010

Mr. Tom Covert, RLA, AICP, LEED AP
Atwell, LLC
4750 Venture Drive, Suite 101
Ann Arbor, Michigan 48108

Re: Report of Geotechnical Investigation
Proposed LGC – Battery Project
48th Street, East of Waverly Road
Holland, Michigan
G2 Project No. 090845r

Dear Mr. Covert:

We have completed the geotechnical investigation for the proposed manufacturing facility in Holland, Michigan. This report presents the results of our observations and analyses and our recommendations for subgrade preparation, foundation design, pavement design, and construction considerations as they relate to the geotechnical conditions at the site.

We appreciate the opportunity to be of service to Atwell, LLC and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding the report or any other matter pertaining to the project, please call us.

Sincerely,

G2 Consulting Group, LLC

Jason B. Stoops

Jason B. Stoops, P.E.
Project Manager

Noel J. Hargrave-Thomas, P.E.
Project Consultant

JBS/NJHT/kls

Enclosures

Geotechnical & Geoenvironmental
Engineering Services
1866 Woodslee Street
Troy, Michigan 48083
248.680.0400
FAX 248.680.9745

EXECUTIVE SUMMARY

We understand the proposed project will include construction of a slab-on-grade battery manufacturing and distribution facility in Holland, Michigan. The building will be both 1-story and 2-stoies in height and will be constructed in three phases.

Approximately 7 to 18 inches of topsoil are present across the site. Thicker deposits of topsoil could be present within the heavy brush area. Within boring B-2, the organic silty clay topsoil deposit extended approximately 3 feet below existing grade. In general, a shallow layer of native granular soil, consisting of very loose to loose silty sand and clayey sand, underlies the topsoil and extends to depths ranging from 1-1/2 feet to 5-1/2 feet below existing grades. Cohesive soils, consisting of generally stiff to hard silty clay, sandy clay, and clayey silt, underlie the topsoil and/or upper granular soils and extend to depths ranging from 33 feet to 47-1/2 feet within borings SB-1, SB-10, and SB-14, and to the explored depths of the remaining borings. Granular soils, consisting of generally compact to very compact sand, silty sand, sandy silt, are present below the cohesive soils and extend to the explored depth of 50 feet within boring SB-10 and to depths of 69-1/2 feet and 46-1/2 within borings SB-1 and SB-14, respectively. A stratum of hard cohesive soil underlies the deeper granular soils within borings SB-1 and SB-14 and extends to an approximate depth of 73-1/2 feet within boring SB-1, and to the explored depth of 50 feet within boring SB-14. Compact to very compact silty sand and sand underlie the silty clay within boring SB-1 and extend to the explored depth of 90 feet.

During our site investigation, perched groundwater was present within the upper granular soils overlying the relatively impermeable silty clay. Depending on when earthwork operations are performed, the upper sand soils could be saturated and unstable under the load of heavy construction equipment. In addition, foundation excavation extending through the upper granular soils will easily collapse if the perched groundwater is present. Therefore, we recommend installing storm and sewer utilities prior to mass balancing to help dewater the site. In addition, earthwork should be performed during the drier months.

Based on the existing subsurface conditions and provided structural loads, we recommend the proposed main building be supported on conventional spread and/or strip footing foundations. We recommend a net allowable soil bearing pressure of 3,000 psf be used in design of foundations supported within the engineered fill or native stiff to hard silty clay. Exterior footings must bear at a minimum depth of 3-1/2 feet below finished grade for protection against frost heave. Interior footings may bear at shallower depths provided suitable native soils and/or engineered fill bearing materials are available for support.

We understand the mixer building will have maximum column loads of 1,700 kips within the area of boring B-1. Based on the competent very stiff to hard soils encountered within this area at the anticipated bearing depth, we recommend the mixer be supported on a conventional spread foundation. The foundation can be designed based on an allowable bearing pressure of 6,000 psf. If spread foundation sizes exceed 20 feet in dimension, then consideration should be given to supporting the mixer on a mat foundation. A mat foundation, supported within the very stiff to hard silty clay, can be designed based on a modulus of subgrade reaction (k) of 150 pounds per cubic inch (pci).

This summary is not to be considered separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analyses and recommendations are discussed in the following sections and in the Appendix of this report.

PROJECT DESCRIPTION

We understand the proposed project will include construction of a slab-on-grade battery manufacturing and distribution facility in Holland, Michigan. The building will be both 1-story and 2-stoies in height and will be constructed in three phases. Phase 1 will consist of a new manufacturing building, approximately 420,000 square feet in area, with associated parking lots and access drives. A detention pond, approximately 7 feet in depth, will be constructed within the eastern portion of the site. Phase II will consist of an addition to the Phase I building and will be approximately 203,500 square feet in area. Phase III will consist of a new manufacturing building north of the Phase 1/II structure, and will be approximately 308,000 square feet in size. New parking areas and access drives will be constructed in association with Phase III. We anticipate that truck wells will be constructed adjacent to the proposed structures. A railroad spur may be constructed within the western portion of the site.

The proposed finished floor elevation of the Phase I and II structures will be 680 feet. The proposed finish floor elevation for the Phase III structure will be 684 feet. Pavement design grades for the Phase I and II area will range from 676 to 684 feet. Proposed pavement design grades were not available for the Phase III development. We anticipate that truck docks will extend approximately 4 feet below the proposed finished floor elevation. We understand that maximum column loads for areas with a second level will be 620 kips, while maximum column loads for areas without a second level will be 225 kips. We understand there will be a maximum column load of 1,700 kips in the mixer building, in the area of boring B-1. Wall loads will range from 1 to 5 kips per linear foot. The maximum anticipated floor slab load is 500 pounds per square foot. If proposed grades change or loading conditions are modified, G2 Consulting Group, LLC should be notified so that we can re-evaluate the recommendations provided within this investigation.

SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under the direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering. Our scope of services for this project is as follows:

1. We drilled a total of twenty (25) soil borings within the limits of the proposed development. Soil borings SB-1 through SB-16 were drilled within the proposed Phase I and II structures. Soil boring B-1 extended to an approximate depth of 90 feet below existing grade and was terminated due to difficult drilling conditions. Soil borings SB-10 and SB-14 were extended to a depth of 50 feet below existing grades. The remaining building borings were extended to depths ranging from 20 to 30 feet below existing grades. Soil borings SB-17 through SB-20 were performed within the proposed pavement areas and extended to depths ranging from 10 to 20 feet below existing grades. Soil borings SB-A and SB-B were performed within the future railroad spur and extended to a depth of 25 feet below existing grades. Soil borings SB-C and SB-D were performed within the future Phase III structure and extended to a depth of 35 feet and 25 feet below existing grades, respectively. The remaining boring SB-E was performed within the proposed detention pond and extended to a depth of 25 feet below existing grade.

2. We performed analyses in the field during drilling operations to determine the thermal properties of the in-situ soils. In general, we recorded the thermal diffusivity, specific heat (heat capacity), thermal conductivity and thermal resistivity at varying depths within borings B-1 and B-18 to determine an in-situ range of values.

3. We performed laboratory testing on representative samples obtained from the soil borings. Laboratory testing included visual engineering classification, natural moisture content, dry density, organic matter content (loss-on-ignition), Atterberg limits, and unconfined compressive strength determinations.

4. We prepared this engineering report. The report includes recommendations regarding foundation types suitable for the soil conditions encountered, allowable bearing capacities of the anticipated bearing soil layers, estimated settlement, and construction considerations related to site preparation and foundation and pavement construction.

FIELD OPERATIONS

Atwell, LLC, in conjunction with G2 Consulting Group, LLC, selected the number, depth, and location of the soil borings based on the proposed building location and site features. The soil boring locations were located in the field by representatives of Atwell, LLC. The approximate soil boring locations are shown on the Soil Boring Location Plan, Plate No. 1. Ground surface elevations at the boring locations were provided by Atwell, LLC.

The soil borings were drilled using an all-terrain vehicle (ATV) mounted drilling rig due to soft subgrade conditions. In general, continuous-flight, 3-1/4-inch inside diameter, hollow-stem augers were used to advance the boreholes to the explored depths. However, within boring B-1, wash rotary drilling methods were used to advance the boring below an approximate depth of 60 feet. In general, soil samples were obtained at intervals of 2-1/2 feet within the upper 10 feet and at intervals of 5 feet below that depth. These samples were obtained by the Standard Penetration Test method (ASTM D 1586), which involves driving a 2-inch diameter split-spoon sampler into the soil with a 140-pound weight falling 30 inches. The sampler is generally driven three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). Blow counts for each 6-inch increment and the resulting N-values are presented on the individual soil boring logs.

In addition, a Shelby tube soil sample was obtained during our field investigation. The thin wall tube is 3-inches in diameter and 30 inches in overall length. The samples were obtained in general accordance with the Standard Practice for Thin-Walled Tube Geotechnical Sampling of Soils, as described in ASTM D 1587.

Thermal conductivity testing was performed within borings B-1 and B-18. The split-spoon samples were evaluated using a KD2Pro Thermal Properties Analyzer in general accordance with ASTM D5334-08. The thermal properties were evaluated for samples ranging from 2-1/2 to 90 feet below existing grades. Test results are presented on the individual logs at the respective test depths.

The soil samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. During the drilling operations, a G2 engineer and the drillers maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels of the soil borings. The final boring logs are based on the field logs and laboratory soil classification of these results. After completion of the drilling operations, the boreholes were backfilled with excavated soil.

LABORATORY TESTING

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to foundation design and site preparation. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included natural moisture content, organic matter content (loss-on-ignition), Atterberg limits, dry density, and unconfined compressive strength determinations. The organic matter content of representative samples were determined in accordance with ASTM Test Method D 2974, "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". Atterberg limits were determined in accordance with ASTM D 4318 "Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils". The unconfined compressive strengths were determined by ASTM Test Method D 2166, a spring loaded hand penetrometer, and a torvane device. Per ASTM Test Method D 2166, the unconfined compressive strength of cohesive soils is determined by axially loading a small cylindrical soil sample under a slow rate of strain. The unconfined compressive strength is defined as the maximum stress applied to the soil sample before shear failure. If shear failure does not occur prior to a total strain of 15 percent, the unconfined compressive strength is defined as the stress at a total strain of 15 percent. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring loaded cylinder. The torvane shear device estimates the soil shear strength to a maximum of one tsf by measuring the resistance of the soil sample to the applied torque of a vane seated in the soil sample. The shear strength determined by the torvane is multiplied by two and presented on the soil boring logs as an equivalent unconfined compressive strength.

The results of the moisture content, organic content, dry density, and unconfined compressive strength laboratory tests are indicated on the boring logs at the depths the samples were obtained. Atterberg limits test results are presented on the Atterberg Limits Test Results, Figure No. 29. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

SITE CONDITIONS

The proposed site is located at the northeast corner of 48th Street and the C & O Railroad, just east of Waverly Road in Holland, Michigan. A majority of the site is open and vacant, and lacked vegetation. A pocket of heavy brush is present within the central portion of the site. The site is currently used for agricultural purposes. The C & O Railroad borders the property to the west. During our field investigation, the subgrade was soft due to recent rain events, lack of surface vegetation, and the predominantly clay soils across the site.

The site generally slopes downward from northwest to southeast, with existing site grades within the proposed developed areas ranging from 710 feet to 667 feet. Existing grades within the proposed Phase I and II building pad range from 668 feet to 690 feet. Existing grades within the future Phase III building pad range from 677 feet to 709 feet. Existing grades within the proposed pavement areas range from 667 feet to 692 feet.

SITE SEISMIC CLASSIFICATION

Ottawa County in Michigan lies in the Central Stable Tectonic Region of the country, characterized by a relatively low expected magnitude of ground accelerations in the event of an earthquake. The observed soils beneath the project site generally consists of stiff to hard native silty clay extending to an approximate depth of 45 feet underlain by compact granular soils to a maximum explored depth of 90 feet. Based on Section 1615 of the 2006 Michigan Building Code, which incorporates the 2006 edition of the International Building Code, a site classification of D (stiff soil profile) should be used for design of the structure for seismic loading conditions.

SOIL CONDITIONS

Approximately 7 to 18 inches of topsoil are present across the site. Thicker deposits of topsoil could be present within the heavy brush area. Within boring SB-2, an organic silty clay topsoil deposit is present extending approximately 3 feet below existing grade. In general, a shallow layer of native granular soil, consisting of silty sand and clayey sand, underlies the topsoil and extends to depths ranging from 1-1/2 feet to 5-1/2 feet below existing grades. Cohesive soils, consisting of silty clay, sandy clay, and clayey silt, underlie the topsoil and/or upper granular soils and extend to depths ranging from 33 feet to 47-1/2 feet within borings SB-1, SB-10, and SB-14, and to the explored depths of the remaining borings. Granular soils, consisting of sand, silty sand, sandy silt, are present below the cohesive soils and extend to the explored depth of 50 feet within boring SB-10 and to depths of 69-1/2 feet and 46-1/2 within borings SB-1 and SB-14. A stratum of cohesive soil underlies the deeper granular soils within borings SB-1 and SB-14 and extends to an approximate depth of 73-1/2 feet within borings SB-1, and to the explored depth of 50 feet within boring SB-14. Silty sand and sand underlie the silty clay within boring SB-1 and extends to the explored depth of 90 feet.

The thicker organic silty clay topsoil deposit within boring B-2 has a moisture content of 51 percent and an organic matter content of 13.9 percent. The upper granular soils are generally very loose to loose in compactness with Standard Penetration Test N-values ranging from 3 to 10 blows per foot (bpf). The cohesive soils are generally stiff to hard in consistency with natural moisture contents ranging from 11 to 28 percent, a liquid limit of 30 percent, plasticity indices ranging from 12 to 13 percent, dry densities ranging from 96 to 123 pounds per cubic foot (pcf), and unconfined compressive strengths ranging from 2,000 to 9,000 pounds per square foot (psf). However, pockets of soft to medium clay are present between approximate depths of 11 to 24 feet below existing grades within borings SB-2, SB-8, SB-13, and SB-E. These softer clay soils have natural moisture contents ranging from 14 to 33 percent, dry densities ranging from 117 to 123 pcf, and unconfined compressive strengths ranging from 500 psf to 1,900 psf. In general, the deeper granular soils are medium compact to very compact, increasing in relative density with depth, and generally have N-values ranging from 27 bpf to 107 blows for 10 inches of penetration.

The soil profiles described above are generalized descriptions of the conditions encountered at the soil boring locations. The stratification depths shown on the soil boring logs represent the soil conditions at the exploration locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown. We have prepared the boring logs on the basis of laboratory classification and testing as well as field logs of the encountered soils.

The Soil Boring Location Plan, Plate No. 1, Soil Boring Logs, Figure Nos. 1 through 25, Unconfined Compressive Strength Test results, Figure Nos. 26 through 28, and Atterberg Limits Test results, Figure No. 29 are presented in the Appendix. General Notes defining the nomenclature used on the soil boring logs and elsewhere in this report are presented on Figure No. 31.

GROUNDWATER CONDITIONS

Groundwater observations were performed during and upon completion of the drilling operations. Groundwater seepage was encountered during drilling operations at approximate depths ranging from 6 inches to 25 feet, corresponding to Elevations 661 to 694 feet, within borings SB-2 through SB-4, SB-6 through SB-11, SB-13, SB-15, SB-16, SB-19, B-20, and SB-A through SB-E. Groundwater was encountered during drilling operations at an approximate depth of 57 feet and 38 feet, corresponding to Elevation 621 feet and 631-1/2 feet, within borings B-1 and B-14, respectively. No measurable groundwater was encountered during drilling operations within the remaining borings. Upon completion of drilling operations, groundwater was measured at depths ranging from 3 to 24-1/2 feet, corresponding to Elevations 648 to 677 feet, within borings SB-1, SB-5 through SB-8, SB-10 through SB-14, SB-18, SB-19, SB-A, and SB-E. It should be noted that the groundwater encountered within boring B-1 and B-14 appeared to be artesian in nature. The groundwater rose immediately within the borehole after it was encountered. No measurable groundwater was encountered upon completion of drilling operations within the remaining soil borings. 24-hour water readings were performed at the boring locations. Groundwater was measured at depths ranging from the ground surface to 17 feet within a majority of the borings. It should be noted that the site experienced heavy rains during the week of our site investigation. Fluctuations in perched and long term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation.

SITE PREPARATION

Existing grades within the proposed Phase I and II building pad range from 668 feet to 690 feet. Based on a proposed finished floor elevation of 680 feet and existing grades within the building, we anticipate up to 12 feet of engineered fill and grade cuts of up to 10 feet will be required to achieve finished grades. Existing grades within the future Phase III building pad range from 677 feet to 709 feet. Based on a proposed finished floor elevation of 684 feet and existing grades within the proposed building, we anticipate up to 7 feet of engineered fill and grade cuts of up to 29 feet will be required to achieve finished grades. Existing grades within the proposed pavement areas range from 667 feet to 692 feet. Based on review of the proposed grading plan, we anticipate up to 10 feet of engineered fill and grade cuts of up to 12 feet will be required to achieve finished grades.

Within the area of boring B-2, a thick deposit (approximately 3 feet) of organic silty clay is present. The lateral extent of the organic silty clay is unknown. The organic silty clay has a moisture content of 51 percent, and an organic matter content of 14 percent. Proposed grades will be raised on the order of 9 feet within this area. The organic silty clay is not suitable for the support of the engineered fill required in this area. Therefore, we recommend the organic silty clay be completely removed and replaced prior to raising site grades. We recommend performing additional subsurface exploration in this area, either with additional shallow soil borings or test pits, to delineate the lateral extent of organic silty clay deposit.

Within the area of boring SB-13, a layer of soft clay was encountered between an approximate depth of 18-1/2 and 23-1/2 feet. The material was sampled with only the weight-of-hammer. It is possible that the material is not as soft or as thick as the field test results indicate if a water bearing granular layer was encountered while driving the split-spoon within the predominantly clay soils. Based on the proposed plans, approximately 8 feet of engineered fill is required to raise the grade in this area which could include settlement of these soft soils. We recommend additional soil borings be performed in this area to delineate the thickness and lateral extent of the soft clay, as well as obtain higher quality Shelby tube samples of the material for further laboratory analyses.

We anticipate earthwork operations will consist of removing vegetation, trees, topsoil, undercutting the unsuitable organic silty clay within the area of boring B-2, excavating for and backfilling of site utilities, grading the proposed detention basin, lowering the grade in some areas, placing and compacting engineered fill to raise site grades, excavating for foundations, and preparing the subgrade for support of floor slab and pavements. We recommend all earthwork operations be performed in accordance with comprehensive specifications and be properly monitored in the field by qualified personnel under the direction of a licensed engineer.

After the vegetation, topsoil, and unsuitable organic soils as noted above have been removed, and prior to placement of any engineered fill, the exposed subgrade, anticipated to consist of silty clay or silty sand overlying silty clay, should be proofrolled with a heavily loaded rubber-tired vehicle such as a dump truck, and visually evaluated for consistency, instability, and/or unsuitable soil conditions by a qualified geotechnical engineer. Any unstable or unsuitable areas noted should be improved by compaction or removed and replaced with engineered fill.

At the time of the investigation, perched groundwater was present within the upper granular soils overlying the relatively impermeable silty clay. Depending on when earthwork operations are performed, the upper sand soils could be saturated and unstable under the load of heavy construction equipment. In addition, foundation excavation extending through the upper granular soils will easily collapse if the perched groundwater is present. Therefore, we recommend installing storm and sewer utilities prior to mass balancing to help dewater the site. We also recommend performed earthwork operations during the drier months to minimize the potential for perched water within the upper granular soils.

The existing upper granular soils are very loose to loose in compactness. We anticipate these granular soils will be present at the design subgrade elevation within portions of the building pad. It should be expected that similar loose granular soils will be encountered within other areas of the site. As such, we recommend proof-compacting the upper very loose to loose granular soils. Proof compaction of the subgrade should be performed with a heavy vibratory roller that weighs a minimum of 15 tons. The roller

should make a minimum of 10 passes in two perpendicular directions across the granular subgrade. At the time of the investigation, perched groundwater was present within the upper granular soils. However, if earthwork operations are performed within the drier months, or if utilities trenches are installed prior to mass grading, the perched groundwater may not be present. We recommend using the vibratory setting on the roller within areas where the groundwater table is approximately 3 feet below the stripped subgrade elevation; otherwise, we recommend the vibratory setting be turned off while performing proof-compaction operations. The groundwater elevation should be confirmed prior to commencing proof-compaction operations.

The excavated soils from the detention area and cut soils from the building pads and pavement areas will generally consist of native silty sand or silty clay. The silty sand can be stockpiled to drain (if saturated due to perched groundwater conditions) and should be suitable for use as engineered fill. The silty clay with the cut areas generally has moisture contents ranging from 13 to 18 percent. Therefore, moisture conditioning (drying) may be necessary to facilitate compaction of the native soils. The cohesive soil can be disced and left to dry in the sun prior to compaction operations, if required. This will require a period of warm, dry weather to reduce the moisture content of the native silty clay.

Engineered fill should be free of organic matter, frozen soil, clods, or other harmful material. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade. Engineered fill should be placed in uniform horizontal layers, not more than 9 inches in loose thickness. The engineered fill should be compacted to achieve a density of at least 95 percent of the maximum dry density as determined by the Modified Proctor compaction test (ASTM D 1557). All engineered fill material should be placed and compacted at approximately the optimum moisture content.

FOUNDATION RECOMMENDATIONS

Main Building

In general, we anticipate foundations will be supported within engineered fill or native stiff to hard silty clay. These soils are suitable for support of the proposed foundations. However, within certain areas of the building pad, such as near borings SB-8 and SB-11, we anticipate loose granular soils or softer clays will be present at the bearing elevation. Within these areas, foundations will need to extend through the loose granular soils or softer clays and bear within the underlying stiff to hard silty clay. Foundation excavations could extend 5 to 6 feet below existing grades within the above mentioned areas.

Based on the existing subsurface conditions and provided structural loads, we recommend the proposed building be supported on conventional spread and/or strip footing foundations. We recommend a net allowable soil bearing pressure of 3,000 psf be used in design of foundations supported within the engineered fill or native stiff to hard silty clay. Exterior footings must bear at a minimum depth of 3-1/2 feet below finished grade for protection against frost heave. Interior footings may bear at shallower depths provided suitable native soils and/or engineered fill bearing materials are available for support. We recommend G2 be on site during construction to observe the excavation and verify the adequacy of the bearing soils.

Continuous wall or strip footings should be at least 12 inches in width and isolated spread footings should be at least 30 inches in their least dimension. To achieve a change in the level of a strip footing, the

footing should be gradually stepped at a grade no steeper than two units horizontal to one unit vertical. We recommend all strip footings be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions.

If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structure should be within 1 inch and 1/2 inch, respectively. We expect settlements of these magnitudes are within tolerable limits for the type of structure proposed.

Mixer Building

We understand the mixer building will have maximum column loads of 1,700 kips within the area of boring B-1. The bearing soils in this area are anticipated to consist of native very stiff to hard silty clay. We recommend the mixer be supported on a conventional spread foundation bear on the very stiff to hard silty clay. The foundation can be designed based on an allowable bearing pressure of 6,000 psf. If spread foundation sizes exceed 20 feet in their least dimension, then consideration should be given to evaluating the mixer foundation as a mat. A mat foundation, supported within the very stiff to hard silty clay, can be designed based on a modulus of subgrade reaction (k) of 150 pounds per cubic inch (pci). Regardless of which foundation evaluation is utilized, dynamic loadings conditions associated with the mixers must be evaluated.

TRUCK WELL RECOMMENDATIONS

We anticipate that truck wells will be constructed adjacent to the proposed structure. Below-grade truck wells constructed as part of the structure should be designed to resist lateral soil loads modeled as an equivalent fluid pressure. Below-grade truck wells considered not to be fixed at the top should be designed on the basis of active earth lateral earth pressures corresponding to an equivalent fluid pressure of 42 pounds per square foot per foot of depth for drained soil conditions and 63 pounds per square foot per foot of depth of undrained soil conditions. The truck well walls should be designed for an additional uniform surcharge load for vehicles that load freight into the trucks. Lateral earth pressures are significantly influenced by the type and intensity of backfill compaction. We recommend thin lifts (approximately 6 inches per lift) of backfill be placed and relatively small compaction equipment be used to compact backfill placed against below-grade walls.

We recommend a foundation drain system or weep holes be incorporated to maintain drained conditions. To prevent the development of hydrostatic pressures on below grade floors and walls, a subdrain system should be installed at the foundation level. The perforated or slotted subdrains should be encased with at least 12 inches of clean gravel or pea gravel, and the gravel and pipe together should be wrapped with a suitable non-woven filter fabric, such as Mirafi 140N, to prevent the migration of surrounding soil fines into the gravel and drain pipe. The subdrain system should outlet water to a sump/pump system designed to remove the collected water.

FLOOR SLAB RECOMMENDATIONS

The subgrade soils will be variable in nature, consisting of engineered fill, native stiff to hard silty clay, and improved granular soils. In general, the subgrade soils resulting from the satisfactory completion of site preparation operations can be used for the support of floor slabs. We recommend that at least 4

inches of pea gravel or clean course sand be placed between the subgrade and the bottom of the floor slab for use as a capillary break to reduce moisture transmission through the concrete floors and to reduce the potential for concrete curling. Alternately, the gravel may consist of minus 3/4-inch crushed gravel with a fines content (minus No. 200 sieve) of less than 3 percent. If moisture sensitive floor coverings are planned or if greater protection against vapor transmission is desired, a vapor barrier consisting of 10 mil plastic sheeting, or equivalent, may be placed below the granular layer beneath floor slabs. For design of concrete slabs, a modulus of subgrade reaction value (k) of 150 pounds per cubic inch (pci) may be used.

We understand that Aging Room, in the area of boring SB-11, will have rack storage that is sensitive to settlement. The rack legs are 2-ft on center, and impose an approximate uniform load of 400 psf on the floor slab. The concrete slab will be 7 inches thick in this area. Based on the proposed finished floor elevation and anticipated floor slab section thickness, we anticipate the floor slab will be supported on a shallow layer silty sand (approximately 6 inches in thickness) overlying medium native silty clay (approximately 2-1/2 feet in thickness) overlying very stiff to hard silty clay within the western portion of the room, or engineered fill overlying the before mentioned soils within the eastern portion of the room. Given the size of the area and the existing grade changes, it appears the floor slab may be supported on different types of soils with varying strengths, which could lead to differential settlement of the floor slab. If the chance of differential settlement cannot be tolerated, we recommend undercutting the shallow layer of medium silty clay, and replacing with engineered fill. This would allow for the floor slab to be uniformly supported on engineered fill overlying the very stiff to hard silty clay and mitigate the potential for excessive differential settlement. Additional shallow soil borings could be performed within this area to better determine the quantity of medium clay soils that may have to be removed, as well as further evaluate the suitability of the soils for support of the floor slab loads.

PAVEMENT RECOMMENDATIONS

We understand the pavement area will include construction of parking areas and access drives. Pavement design grades for the Phase I and II area will range from 676 to 684 feet. Proposed pavement design grades were not available for the Phase III development. We anticipate the truck docks will extend 4 feet below the proposed finished floor elevation. Based on the proposed site grades and existing subsurface conditions, we expect subgrade soils will be variable, consisting of engineered fill, stiff to hard silty clay, and improved granular soils. We anticipate these soils will generally be suitable for support of the proposed pavements following satisfactory completion of proofrolling / proofcompaction operations as described in the Site Preparation section of this report. In general, granular fill and/or native granular soils are considered to be of fair to moderate quality for the direct support of conventional pavement structures. Granular soils are considered to have moderately good drainage characteristics and have a lower potential for frost action. Silty clay soils are considered poor for direct support of pavement structures. Silty clay soils have poor drainage characteristics, are susceptible to frost heave, and may become unstable under the repeated loading typical of pavement construction operations.

The native silty clay has in-situ moisture contents generally ranging from 14 to 18 percent at the anticipated design subgrade elevation, which is at or slightly below the plastic limit of the soils. Based on the predominantly silty clay soils present and assumption that engineered fill will primarily consist of on-site silty clay borrow material, the subgrade soils may be assigned an effective roadbed soil resilient modulus of 11,500 psi. This value has been selected to apply to the existing soil conditions at the site as

well as to reflect seasonal effects of moisture and temperature changes on the subgrade soils. If additional soils are brought on site for use as engineered fill below the pavement areas, the material's soil resilient modulus should be confirmed prior to use as engineered fill below pavements.

At the time of this investigation, the anticipated daily truck traffic was not available. Therefore, heavy-duty design pavement cross-sections could not be determined. Once traffic data becomes available, we can determine the heavy-duty design pavement cross-sections. For light-duty parking areas, we performed pavement design analyses in accordance with the "AASHTO Guide for Design of Pavement Structures". For the light-duty flexible pavement in car traffic areas, we have designed the pavement section based on an estimated 50,000 18-kip ESALs over a 20-year design life. For evaluation purposes, we estimated a serviceability loss of 2.5, a standard deviation of 0.45 for flexible pavements, a reliability factor of 0.85, and an effective roadbed soil resilient modulus of 11,500 psi.

Based on the results of our analyses, we recommend a light-duty pavement section consisting of 1-1/2 inches of 1100T bituminous wearing course, 2 inches of 1100L bituminous leveling course, supported by 8 inches of MDOT 21AA dense-graded aggregate base material. All pavement materials are specified within the 2003 Standard Specifications for Construction from the Michigan Department of Transportation. The bituminous pavement materials are described in Section 501. The concrete pavement materials are described in Section 601. The aggregate materials for dense-graded base, bituminous mixtures and concrete are described in Section 902.

The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase material consist of non-frost-susceptible aggregates. Regular timely maintenance should be performed on the bituminous pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.

Large front-loading refuse trucks can impose significant concentrated wheel loads within trash dumpster pick-up areas. This type of loading can result in rutting of bituminous pavements and ultimately in failure. Therefore, we recommend non-reinforced concrete pavement at least 8 inches in thickness be used in these areas.

GEOTHERMAL PROPERTIES AND RECOMMENDATIONS

We understand that a deep or shallow geothermal field loop may be constructed within the site. Thermal property analyses were performed at two boring locations, B-1 and B-18. The test results are presented in the Geothermal Properties Summary Sheet within the appendix of this report. The thermal diffusivity ranged from 0.39 to 1.14 mm^2/s, and thermal conductivity ranged from 1.17 to 3.46 W/(mK). The specific heat ranged from 2.34 to 3.57 $MJ/(m^3K)$, and thermal resistivity ranged from 0.29 to 0.86 mK/W. Deep loops may be advantageous for this site given the granular soils encountered below depths ranging from 33 to 47 feet, and groundwater table present below approximate depths ranging from 38 to 57 feet below existing grades.

DETENTION BASIN RECOMMENDATIONS

A detention basin will be constructed within the eastern portion of the site. The detention basin will be approximately 7 feet deep, and have a bottom elevation of 665 feet. Soil conditions at the bottom of the proposed basin are anticipated to consist of brown silty clay. The existing silty clay soils anticipated to be present at the depth of the basin are low in permeability and will not allow for the collected water to freely percolate into the subsurface. An outlet structure would have to be constructed within the basin. Otherwise, the existing cohesive soils are highly suitable for the construction of a retention system.

CONSTRUCTION CONSIDERATIONS

We expect foundation excavations will generally extend a minimum of 3-1/2 feet below proposed finished grade elevations. In addition, footing excavations at the truck well locations will extend deeper. Some groundwater may be encountered at or near the bearing elevations within areas where granular soils are present, but we expect accumulations of groundwater seepage and surface run-off water in such excavations should be controllable with normal pumping from properly constructed sumps. The installation of storm sewer utilities prior to mass balancing, as well as performing earthwork within the drier summer months, will help to control the presence of perched water within the upper granular soils overlying the silty clay.

Utility excavations are expected to extend 5 to 7 feet below the proposed finished grades. Perched groundwater may be encountered in excavations that extend through the upper granular soils. However, we anticipate the groundwater can temporarily be controlled with normal pumping from properly constructed sumps. Temporary unsurcharged slopes may be cut at 2:1 (horizontal:vertical) or flatter in the very loose to loose granular soils, 1:1 or flatter in the stiff silty clay, and ¾:1 or flatter in the very stiff to hard silty clay. Where seepage from excavation cuts is observed, the slopes will need to be flattened sufficiently to achieve stability, but in no case left steeper than 3:1 at and below the seepage level.

Caving and/or sloughing of the upper granular soils, where encountered, may occur during foundation excavation. As such, the contractor should be prepared to over excavate and form footings within the granular soils, as necessary. Otherwise, we anticipate foundation can be excavated in neat open excavations within the predominantly silty clay soils. The sides of the spread and/or strip footing foundations should be constructed straight and vertical to reduce the risk of frozen soil adhering to the concrete and raising the foundations.

It is recommended that grading and excavation operations be performed during periods of extended hot and dry weather to reduce the need for extensive dewatering and excavation support. All excavations should be safely sheeted, shored, sloped, or braced in accordance with MI-OSHA requirements. If material is stored or equipment is operated near an excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report relative to site preparation and foundations on the basis of data provided to us relating to the location, type, and grade for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

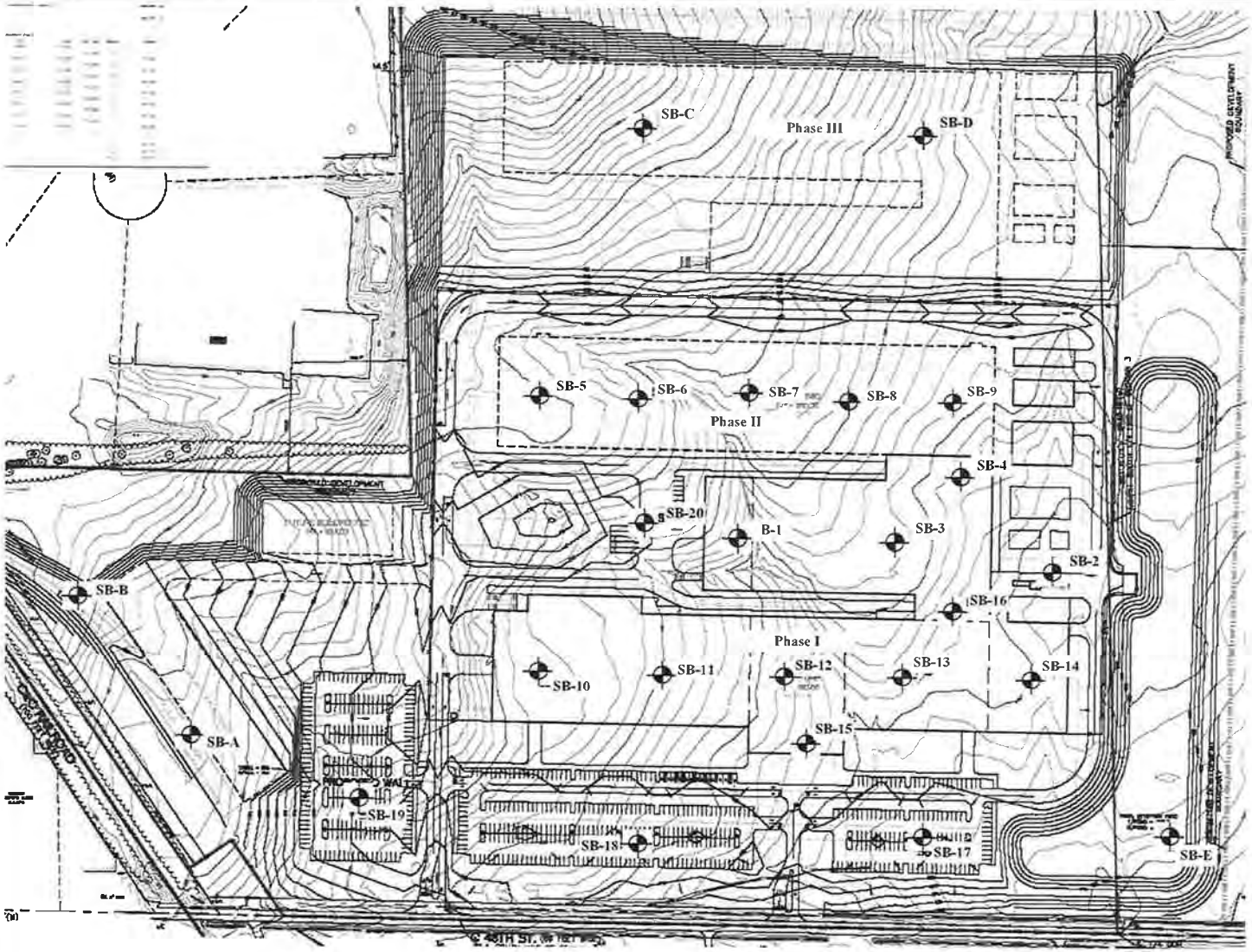
The scope of the present investigation was limited to evaluation of subsurface conditions for the support of the commercial structures and other related aspects of the development. No chemical, environmental, or hydrogeological testing or analysis were included in the scope of this investigation.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate 1. This report does not reflect variations that may occur between the actual soil boring locations and the actual structure location.

Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the site preparation, excavation, and foundation construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

APPENDIX

Soil Boring Location Plan	Plate No. 1
Soil Boring Logs	Figure Nos. 1 through 25
Unconfined Compressive Strength Test Results	Figure Nos. 26 through 28
Atterberg Limits Test Results	Figure No. 29
Geothermal Properties Summary Sheet	Figure No. 30
General Notes	Figure No. 31



N

Legend

Soil Borings Performed by West Michigan Drilling on November 17th through 24th, 2009

Soil Boring Location Plan

Proposed LGC - Battery Project
48th Street, East of Waverly
Holland, Michigan

G2 CONSULTING GROUP
1866 Woodslee Street
Troy, Michigan 48083

Project No 090845	
Drawn by JBS	
Date: 12-8-09	Plate No 1
Scale: NTS	

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-01**

G2 Consulting Group, LLC

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 677.9 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (10 inches) 0.8							
				S-1	2 5 6	11	17.5		6000*
672.9			5	S-2	5 7 10	17	13.8		9000*
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel		S-3	5 10 13	23	14.1		9000*
667.9			10	S-4	9 8 12	20	12.9		9000*
		13.5							
662.9			15	S-5	3 6 7	13	15.1		8000*
657.9			20	S-6	3 5 7	12	14.8		6000*
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel and occasional silt seams							
652.9			25	S-7	3 6 7	13	16.6	125	5890
647.9			30	S-8	3 6 7	13	28.1		4500*
642.9			35	S-9	4 6 11	17	14.4		4500*

Total Depth: 90ft
Drilling Date: November 17, 2009
Inspector: A. Scott
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem auger; wash rotary driling methods starting at 60 feet

Water Level Observation:
57 feet during drilling; 21 feet before auger removal; 17 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings and betonite slurry

Figure No. 1a

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-01**

G2 Consulting Group, LLC

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 677.9 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel and occasional silt seams *(continued)*							
		38.5							
637.9			40	S-10	12 33 50/2"	---			
632.9			45	S-11	16 21 30	51			
		Compact to Very Compact Gray Silty Sand with trace gravel and clay							
627.9			50	S-12	7 20 21	41			
622.9			55	S-13	16 21 29	50			
		57.0 ▽							
617.9		Medium Compact Gray Sand with trace gravel and silt	60	S-14	4 4 8	12			
		63.5							
612.9			65	S-15	41 60	---			
		Very Compact Gray Silty Sand with trace gravel							
		69.5							
607.9			70	S-16	29 39 50/5"	---	11.4		9000*

Total Depth: 90ft
Drilling Date: November 17, 2009
Inspector: A. Scott
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem auger; wash rotary driling methods starting at 60 feet

Water Level Observation:
57 feet during drilling; 21 feet before auger removal; 17 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings and betonite slurry

Figure No. 1b

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-01**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 677.9 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Hard Gray Silty Clay with trace sand and gravel *(continued)*							
		73.5							
602.9			75	S-17	57 50/4"	---			
		Very Compact Gray Silty Sand with trace gravel							
597.9			80	S-18	44 62	---			
		83.5							
592.9			85	S-19	17 37 41	78			
		Very Compact Gray Sand with trace gravel and silt							
587.9		90.0	90	S-20	30 36 36	72			
		End of Boring @ 90ft							
582.9			95						
577.9			100						
572.9			105						

Total Depth: 90ft
Drilling Date: November 17, 2009
Inspector: A. Scott
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem auger; wash rotary driling methods starting at 60 feet

Water Level Observation:
57 feet during drilling; 21 feet before auger removal; 17 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings and betonite slurry

Figure No. 1c

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-02**

G2 Consulting Group, LLC

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 669.1 ft	DEPTH (ft)	SAMPLE TYPE-NO	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Medium Dark Brown Silty Clay (36 inches) (Organic Matter Content = 13.9%)		S-1	0 1 3	4	51.2		
		3.0							
664.1		Stiff Brown and Gray Silty Clay with trace sand and gravel	5	S-2	1 3 5	8	22.7		3000*
		5.5		S-3	3 3 6	9	20.2		5000*
659.1			10	S-4	3 6 7	13	16.6		5500*
		Very Stiff Gray Silty Clay with trace sand and gravel							
654.1			15	S-5	3 5 7	12	14.4		6000*
		18.5							
649.1		Medium Gray Silty Clay with trace sand and gravel 20.0	20	S-6	2 3 3	6	17.8	117	1900
		End of Boring @ 20ft							
644.1			25						
639.1			30						
634.1			35						

Total Depth: 20ft
Drilling Date: November 23, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 3 feet during drilling; dry before and after auger removal; 10 feet after 24 hours

Notes:
Borehole collasped at 10 feet after 24 hours
Borehole collapsed at 18 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 2

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-03**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 676.1 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches) 1.0							
		Brown Silty Sand with trace gravel 2.0			3 4 3				
		Stiff Brown and Gray Silty Clay with trace sand and gravel 3.0		S-1		7	19.0		2000*
671.1			5	S-2	3 7 10	17	17.5		9000*
		Hard Brown and Gray Silty Clay with trace sand and gravel		S-3	4 6 9	15	15.1		9000*
666.1			10	S-4	4 8 9	17	15.1		9000*
		12.0							
661.1			15	S-5	4 6 9	15	15.2		8000*
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel							
656.1			20	S-6	3 5 6	11	12.7		4000*
651.1		25.0	25	S-7	4 5 8	13	15.1		4000*
		End of Boring @ 25ft							
646.1			30						
641.1			35						

Total Depth: 25ft
Drilling Date: November 23, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
3-1/2 feet during drilling; dry before and after auger removal; 7 feet after 24 hours

Notes:
Borehole collasped at 16-1/2 feet after 24 hours
Borehole collapsed at 23 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 3

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-04**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 674.5 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (18 inches)							
		1.5			2 2				
		Loose Brown Silty Sand with trace gravel		S-1	3	5			
		3.0			3				
669.5			5	S-2	4 5	9	15.2		6000*
					3				
				S-3	4 8	12	16.1		7000*
					3				
664.5			10	S-4	5 6	11	14.4		5000*
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel			3				
659.5			15	S-5	6 7	13	11.1		3000*
					3				
654.5			20	S-6	5 6	11	15.0		3000*
					3				
649.5		25.0	25	S-7	5 7	12	17.5		4000*
		End of Boring @ 25ft							
644.5			30						
639.5			35						

Total Depth: 25ft
Drilling Date: November 23, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
1-1/2 feet during drilling; dry before auger removal; 22 feet upon removal of augers; 3 inches after 24 hours

Notes:
Borehole collasped at 22 inches after 24 hours
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 4

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-05**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 690.8 ft	DEPTH (ft)	SAMPLE TYPE-NO	BLOWS/ 6-INCHES	STD. PEN RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF COMP. STR (PSF)
		Topsoil: Dark Brown Silty Sand (11 inches) 0.9							
685.8			5	S-1	4 7 8	15	15.2		9000*
680.8		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-2	5 7 11	18	15.6		9000*
		11.5		S-3	4 8 11	19	14.6		8000*
675.8		Very Stiff to Hard Gray Silty Clay with trace sand and gravel	15	S-4	3 5 8	13	15.8		4500*
		17.5		S-5	4 4 7	11	16.6		4000*
670.8			20	S-6	3 4 6	10	15.3	123	3540
665.8		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	25	S-7	4 6 8	14	23.1		4000*
660.8		30.0	30	S-8	3 3 6	9	16.7	118	3160
		End of Boring @ 30ft							
655.8			35						

Total Depth: 30ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Dry during drilling; 24 feet before auger removal; dry after auger removal; dry after 24 hours

Notes:
Borehole collapsed at 23 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 5

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-06**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 687.7 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (11 inches) 0.9							
		Brown Silty Sand with trace gravel 2.0							
682.7			5	S-1	3 6 8	14	17.7		9000*
677.7		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-2	4 8 12	20	13.4		9000*
				S-3	6 9 14	23	14.0		9000*
672.7			15	S-4	4 7 8	15	13.6		8500*
		17.5		S-5	3 5 9	14	14.3		8000*
667.7			20	S-6	3 6 8	14	14.6		8000*
662.7		Very Stiff to Hard Gray Silty Clay with trace sand and gravel 25.0	25	S-7	5 8 10	18	14.9		4500*
657.7		End of Boring @ 25ft	30						
652.7			35						

Total Depth: 25ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1 and 3 feet during drilling; 21-1/2 feet after auger removal; 1-1/2 feet after 24 hours

Notes:
Borehole collasped at 5-1/2 feet after 24 hours
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 6

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-07**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 684.0 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (11 inches) 0.9							
679.0		Hard Brown and Gray Sity Clay with trace sand and gravel	5	S-1	5 7 9	16	14.5		9000*
				S-2	4 6 8	14	15.8		9000*
674.0			10	S-3	4 7 10	17	15.1		8000*
		11.0		S-4	5 8 11	19	14.8		7000*
669.0		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	15	S-5	3 5 6	11	15.6		5000*
664.0			20	S-6	3 3 5	8	15.6		2000*
		23.0							
659.0		Medium Gray Silty Clay with trace sand and gravel and occasional sand layers 25.0	25	S-7	3 3 3	6	19.1		1000*
		End of Boring @ 25ft							
654.0			30						
649.0			35						

Total Depth: 25ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 23 feet during drilling; 24 feet before auger removal; 22-1/2 feet after auger removal

Notes:
Borehole collapsed at 22-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 7

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-08**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 680.6 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR (PSF)
		Topsoil: Dark Brown Silty Sand (11 inches) 0.9							
		Very Loose Brown Silty Sand with trace gravel		S-1	2 1 2	3			
		3.5							
675.6		Soft Brown and Gray Silty Clay with trace sand and gravel and occasional sand layers	5	S-2	2 1 2	3	21.4		600**
		6.0							
		Stiff to Very Stiff Brown and Gray Silty Clay with trace sand and gravel		S-3	4 6 7	13	26.1		3000*
670.6		10.0	10	S-4	5 4 7	11	15.6		5000*
665.6			15	S-5	2 3 4	7	17.5	117	2040
		Medium to Stiff Gray Silty Clay with trace sand and gravel							
660.6			20	S-6	2 3 4	7	14.1	123	1850
655.6		25.0	25	S-7	2 4 6	10	17.1		3000*
		End of Boring @ 25ft							
650.6			30						
645.6			35						

Total Depth: 25ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 7 inches during drilling; dry before auger removal; 3-1/2 after auger removal; 2 feet after 24 hours

Notes:
Borehole collasped at 5 feet after 24 hours
Borehole collapsed at 4 ft after auger removal
* Calibrated Hand Penetrometer
** Torvane

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 8

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-09**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 676.4 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches) 1.0							
		Loose Brown Silty Sand with trace gravel 2.5		S-1	3 4 4	8			3000*
671.4		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	5	S-2	3 7 10	17	24.8		6500*
				S-3	6 7 10	17	14.7		9000*
		8.0							
666.4			10	S-4	4 9 12	21	14.4		9000*
661.4			15	S-5	3 5 8	13	13.2		8000*
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel							
656.4			20	S-6	3 4 7	11	16.4		4000*
651.4		25.0	25	S-7	3 5 8	13	18.0		4000*
		End of Boring @ 25ft							
646.4			30						
641.4			35						

Total Depth: 25ft
Drilling Date: November 23, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1-1/2 feet during drilling; dry before and after auger removal; 14 inches after 24 hours

Notes:
Borehole collasped at 11-1/2 feet after 24 hours
Borehole collapsed at 23 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 9

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-10**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 683.1 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (13 inches)							
		1.1							
		Brown Silty Sand with trace gravel							
		3.0		S-1	2 2 1	3	19.9		1000*
678.1		Soft to Medium Brown and Gray Silty Clay with trace sand and gravel and occasional sand layers	5	S-2	3 6 12	18	20.0		500*
		5.5		S-3	5 5 7	12	14.3		8000*
673.1		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	3 5 7	12	14.2		7000*
		12.0							
668.1		Hard Gray Silty Clay with trace sand and gravel	15	S-5	3 6 8	14	15.0		8500*
		18.0							
663.1			20	S-6	3 4 5	9	17.3	118	3240
658.1			25	S-7	3 5 5	10	12.7		5000*
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel							
653.1			30	S-8	4 5 5	10	15.9		4000*
648.1			35	S-9	2 5 5	10	16.2		4000*

Total Depth: 50ft
Drilling Date: November 19, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 2-1/2 feet during drilling; 22-1/2 feet before auger removal; 24-1/2 feet after auger removal; 1 foot after 24 hours

Notes:
Stone in split-spoon for 5-ft sample
Borehole collapsed at 12 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 10a

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-10**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 683.1 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
643.1			40	S-10	2 5 6	11	16.0		4000*
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel *(continued)*							
638.1			45	S-11	3 4 4	8	13.9		4000*
		47.5							
633.1		Medium Compact Gray Sand with trace silt and gravel 50.0	50	S-12	6 12 15	27			
		End of Boring @ 50ft							
628.1			55						
623.1			60						
618.1			65						
613.1			70						

Total Depth: 50ft
Drilling Date: November 19, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 2-1/2 feet during drilling; 22-1/2 feet before auger removal; 24-1/2 feet after auger removal; 1 foot after 24 hours

Notes:
Stone in split-spoon for 5-ft sample
Borehole collapsed at 12 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 10b

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-11**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 679.6 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches) 0.7							
		Brown Silty Sand with trace gravel 1.5		S-1	2 2 3	5	18.1		1500*
		Medium Brown and Gray Silty Clay with trace sand and gravel 4.0							
674.6			5	S-2	3 6 8	14	17.0		6000*
				S-3	3 6 10	16	16.0		9000*
669.6		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-4	5 7 11	18	15.2		9000*
		12.0							
664.6			15	S-5	3 5 6	11	15.3		5000*
659.6		Very Stiff Gray Silty Clay with trace sand and gravel	20	S-6	3 4 6	10	16.8	123	4010
654.6		25.0	25	S-7	3 4 6	10	17.1		4000*
		End of Boring @ 25ft							
649.6			30						
644.6			35						

Total Depth: 25ft
Drilling Date: November 19, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1-1/2 feet during drilling; 23 feet upon completion of drilling; at ground surface after 24 hours

Notes:
Borehole collapsed at 4 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 11

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-12**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PROFILE	GROUND SURFACE ELEVATION: 673.0 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches) 1.0							
		Brown Silty Sand with trace gravel 2.0		S-1	2 3 3	6	16.7		6000*
668.0		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	5	S-2	4 6 7	13	14.4		9000*
				S-3	3 6 9	15	15.3		9000*
663.0		9.0	10	S-4	4 8 9	17	13.6		9000*
658.0			15	S-5	3 5 7	12	16.3		7500*
653.0		Very Stiff to Hard Gray Silty Clay with trace sand and gravel	20	S-6	3 6 7	13	14.1		4000*
648.0		25.0	25	S-7	3 6 7	13	15.2		8500*
643.0		End of Boring @ 25ft	30						
638.0			35						

Total Depth: 25ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Dry during drilling and after removal of augers; Seepage at 24-1/2 feet upon completion; 6 feet after 24 hours

Notes:
Borehole collapsed at 11-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 12

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-13**

G2 Consulting Group, LLC

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 672.0 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches) 0.8							
		Medium Compact Brown Silty Sand		S-1	4 8 10	18			
		3.0							
667.0		Medium Brown Sandy Clay with trace gravel	5	S-2	2 2 6	8	20.5		1000*
		5.5							
		Very Stiff Brown Silty Clay with trace sand and gravel and occasional sand partings		S-3	4 6 5	11	15.5		4000*
		8.0							
662.0		Stiff Gray Sity Clay with trace sand and gravel	10	S-4	5 8 10	18	15.5		3000*
		11.0							
657.0		Medium Gray Sandy Clay with trace silt and gravel	15	S-5	2 2 3	5	12.4		1000*
		18.5							
652.0		Soft Gray Silty Clay with trace sand and gravel and occasional sand layers	20	S-6	0 0 0	0	23.7		600**
		23.5							
647.0		Stiff Gray Silty Clay with trace sand and gravel 25.0	25	S-7	2 3 4	7	17.8	122	3010
		End of Boring @ 25ft							
642.0			30						
637.0			35						

SUBSURFACE PROFILE

SOIL SAMPLE DATA

Total Depth: 25ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
3 feet during drilling; 25 feet before auger removal; Seepage observed at 5 feet upon removal of augers; 2 feet after 24 hours

Notes:
Borehole collapsed at 3-1/2 ft after auger removal
* Calibrated Hand Penetrometer
** Torvane

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 13

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-14**

G2 Consulting Group, LLC

ELEV (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 669.6 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (10 inches) 0.8							
664.6		Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel and occasional sand seams	5	S-1	2 2 4	6	24.2	100	3050
				S-2	2 4 5	9	16.4		3000*
		6.5		S-3	4 5 8	13	15.8		6500*
659.6		Very Stiff Brown and Gray Silty Clay with trace sand and gravel	10	S-4	5 7 8	15	14.6		7000*
		12.0							
654.6		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	15	S-5	3 4 5	9	19.6	112	4340
649.6			20	S-6	1 3 3	6	24.9	105	2700
		24.0		S-7	3 4 5	9	28.2	96	3800
644.6		Stiff Gray Clayey Silt with trace sand and gravel	25						
		28.0							
639.6		Hard Gray Sandy Clay with trace silt and gravel	30	S-8	9 11 20	31	8.3		9000*
		33.0							
634.6		Compact Sand with trace silt and gravel	35	S-9	13 21 25	46			

Total Depth: 50ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
38 feet during drilling; 14 feet before auger removal; 20 feet after auger removal; 9 feet after 24 hours

Notes:
Wash water added at 45 feet
Borehole collapsed at 28-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 14a

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-14**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 669.6 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Compact Sand with trace silt and gravel *(continued)*							
		▽ 38.0							
629.6		Compact Gray Silty Sand with trace gravel and occasional clay seams	40	S-10	13 19 30	49			
		42.5							
624.6		Very Compact Gray Sandy Silt with occasional sand layers and clay layers	45	S-11	6 31 50	81			
		46.5							
619.6		Hard Gray Sandy Clay with trace silt and gravel 50.0	50	S-12	23 35 50/5"	---	9.0		9000*
		End of Boring @ 50ft							
614.6			55						
609.6			60						
604.6			65						
599.6			70						

Total Depth: 50ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
38 feet during drilling; 14 feet before auger removal; 20 feet after auger removal; 9 feet after 24 hours

Notes:
Wash water added at 45 feet
Borehole collapsed at 28-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 14b

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-15**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 672.0 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches) 0.8							
		Brown Silty Sand with trace gravel 1.5		S-1	2 3 4	7	16.7		7000*
667.0			5	S-2	5 7 10	17	17.2		9000*
				S-3	5 7 10	17	14.8		9000*
		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel		S-4	5 8 11	19	14.3		9000*
662.0			10						
				S-5	3 5 8	13	15.1		6500*
657.0			15						
		16.0							
		Very Stiff Gray Silty Clay with trace sand and gravel		ST-6			14.6	123	5260
652.0			20		4				
				S-7	6 8	14	16.9		5000*
		23.0							
		Very Stiff Gray Silty Clay with trace sand and gravel and occasional sand seams 25.0		S-8	6 5 7	12	16.3		4000*
647.0			25						
		End of Boring @ 25ft							
642.0			30						
637.0			35						

Total Depth: 25ft
Drilling Date: November 24, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
1-1/2 feet during drilling; dry before and after auger removal; 13 feet after 24 hours

Notes:
Borehole collasped at 19 feet after 24 hours
Borehole collapsed at 22-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 15

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-16**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 676.7 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches) 1.0							
		Brown Silty Sand with trace gravel 2.0		S-1	2 2 3	5	15.2		4000*
671.7		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	5	S-2	4 5 8	13	14.3		9000*
				S-3	3 5 8	13	15.5		7000*
666.7		9.0	10	S-4	6 8 10	18	15.6		8000*
		Hard Gray Silty Clay with trace sand and gravel 12.0							
661.7			15	S-5	4 4 7	11	19.6		4000*
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel							
656.7		20.0	20	S-6	3 4 6	10	15.6	119	3290
		End of Boring @ 20ft							
651.7			25						
646.7			30						
641.7			35						

Total Depth: 20ft
Drilling Date: November 23, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1-1/2 feet during drilling; dry before and after auger removal; 17 feet after 24 hours

Notes:
Borehole collapsed at 18 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 16

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. SB-17

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 667.7 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Sandy Clay (15 inches) 1.3							
		Stiff Mottled Brown and Dark Brown Silty Clay with trace sand and gravel 3.5		S-1	2 3 3	6	27.0		2000*
662.7		Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel 6.5	5	S-2	2 3 3	6	22.8		2500*
		Hard Brown and Gray Silty Clay with trace sand and gravel 9.0		S-3	4 5 8	13	16.0		9000*
657.7		Hard Brown Silty Clay with trace sand and gravel 10.0	10	S-4	4 8 10	18	15.6		9000*
		End of Boring @ 10ft							
652.7			15						
647.7			20						
642.7			25						
637.7			30						
632.7			35						

Total Depth: 10ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Dry during and upon completion of drilling

Notes:
Borehole collapsed at 6 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 17

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-18**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 676.6 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches) 0.8							
		Loose Brown Sand with trace silt and gravel		S-1	3 4 4	8			
		3.5							
671.6			5	S-2	3 6 7	13	14.8		9000*
				S-3	3 4 8	12	14.4		8000*
666.6		Very Stiff to Hard Gray Silty Clay with trace sand and gravel	10	S-4	3 7 7	14	15.4		7000*
661.6		15.0	15	S-5	4 4 7	11	15.3		5000*
		End of Boring @ 15ft							
656.6			20						
651.6			25						
646.6			30						
641.6			35						

Total Depth: 15ft
Drilling Date: November 17, 2009
Inspector: A. Scott
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Dry during drilling; Seepage observed at 3 feet upon removal of augers; 1-1/2 after 24 hours

Notes:
Borehole collapsed at 13 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 18

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-19**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 687.3 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches) 0.8							
		Brown Silty Sand with trace gravel 1.5			2 2				
		Stiff Brown and Gray Silty Clay with trace sand and gravel 2.5		S-1	2	4	21.1		3000*
682.3		Loose Brown Clayey Sand with trace gravel 5.0	5	S-2	2 2 3	5			
		Very Stiff Brown and Gray Silty Clay with trace sand and gravel		S-3	3 5 9	14	16.3		7000*
677.3		9.5	10	S-4	3 5 8	13	15.6		7000*
672.3		Very Stiff Gray Silty Clay with trace sand and gravel 15.0	15	S-5	4 5 8	13	15.5		7000*
		End of Boring @ 15ft							
667.3			20						
662.3			25						
657.3			30						
652.3			35						

Total Depth: 15ft
Drilling Date: November 19, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
2-1/2 feet during drilling; Dry before auger removal; 12 feet after auger removal; 1 foot after 24 hours

Notes:
Borehole collapsed at 3 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 19

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-20**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 681.5 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (18 inches)							
		1.5			2				
		Loose Brown Silty Sand with trace gravel			3				
		2.5		S-1	2	5			
					3				
676.5		Very Stiff Brown and Gray Silty Clay with trace sand and gravel	5	S-2	5	11	16.1		6000*
					6				
					3				
				S-3	5	13	15.9		7000*
		8.0			8				
					4				
671.5			10	S-4	7	16	14.8		8000*
					9				
		Hard Gray Silty Clay with trace sand and gravel							
					3				
666.5		15.0	15	S-5	6	13	14.0		8000*
					7				
		End of Boring @ 15ft							
661.5			20						
656.5			25						
651.5			30						
646.5			35						

Total Depth: 15ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1-1/2 feet during drilling; Dry before and after auger removal; 6 inches after 24 hours

Notes:
Borehole collasped at 1-1/2 feet after 24 hours
Borehole collapsed at 12-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 20

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. SB-A

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 698.2 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches) 1.0							
				S-1	2 2 3	5			
693.2		Loose Brown Sand with trace silt and gravel	5	S-2	4 4 6	10			
		5.5		S-3	3 4 6	10	15.6		6000*
688.2		Very Stiff Brown and Gray Silty Clay with trace sand and gravel	10	S-4	3 4 8	12	16.8		6000*
		11.5							
683.2			15	S-5	3 3 4	7	15.0		6000*
678.2		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	20	S-6	4 3 6	9	16.6		3000*
673.2		25.0	25	S-7	3 4 6	10	16.7		2500*
		End of Boring @ 25ft							
668.2			30						
663.2			35						

Total Depth: 25ft
Drilling Date: November 19, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 4 feet during drilling; 21-1/2 feet after auger removal; 3 feet after 24 hours

Notes:
Borehole collapsed at 5 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 21

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-B**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 706.7 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (7 inches) 0.6							
701.7			5	S-1	4 7 9	16	15.6		9000*
696.7		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-2	4 8 2	10	14.7		7000*
		11.0		S-3	4 6 8	14	12.9		7000*
691.7		Very Stiff Gray Silty Clay with trace sand and gravel	15	S-4	3 6 8	14	12.5		5000*
		16.5		S-5	5 5 7	12	11.4		4000*
686.7			20	S-6	3 5 8	13	11.9		6000*
681.7		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel and occasional sand layers 25.0	25	S-7	3 3 6	9	14.6		3000*
676.7		End of Boring @ 25ft	30						
671.7			35						

Total Depth: 25ft
Drilling Date: November 20, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
16-1/2 feet during drilling; dry before and after auger removal;
5-1/2 feet after 24 hours

Notes:
Borehole collasped at 11-1/2 feet after 24 hours
Borehole collapsed at 23 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 22

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-C**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV. (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 699.1 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Clay (11 inches) 0.9							
694.1			5	S-1	5 7 12	19	15.9		8500*
689.1		Hard Brown and Gray Silty Clay with trace sand and gravel	10	S-2	5 9 12	21	12.9		9000*
684.1			15	S-3	3 8 10	18	15.2		9000*
		16.5		S-4	3 4 6	10	14.9		6000*
679.1			20	S-5	4 5 7	12	16.9		3000*
				S-6	3 4 6	10	17.3		3000*
674.1	▽		25	S-7	3 3 6	9	17.1		3000*
669.1		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	30	S-8	5 4 6	10	15.3		3000*
664.1		35.0	35	S-9	3 5 7	12	15.4		4500*

Total Depth: 35ft End of Boring @ 35ft
Drilling Date: November 24, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 25 feet during drilling; dry before and after auger removal

Notes:
Borehole collasped at 32 feet after 24 hours
Borehole collapsed at 33 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 23

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-D**

G2 Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
ELEV (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 682.7 ft	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (13 inches) 1.1							
		Brown Silty Sand with trace gravel 1.5		S-1	2 2 2	4			7000*
677.7			5	S-2	4 6 8	14			9000*
		Very Stiff to Hard Brown and Gray Silty Clay with trace sand and gravel and occasional sand partings		S-3	4 6 10	16			9000*
672.7			10	S-4	4 7 9	16			9000*
		13.0							
667.7			15	S-5	3 4 6	10			4000*
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel and occasional sand partings							
662.7			20	S-6	3 4 5	9			2000*
		21.0							
		Stiff Gray Silty Clay with trace sand and gravel							
657.7		25.0	25	S-7	3 3 5	8			2500*
		End of Boring @ 25ft							
652.7			30						
647.7			35						

Total Depth: 25ft
Drilling Date: November 24, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

Water Level Observation:
Seepage at 1 foot during drilling; dry before and after auger removal; 13 feet after 24 hours

Notes:
Borehole collasped at 17-1/2 feet after 24 hours
Borehole collapsed at 21 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 24

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No. 090845

Latitude: N/A Longitude: N/A

Soil Boring No. **SB-E**

G2 Consulting Group, LLC

SUBSURFACE PROFILE

SOIL SAMPLE DATA

ELEV (ft)	PRO-FILE	GROUND SURFACE ELEVATION: 666.6 ft	DEPTH (ft)	SAMPLE TYPE-NO	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Clayey Silt (7 inches) 0.6		S-1	3 4 5	9	21.7		7500*
661.6		Very Stiff Brown and Gray Silty Clay with trace sand gravel and occasional sand seams and layers	5	S-2	5 7 9	16	18.2		9000*
				S-3	4 7 9	16	19.1		7500*
656.6		9.5	10	S-4	4 6 7	13	19.1		2000*
		Stiff to Very Stiff Brown and Gray Silty Clay with trace sand and gravel 14.0							
651.6			15	S-5	2 4 5	9	27.6		4000*
		Very Stiff Gray Silty Clay with trace sand 18.0							
646.6		Medium Gray Silty Clay with trace sand	20	S-6	2 3 3	6	32.6		1500*
		22.0							
641.6		Hard Gray Silty Clay with little sand and trace gravel 25.0	25	S-7	6 8 9	17	11.0		9000*
		End of Boring @ 25ft							
636.6			30						
631.6			35						

Total Depth: 25ft
Drilling Date: November 18, 2009
Inspector:
Contractor: West Michigan Drilling
Driller: D. Klitz

Drilling Method:
3-1/4 inch, inside diameter, hollow-stem augers

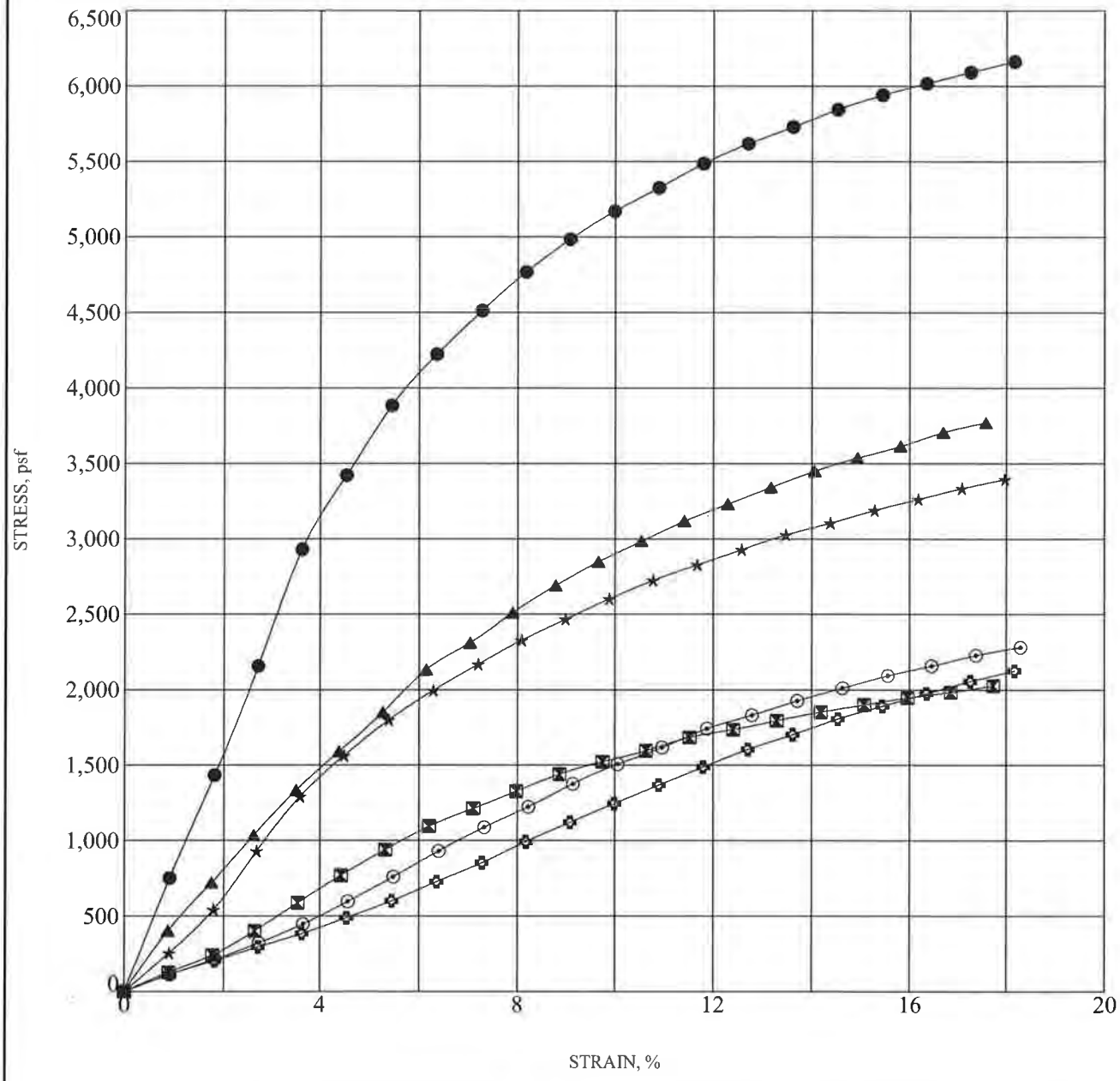
Water Level Observation:
9 feet during drilling; 18-1/2 feet after removal of augers; 3-1/2 feet after 24 hours

Notes:
Borehole collapsed at 8-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 25

SOIL / PAVEMENT BORING 090845.GPJ G2_CONS.GDT 12/9/09



Specimen		Classification	MC%	γ_d	UC
● SB-01	S-7	Gray Silty Clay	17	125	5890
⊠ SB-02	S-6	Gray Silty Clay	18	117	1900
▲ SB-05	S-6	Gray Silty Clay	15	123	3540
★ SB-05	S-8	Gray Silty Clay	17	118	3160
⊙ SB-08	S-5	Gray Silty Clay	18	117	2040
✿ SB-08	S-6	Gray Silty Clay	14	123	1850

G2 Consulting Group, LLC

UNCONFINED COMPRESSIVE STRENGTH TEST

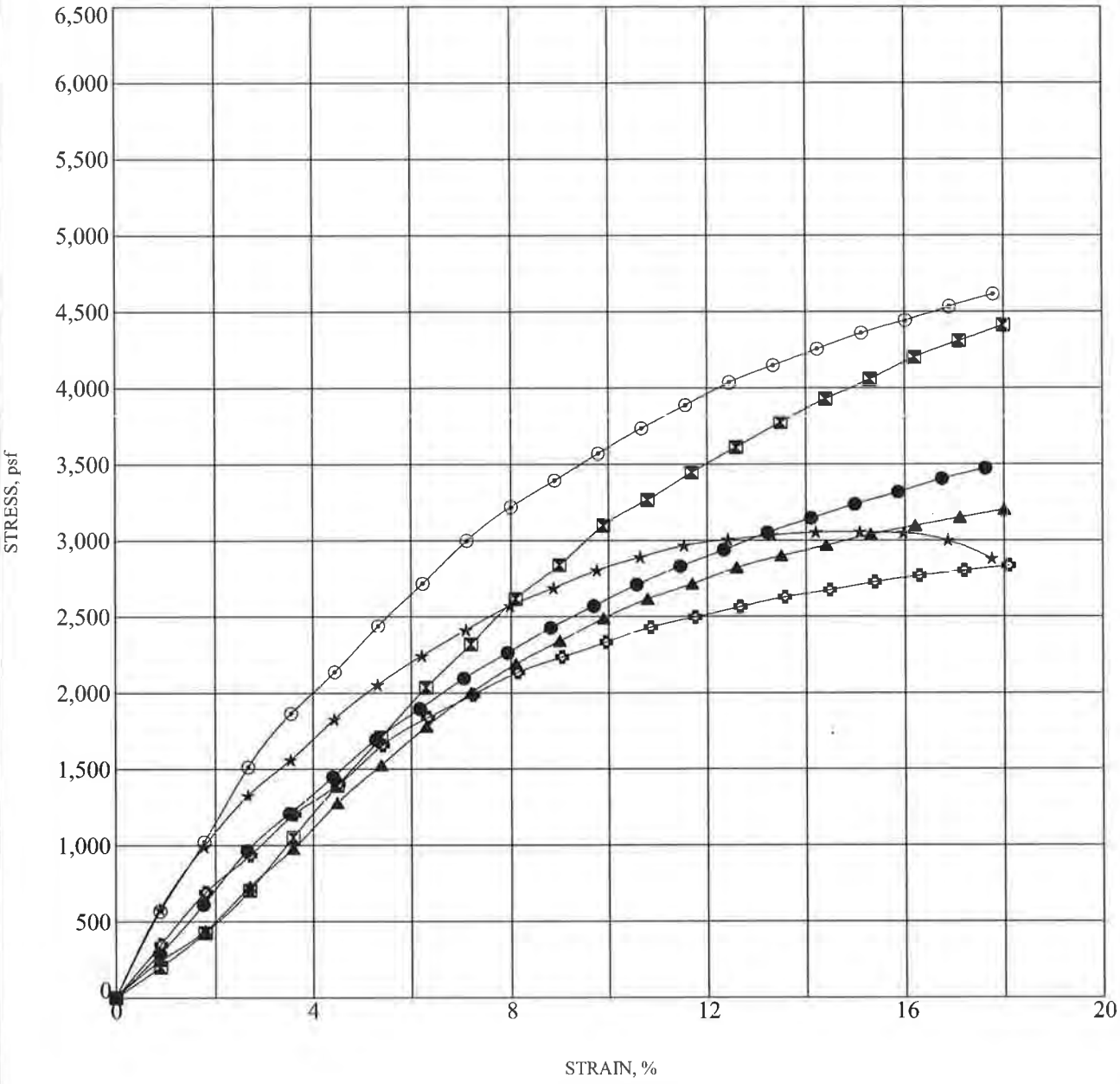
Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No.: 090845

Figure No. 26

US_UNCONFINED 090845.GPJ G2_CONS.GDT 12/9/09



Specimen			Classification	MC%	γ_d	UC
●	SB-10	S-6	Gray Silty Clay	17	118	3240
⊠	SB-11	S-6	Gray Silty Clay	17	123	4010
▲	SB-13	S-7	Gray Sandy Clay	18	122	3010
★	SB-14	S-1	Brown and Gray Silty Clay	24	100	3050
⊙	SB-14	S-5	Gray Silty Clay	20	112	4340
✿	SB-14	S-6	Gray Silty Clay	25	105	2700

UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: Proposed LGC - Battery Project

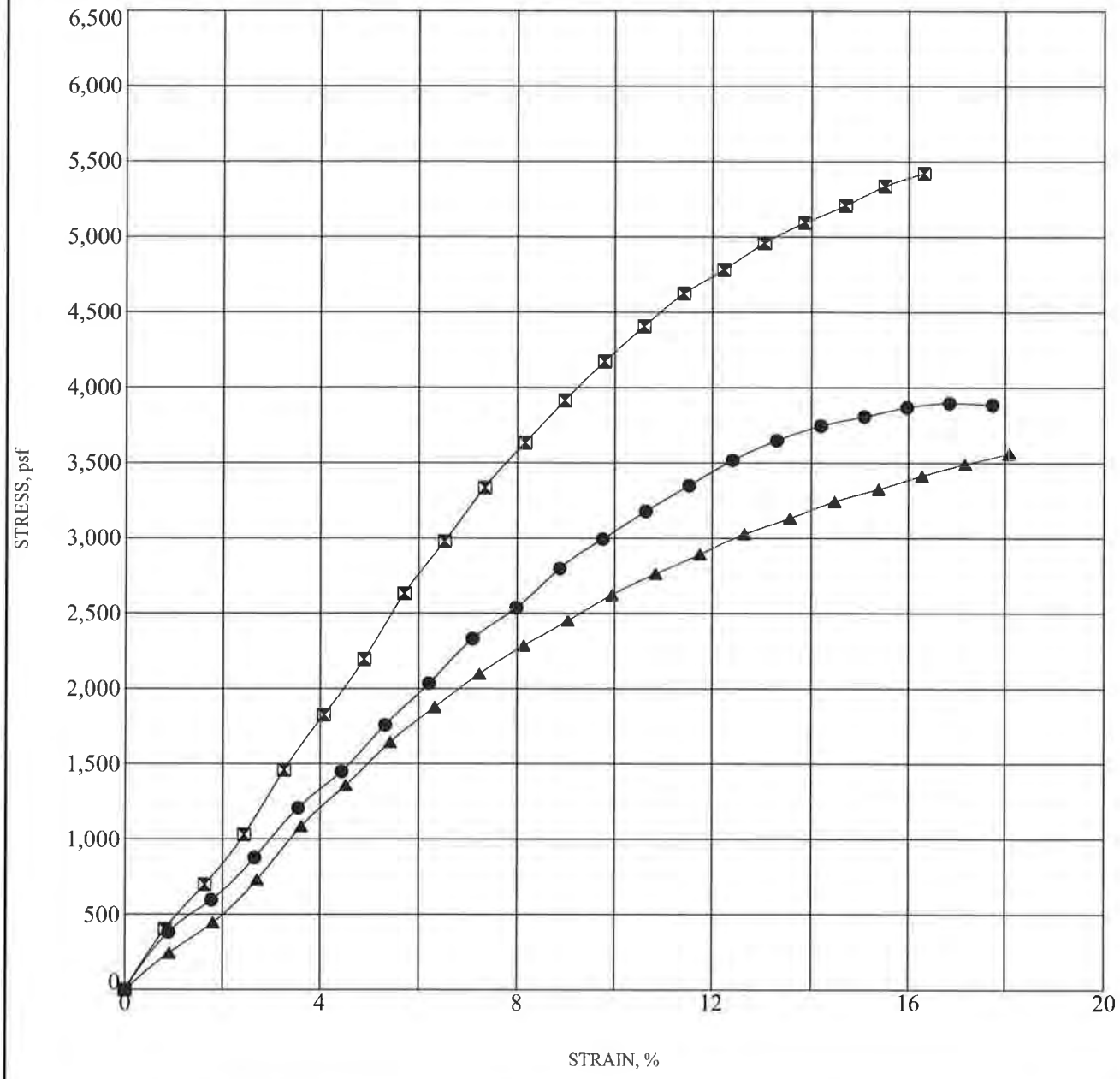
Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No.: 090845

Figure No. 27

G2 Consulting Group, LLC

US_UNCONFINED 090845.GPJ G2_CONS.GDT 12/9/09



Specimen	Classification	MC%	γ_d	UC
● SB-14 S-7	Gray Clayey Silt	28	96	3800
⊠ SB-15 ST-6	Gray Silty Clay	15	123	5260
▲ SB-16 S-6	Gray Silty Clay	16	119	3290

G2 Consulting Group, LLC

UNCONFINED COMPRESSIVE STRENGTH TEST

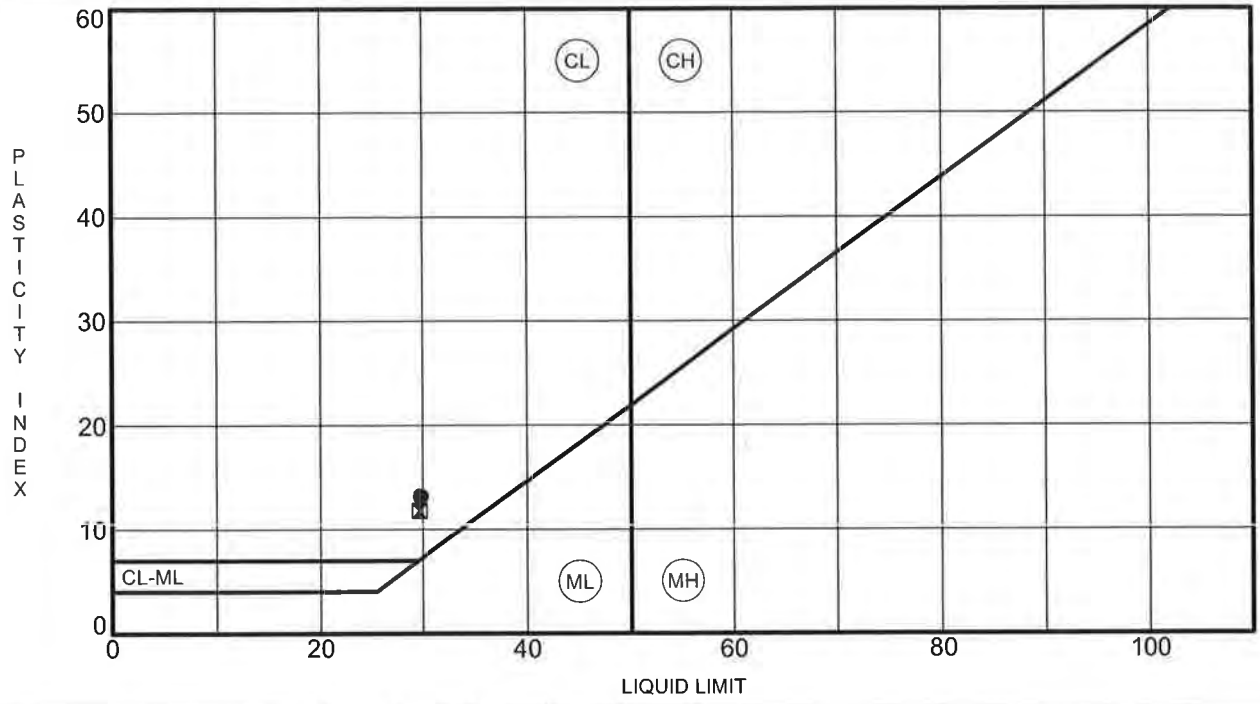
Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No.: 090845

Figure No. 28

US_UNCONFINED 090845.GPJ G2_CONS.GDT 12/9/09



	Specimen Identification		LL	PL	PI	Fines	M %	Classification
●	**SB-05**	**S-2**	**30**	**17**	**13**		**16**	**Brown and Gray Silty Clay**
⊠	**SB-18**	**S-2**	**30**	**18**	**12**		**15**	**Gray Silty Clay**

ATTERBERG LIMITS RESULTS

Project Name: Proposed LGC - Battery Project

Project Location: 48th Street, East of Waverly Road
Holland, Michigan

G2 Project No.: 090845

Figure No. 29

G2 Consulting Group, LLC

US_ATTERBERG_LIMITS 090845.GPJ G2_CONS.GDT 12/9/09

Geothermal Properties Summary

Boring	Depth	Conductivity W/(mK)	Resistivity mK/W	Specific Heat MJ/(m³K)	Diffusivity mm²/s	r²	Temp °C	Notes
B-1	2.5	1.770	0.565	3.021	0.586	0.9994	9.2	
B-1	5	2.966	0.337	2.818	1.052	0.9992	11.8	
B-1	7.5	2.059	0.486	3.585	0.574	0.9934	13.1	
B-1	10	2.086	0.479	2.962	0.704	0.9995	13.0	
B-1	15	1.885	0.530	3.142	0.600	0.9993	13.7	
B-1	20	2.062	0.485	3.035	0.679	0.9997	13.3	
B-1	25	1.863	0.537	3.171	0.588	0.9998	12.5	
B-1	30	1.170	0.855	2.988	0.392	0.9996	11.7	
B-1	35	2.052	0.487	2.406	0.853	0.9998	11.8	
B-1	40	1.921	0.521	2.357	0.815	0.9987	12.8	
B-1	45	2.262	0.442	3.586	0.631	0.9965	13.5	
B-1	50	2.697	0.371	2.366	1.140	0.9989	13.9	
B-1	55	2.417	0.414	2.392	1.011	0.9986	13.6	
B-1	65	1.513	0.661	1.837	0.823	0.8659	12.0	Result not valid given r² value
B-1	65	2.092	0.478	2.337	0.895	0.9993	11.1	
B-1	85	1.833	0.545			0.9997	11.8	
B-1	90	3.461	0.289			1.0000	11.1	
B-18	2.5	1.158	0.863	2.895	0.400	0.9995	7.7	
B-18	5	1.953	0.512	3.082	0.634	0.9998	11.0	
B-18	7.5	1.986	0.504	3.462	0.574	0.9998	11.5	
B-18	10	1.964	0.509	2.736	0.718	0.9999	11.8	
B-18	15	1.988	0.503	3.378	0.589	0.9999	12.8	

Figure No. 30

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE

Boulders		- greater than 12 inches
Cobbles		- 3 inches to 12 inches
Gravel	- Coarse	- 3/4 inches to 3 inches
	- Fine	- No. 4 to 3/4 inches
Sand	- Coarse	- No. 10 to No. 4
	- Medium	- No. 40 to No. 10
	- Fine	- No. 200 to No. 40
Silt		- 0.005mm to 0.074mm
Clay		- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

COHESIONLESS SOILS

Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

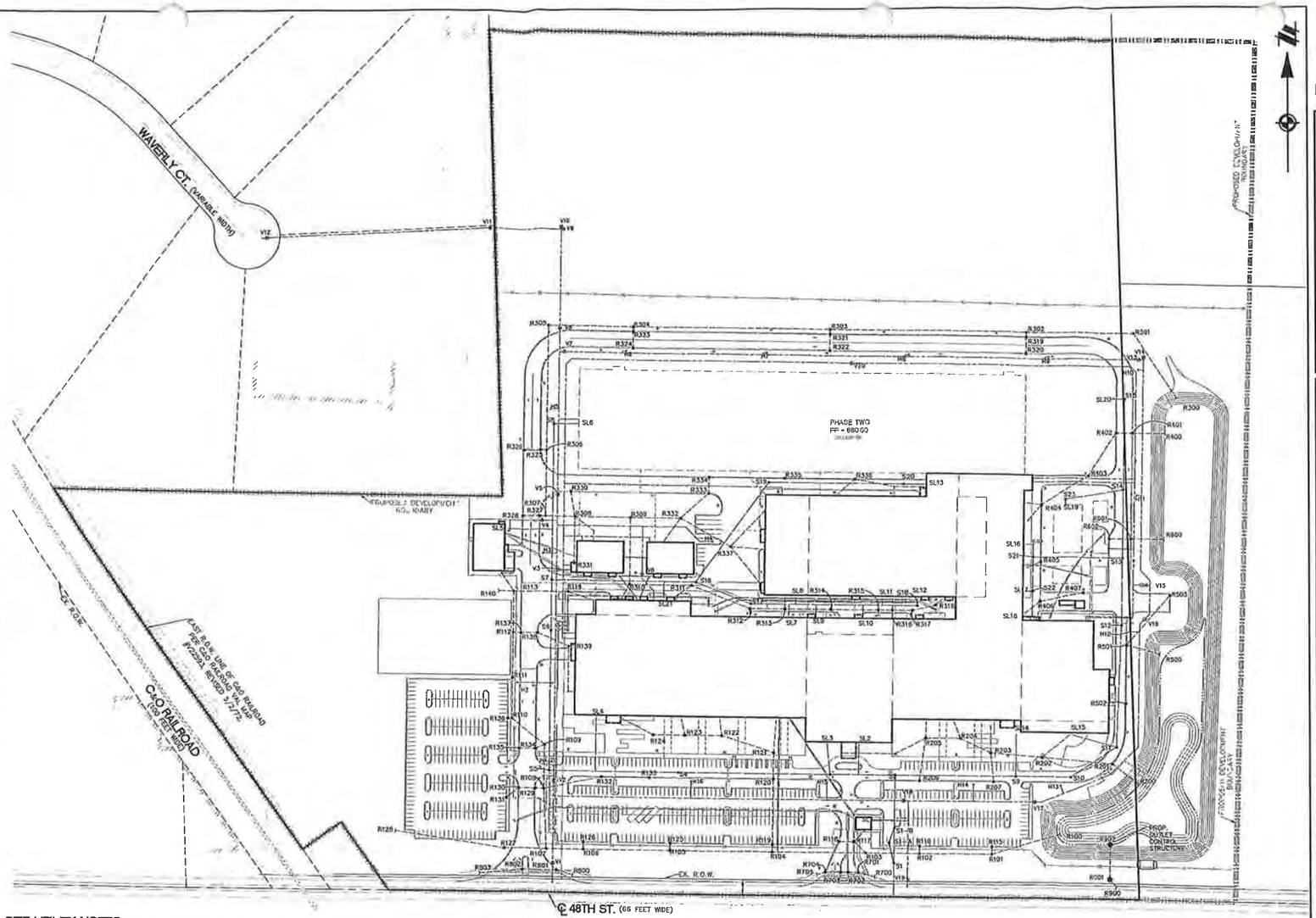
SAMPLE DESIGNATIONS

AS - Auger Sample – Cuttings directly from auger flight
BS - Bottle or Bag Samples
S - Spilt Spoon Sample - ASTM D 1586
LS - Liner Sample with liner insert 3 inches in length
ST - Shelby Tube sample - 3 inch diameter unless otherwise noted
PS - Piston Sample - 3 inch diameter unless otherwise noted
RC - Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

UTILITY CROSSING SCHEDULE

CROSSING NUMBER	TOP UTILITY	B/F ELEVATION	BOTTOM UTILITY	T/P ELEVATION	CLEARANCE
1	GAS	668.91	8"SAN	667.10	2.81
2	8"SAN	666.41	48"STORM	665.08	1.53
3	12"WATER	671.86	8"SAN	667.66	4.01
4	12" WATER	670.12	8"SAN	667.83	2.21
5	ELECTRIC	673.28	8"SAN	668.72	4.42
6	TELEPHONE	672.69	8"SAN	669.12	2.87
7	12"STORM	672.85	8"SAN	669.17	2.68
8	GAS	673.31	8"SAN	670.97	4.26
9	ELECTRIC	672.81	8"SAN	671.63	1.82
10	12" WATER	672.42	8"SAN	671.05	1.57
11	6"WATER	673.81	8"SAN	671.53	3.01
12	12"STORM	674.31	8"SAN	672.32	2.01
13	12"STORM	674.27	8"SAN	672.72	1.85
14	ELECTRIC	674.68	8"SAN	672.95	3.33
15	8"WATER	673.88	8"SAN	672.05	2.83
16	ELECTRIC	674.25	8"SAN	673.08	1.17
17	8"SAN	672.37	6"WATER	671.04	1.55
18	8"SAN	672.81	48"STORM	671.33	1.23
19	ELECTRIC	670.43	21"STORM	668.90	1.53
20	ELECTRIC	673.01	TELEPHONE	669.98	3.03
21	12"STORM	672.01	8"SAN	668.52	3.49
22	12"STORM	672.86	8"SAN	669.37	2.99
23	8"SAN	669.21	18"STORM	667.68	1.53
24	12" WATER	673.00	8"SAN	671.43	1.58
25	6"WATER	673.28	8"SAN	672.05	1.23
26	12"STORM	673.33	8"SAN	672.09	1.24
27	ELECTRIC	674.10	24"STORM	672.36	2.74
28	6"WATER	672.93	24"STORM	671.37	1.56
29	8"SAN	672.24	27"STORM	670.27	1.97
30	8"SAN	672.20	12" WATER	670.62	1.58
31	8"SAN	672.23	12" WATER	670.73	1.50
32	ELECTRIC	674.51	8"SAN	673.46	1.05
33	ELECTRIC	674.27	8"SAN	672.84	2.84
34	8"SAN	672.84	24"STORM	671.28	3.56
35	8"SAN	672.97	6"WATER	671.47	3.50
36	ELECTRIC	674.54	8"SAN	673.73	0.80
37	GAS	674.45	8"SAN	673.37	2.28
38	8"SAN	672.76	ELECTRIC	672.20	3.26
39	8"SAN	673.42	ELECTRIC	672.80	1.02
40	8"SAN	674.39	8"STORM	672.86	2.11
41	8"SAN	674.60	8"STORM	672.91	2.09
42	8"SAN	674.11	8"STORM	672.26	2.85
43	8"SAN	673.82	12"STORM	672.26	1.56
44	8"SAN	674.31	6"WATER	672.84	3.59
45	8"SAN	674.35	8"STORM	672.42	1.73
46	8"SAN	674.39	12"STORM	672.90	1.69
47	6"SAN	675.54	24"STORM	673.93	2.61
48	4"SAN	675.15	ELECTRIC	672.80	2.55
49	4"SAN	675.97	24"STORM	672.80	3.37
50	4"SAN	675.77	18"STORM	672.04	3.73
51	4"SAN	675.93	ELECTRIC	674.40	1.53
52	4"SAN	675.73	ELECTRIC	674.19	1.54
53	ELECTRIC	679.34	8"SAN	673.45	3.09
54	ELECTRIC	674.05	8"SAN	672.51	3.24
55	8"SAN	674.21	18"STORM	672.86	3.22
56	8"STORM	678.03	8"SAN	674.25	2.78
57	8"STORM	677.02	4"SAN	673.47	3.66
58	4"SAN	676.93	15"STORM	673.56	3.27
59	8" STORM	676.49	4"SAN	674.72	1.86
60	4"SAN	676.01	6"WATER	674.15	1.86
61	8"SAN	679.84	12" WATER	673.96	1.74
62	8"SAN	675.50	12" WATER	674.13	1.57
63	GAS	680.47	12" WATER	676.97	1.50
64	12" WATER	680.01	48"STORM	674.95	4.01
65	ELECTRIC	677.80	12" WATER	676.07	1.53
66	TELEPHONE	677.83	12" WATER	676.30	1.53
67	12" WATER	680.70	21"STORM	678.93	0.77
68	GAS	679.79	12" WATER	676.76	3.03
69	ELECTRIC	677.84	12" WATER	676.51	1.33
70	12"STORM	-0.27	12" WATER	673.78	-675.84
71	12"STORM	-0.27	GAS	678.85	-679.02
72	12" WATER	677.72	18"STORM	675.72	1.99
73	ELECTRIC	675.85	12" WATER	674.32	1.53
74	12" WATER	677.77	12"STORM	676.25	1.52
75	12"STORM	679.39	12" WATER	677.86	1.53
76	12"STORM	679.32	12" WATER	677.05	1.25
77	ELECTRIC	679.26	12" WATER	677.14	1.12
78	ELECTRIC	677.87	12" WATER	677.33	1.53
79	12" WATER	677.73	48"STORM	675.38	1.53
80	12" WATER	679.29	48"STORM	677.80	1.29
81	12"STORM	679.67	12" WATER	669.67	3.00
82	GAS	680.86	12" WATER	678.51	2.50
83	12"STORM	677.39	12" WATER	668.90	3.00
84	12"STORM	677.37	12" WATER	668.99	2.98
85	12" WATER	682.80	18"STORM	667.28	1.58
86	ELECTRIC	680.04	12" WATER	677.51	1.53
87	12" WATER	679.51	12" WATER	677.98	1.53
88	12"STORM	679.45	12" WATER	677.92	1.53
89	ELECTRIC	679.12	12" WATER	677.59	1.53
90	ELECTRIC	679.15	12" WATER	677.62	1.53
91	ELECTRIC	679.23	30"WATER	668.26	1.67
92	GAS	679.23	8"WATER	671.28	1.39
93	12" WATER	679.90	48"STORM	671.39	1.51
94	12" WATER	679.89	27"STORM	667.53	3.20
95	8"SAN	677.85	6"WATER	676.91	1.54
96	6"WATER	677.21	21"STORM	675.50	1.90
97	8"SAN	677.84	6"WATER	676.28	1.54
98	6"WATER	677.52	21"STORM	675.32	2.19
99	6"WATER	676.36	12" WATER	674.50	1.85
100	ABSTRACT	676.36	24"STORM	673.27	1.51
101	8"WATER	678.79	24"STORM	673.27	1.52
102	6"STORM	678.92	8"WATER	676.28	1.54
103	6"WATER	677.43	24"STORM	675.91	1.52
104	6" STORM	677.83	6"WATER	673.23	1.63
105	12" WATER	680.01	27"STORM	667.57	1.44
106	6"WATER	677.35	8"WATER	672.62	1.73
107	ELECTRIC	674.93	6"WATER	673.38	1.53
108	ELECTRIC	674.13	8"WATER	671.47	2.63
109	GAS	676.80	6"WATER	673.40	3.40
110	ELECTRIC	679.93	6"WATER	673.78	1.37
111	6"WATER	674.01	24"STORM	672.50	1.50
112	6"WATER	677.73	24"STORM	673.65	2.81
113	27"STORM	675.14	8"WATER	668.54	1.98
114	GAS	679.50	30"STORM	668.67	4.83
115	GAS	677.83	ELECTRIC	677.13	3.50
116	ELECTRIC	677.69	ELECTRIC	676.27	1.53
117	ELECTRIC	677.07	30"STORM	670.03	3.04
118	ELECTRIC	677.23	30"STORM	670.03	3.35
119	ELECTRIC	677.13	12"STORM	670.33	1.82
120	GAS	674.93	12"STORM	670.78	4.04
121	12"STORM	674.48	ELECTRIC	673.20	1.52
122	12"STORM	674.48	ELECTRIC	673.75	1.79
123	ELECTRIC	674.48	24"STORM	673.32	1.53
124	ELECTRIC	674.19	24"STORM	673.13	2.03
125	6" STORM	676.33	ELECTRIC	674.68	1.75
126	6" STORM	676.85	ELECTRIC	674.66	2.19
127	4"SAN	677.42	24"STORM	673.45	3.97
128	GAS	677.09	4"SAN	673.94	3.08
129	ELECTRIC	675.93	4"SAN	674.07	1.86
130	GAS	678.03	8"STORM	674.04	2.96
131	ELECTRIC	674.63	8" STORM	673.28	1.36
132	GAS	674.93	24"STORM	673.39	1.54
133	ELECTRIC	674.73	24"STORM	674.73	2.00
134	ELECTRIC	674.63	24"STORM	673.72	1.89
135	ELECTRIC	674.63	24"STORM	673.38	1.57
136	18"STORM	673.26	ELECTRIC	672.61	1.55
137	12"SAN	673.86	ELECTRIC	672.31	1.44
138	ELECTRIC	674.26	ELECTRIC	673.80	1.53
139	ELECTRIC	674.23	8" STORM	673.82	1.61
140	8"STORM	674.13	6" STORM	673.19	1.84
141	ELECTRIC	674.23	ELECTRIC	673.78	1.30
142	ELECTRIC	674.23	8" STORM	673.82	1.61
143	ELECTRIC	674.13	6" STORM	673.19	1.84
144	ELECTRIC	674.13	ELECTRIC	673.78	1.30
145	GAS	678.26	ELECTRIC	674.81	1.36
146	GAS	676.35	ELECTRIC	674.81	1.36
147	GAS	676.69	ELECTRIC	675.15	1.50
148	ELECTRIC	677.45	GAS	673.10	1.53
149	6"STORM	676.63	GAS	673.10	1.53
150	ELECTRIC	677.89	GAS	673.10	1.78
151	12"STORM	676.36	GAS	672.80	1.36
152	ELECTRIC	675.93	GAS	672.41	1.50
153	GAS	676.73	12" WATER	674.23	2.66
154	GAS	676.87	12" WATER	674.37	2.50
155	12"STORM	675.13	GAS	673.50	1.41
156	6"STORM	676.77	ELECTRIC	673.10	1.57
157	ELECTRIC	677.83	12" WATER	672.23	1.50



SITE UTILITY NOTES:

1. REVERSE OSMOSIS SYSTEM WASTE WATER TO DISCHARGE TO SANITARY SEWER SYSTEM.
2. APPROXIMATE PHASE I SITE UTILITY USES ARE AS FOLLOWS

   ELECTRIC POWER = 10,000 Kw
   STEAM = 1.5 ton/hr
   HOT WATER = 24,500 MBH
   WATER = 710 ton/day
   AIR = 124 m^3/min
   NATURAL GAS = 940 Nm^3/hr
   NITROGEN (N2) = 7.5 m^3/min
   INDUSTRIAL WASTE WATER = 10 ton/day
3. APPROXIMATE PHASE II SITE UTILITY USES ARE AS FOLLOWS

   ELECTRIC POWER = 10,000 Kw
   STEAM = 0 ton/hr
   HOT WATER = 11,500 MBH
   WATER = 710 ton/day
   AIR = 124 m^3/min
   NATURAL GAS = 940 Nm^3/hr
   NITROGEN (N2) = 7.5 m^3/min
   INDUSTRIAL WASTE WATER = 10 ton/day
4. PERMITTING AND CONSTRUCTION OF GAS MAIN AND SERVICES TO BE COMPLETED BY SEMCO ENERGY.
5. SANITARY SEWER SHALL BE PRVATE AND SHALL BE CONSTRUCTED PER CITY OF HOLLAND STANDARDS. USE EXTERNAL FRAME SEAL ON ALL MANHOLE COVERS PER CITY OF HOLLAND DETAIL.
6. PUBLIC WATER MAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOLLAND SPECIFICATIONS.
7. EDGE DRAIN SHALL BE INSTALLED BEHIND ALL CURB.

FIRE PROTECTION LOOP (PRIVATE) CONSTRUCTION SPECIFICATIONS:

1. WATERLINES SHALL BE CLASS 52 DUCTILE IRON.
2. WATERLINES SHALL BE BURIED AT A DEPTH OF 5.5 FT TYPICAL -- MINIMUM 5 FT.
3. GATE VALVES SHALL BE PLACED IN VALVE BOXES PER CITY OF HOLLAND STANDARDS.
4. UTILITY CROSSING SHALL BE ACCORDANCE WITH THE UTILITY CROSSING TABLE LOCATED ON THE OVERALL UTILITY PLAN.
5. CLASS II SAND BACKFILL COMPACTED TO 95% MAXIMUM DENSITY SHALL BE INSTALLED IN AREAS WITHIN A 1:1 INFLUENCE PAVEMENT.

Sanitary Sewer Basis of Design:

Phase 1
Total Building Area: 557,898 sf

Unit Type	Floor Area (sf)	Flow Rate (REU/ 1000 sf)	Total REU's	Total Flow* (gpd)	Total Flow (cfs)
Factory	299,685	0.5	149.8	44,953	0.0694
Warehouse/Storage	166,026	0.1	16.6	4,981	0.0077
Office	92,187	0.4	36.9	11,062	0.0171
Total	557,898		203	60,996	0.0941

Phase 2
Total Building Area: 379,819 sf

Unit Type	Floor Area (sf)	Flow Rate (REU/ 1000 sf)	Total REU's	Total Flow* (gpd)	Total Flow (cfs)
Factory	209,986	0.5	105.0	31,498	0.0486
Warehouse/Storage	84,471	0.1	8.4	2,534	0.0039
Office	79,362	0.4	31.7	9,523	0.0147
Total	373,819		145	43,555	0.0672

Total REU's 349
Total Flow (gpd) 104,551
Total Flow (cfs) 0.1618

* Assume 300gal/day per EDU

Peak Flow
Peaking Factor = $\frac{18 + (P/1000)^{0.5}}{4 + (P/1000)^{0.5}}$

Population per REU =	3
Total Population =	1046
Peaking Factor =	3.79
Peak gallons per day (gpd) =	396,984
Peak million gallons per day (mgd) =	0.40
Peak cubic feet per second (cfs) =	0.6111
Capacity of 8" PVC SDR-26 @ 0.40% =	0.90 cfs

LEGEND

- EXIST. CONTOUR
- PROP. CONTOUR
- EXIST. DECIDUOUS TREE
- EXIST. CONIFEROUS TREE
- EXIST. TREE OR BRUSH LINE
- EXIST. STORM SEWER
- PROP. STORM SEWER
- EXIST. MANHOLE
- PROP. MANHOLE
- PROP. EDGE DRAIN
- EXIST. CATCH BASIN/INLET
- PROP. CATCH BASIN/INLET
- END SECTION
- CLEANOUT
- EXIST. SANITARY SEWER
- PROP. SANITARY SEWER
- PROP. CLEANOUT
- EXIST. WATER MAIN
- PROP. WATER MAIN
- EXIST. HYDRANT
- PROP. HYDRANT
- EXIST. POST INDICATOR VALVE
- PROP. POST INDICATOR VALVE
- EXIST. SHUTOFF OR CURB BOX
- PROP. SHUTOFF OR CURB BOX
- EXIST. GATE VALVE IN BOX
- PROP. GATE VALVE IN BOX
- EXIST. GATE VALVE IN MANHOLE
- PROP. GATE VALVE IN MANHOLE
- EXIST. OVERHEAD ELECTRIC
- PROP. OVERHEAD ELECTRIC
- EXIST. UNDERGROUND ELECTRIC
- PROP. UNDERGROUND ELECTRIC
- EXIST. LIGHT POLE
- PROP. LIGHT POLE
- EXIST. UTILITY POLE
- GUY WIRE
- EXIST. ELECTRIC TRANSFORMER
- PROP. ELECTRIC TRANSFORMER
- EXIST. OVERHEAD TELEPHONE
- PROP. OVERHEAD TELEPHONE
- EXIST. UNDERGROUND TELEPHONE
- PROP. UNDERGROUND TELEPHONE
- EXIST. GAS
- PROP. GAS
- EXIST. GAS RISER
- EXIST. TELEPHONE RISER
- EXIST. CURB AND GUTTER
- PROP. CURB AND GUTTER
- CENTERLINE OF DITCH OR EDGE OF WATER
- EDGE OF WETLAND
- EXISTING FENCE
- PROPOSED FENCE
- PROPERTY LINE
- CENTERLINE
- EXIST. SIGN
- PROP. SIGN

CURRENT UTILITY CONNECTIONS PER DRAWINGS RECEIVED FROM GHAFARI ON 2/27/2010 AT 5:14 PM. ELECTRICAL ROUTING PER DRAWINGS RECEIVED FROM GHAFARI ON 2/8/2010 AT 10:15 AM.

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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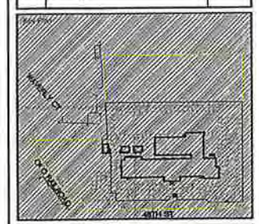
Project
cpi compact power, inc.
a subsidiary of LG Group

LGC
H-PROJECT
PHASE I

HOLLAND, MI

Consultant
ATWELL
866.850.4200 | www.atwell-group.com
OFFICES IN NORTH AMERICA AND ASIA
4701 EXCELSIOR DR., SUITE 101 | 734.994.4000 TEL
ANN ARBOR, MICHIGAN 48108 | 734.994.1000 FAX

No.	Description	Date
1	DETAILED ENGINEERING	4.19.10



Sheet Title
Overall Utility Plan

Date: April 8, 2010
Project Number: 09001770
Scale: 0 60 120, 1" = 120 Feet
Sheet Number: **C-500**

K:\2009\09001770\dwg\Plan Sets\Construction\09001770CP-ATWELL-4TH2010 4-7-10 PM.dwg

EXHIBIT G

48th Street Improvement Project

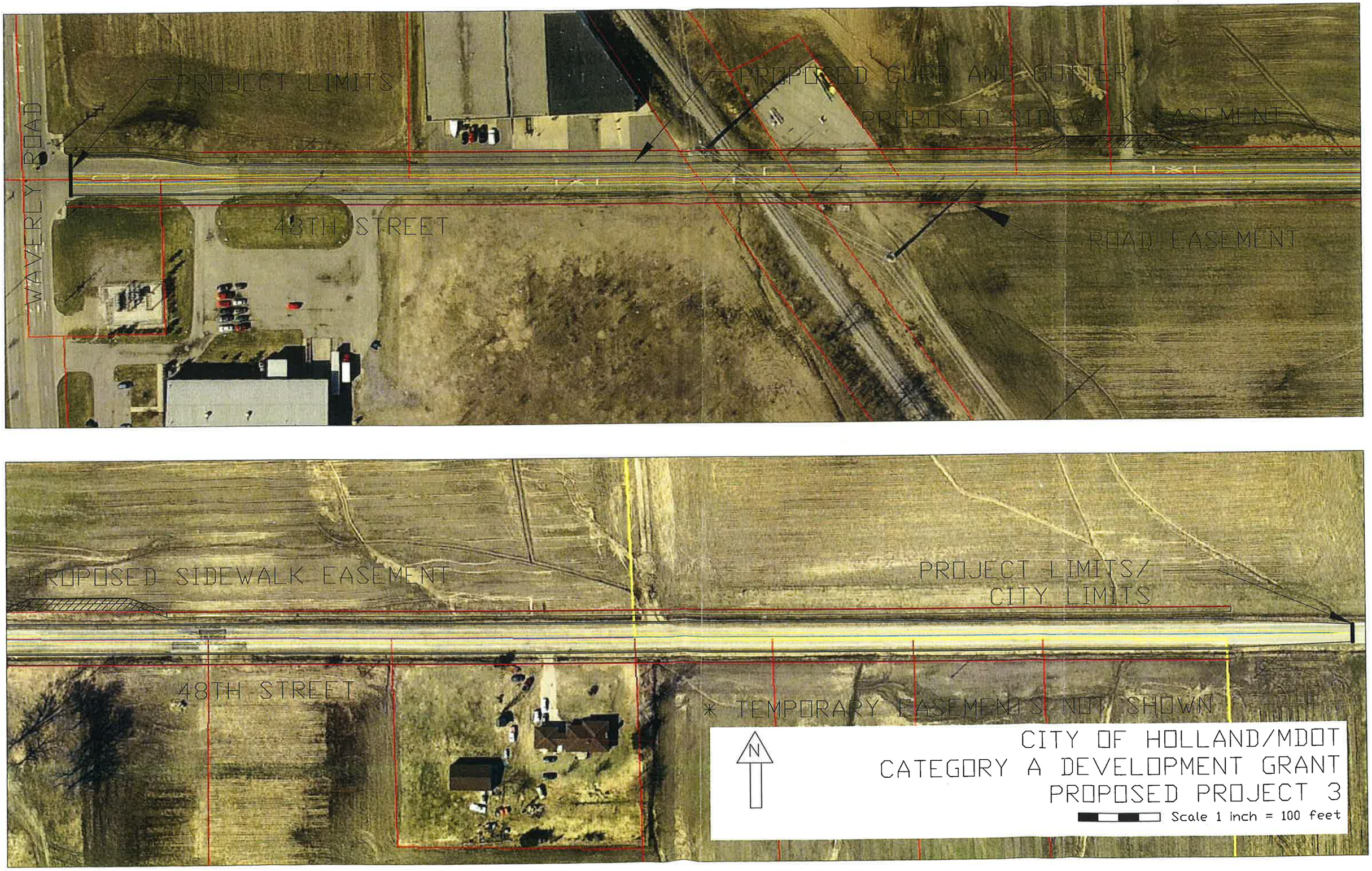

PROJECT LIMITS
PROPOSED CURB AND GUTTER
PROPOSED SIDEWALK EASEMENT
WAVERLY ROAD
48TH STREET
ROAD EASEMENT
PROPOSED SIDEWALK EASEMENT
PROJECT LIMITS/
CITY LIMITS
48TH STREET
* TEMPORARY EASEMENTS NOT SHOWN
N
CITY OF HOLLAND/MDOT
CATEGORY A DEVELOPMENT GRANT
PROPOSED PROJECT 3
Scale 1 inch = 100 feet

EXHIBIT H

Drawing Showing Proposed Storm Sewer Easement Area to be Retained by City

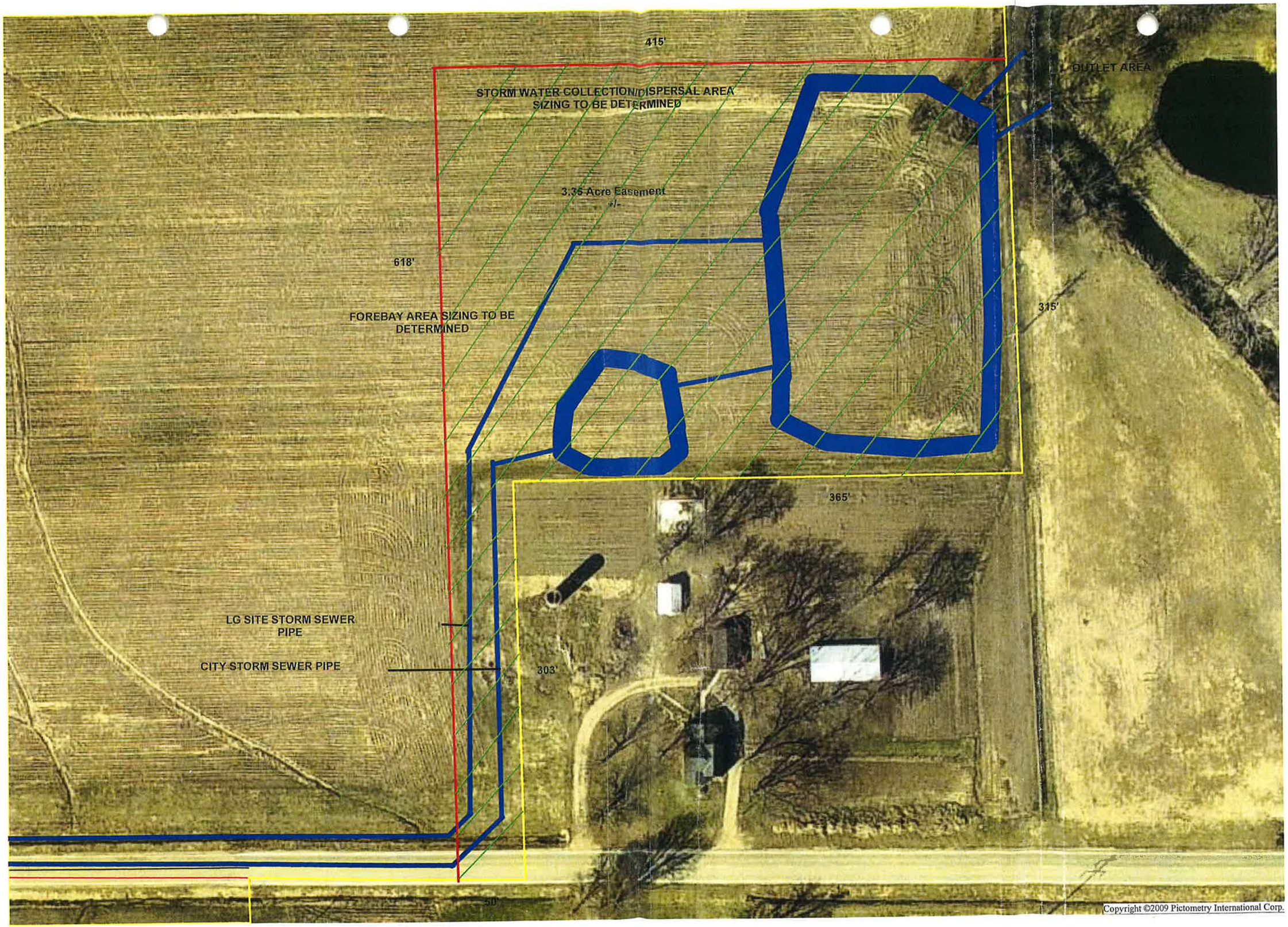

415'
STORM WATER COLLECTION/DISPERSAL AREA
SIZING TO BE DETERMINED
3.35 Acre Easement
+/-
618'
FOREBAY AREA SIZING TO BE
DETERMINED
OUTLET AREA
315'
365'
LG SITE STORM SEWER
PIPE
CITY STORM SEWER PIPE
303'
50'
Copyright ©2009 Pictometry International Corp.

EXHIBIT I

Utility Service Plans for Electric Service to the Plant

WAVERLY CT. (VARIABLE WIDTH)

Temporary underground line for construction

Permanent metering and customer connection point

Permanent underground electric service line

Temporary underground line for construction office buildings

PHASE TWO
FF = 680.00
203,500 SF

EX. R.O.W.

EAST R.O.W. LINE OF C&O RAILROAD PER C&O RAILROAD VAL MAP #V2258, REVISED 5/2/72

C&O RAILROAD (100 FEET WIDE)

℄ 48TH ST. (66 FEET WIDE)

PROP. OUTLET CONTROL STRUCTURE

TILITY NOTES:

SE OSMOSIS SYSTEM WASTE WATER TO DISCHARGE

A. Describe in detail the history and background of the company.

Compact Power Inc. is a wholly-owned US subsidiary of LG Chem Ltd. LG Group, based in Korea, is a cluster of affiliates of which LG Chem, Ltd. ("LGC") is a founding company of the Group. LG Group is a global company with 2009 revenue of $113 billion and 186,000 employees worldwide. In 2009 the company ranked 69th on the Fortune 100 list.

LGC, also based in Korea, is a $12.4 billion-revenue company with 15,000 employees. It is one of the world's largest producers of advanced chemical materials and a leading supplier of lithium-ion batteries. LGC's business is divided into three (3) operating units: Chemicals and Polymers; Information Technology and Electronics; and Batteries. The company has 28 global sites including five (5) production facilities and two (2) research and development centers, the largest employing approximately 1,100 researchers and engineers in the chemistry related research field. LGC has two (2) wholly-owned U.S. subsidiaries, Compact Power, Inc ("CPI") and LG Chem America Inc ("LGCAI"). There is also a spin-off manufacturing facility formerly known as LG Chem Industrial Materials. It has changed its name as LG Husys US which is LGC's first significant U.S. manufacturing operation. This facility was established in 2005 in Gordon County, Georgia. This Georgia operation produces artificial acrylic solid surface sheets that are applied to household counter tops and now it is expanding facility for additional products called E-Stone. LGCAI is LGC's U.S. headquarters encompassing all businesses of LGC's four major units in sales and marketing in the North America market.

LGC established CPI in Colorado Springs in the State of Colorado as part of its battery business in 2000, which began with a research and development center for battery pack. Shortly thereafter, in 2001, CPI began developing lithium-ion battery packs and electronics for hybrid electric vehicle and light electric vehicle applications. CPI strategically relocated its headquarter and engineering center to Troy, Michigan in 2005 in order to be in close proximity to the Big 3 automakers. Since then, CPI has grown its Michigan operation significantly, both in terms of jobs and revenue, and 2009 is poised to be an even better year for the company. CPI is bringing the power of lithium-ion polymer battery technology to North America for Hybrid Electric Vehicle (HEV), Plug-In Electric Vehicle (PHEV), and Electric Vehicle (EV) applications in the automotive, commercial, and military markets. CPI uses LGC-produced battery cells for its electric vehicle battery packs, which are abuse tolerant, high-power/high-energy, compact and lightweight. CPI is leveraging its engineering talent, solid financial resources, and cutting edge technology to become the supplier of choice for advanced energy storage systems.

CPI has extensive and impressive production experience in manufacturing battery cells in Korea and partially in China.

B. Describe the Project, equipment to be purchased, type of building to be constructed or purchased and any necessary infrastructure improvements, etc.

1. <u>Project</u>

The completion of this project would result in validated production capability for advanced lithium -ion battery cells in a new facility located in the City of Holland, Allegan County, Michigan. In an industry leadership position, CPI has demonstrated product capability to meet General Motor's performance specifications and has been awarded production business for the Volt, General Motors's first high volume production Extended Range Electric Vehicle (EREV) in the US.

The overall objective of this project is to transplant production of Li Ion Polymer battery cells from Ochang, Korea into a new manufacturing facility in Holland, Michigan to meet the production

schedule of awarded GM business, and strengthen CPI's market leadership in North America. The project would meet this objective and provide a foundation for the emergence, growth and success of Electric and Hybrid Electric Vehicles in the US automobile market.

When in full production, the proposed facility will create more than 300 jobs and will produce over 15 million battery cells annually. After starting assembly operations in the 1st Quarter of 2012, an expansion of production capability will continue through 2013 with the addition of a large scale electrode manufacturing line as well as additional assembly and separator lines.

2. Equipment

In manufacturing technologies, CPI was the third largest lithium-ion battery cell manufacturer in the global market in 2009. It has successfully established a robust mass production system for lithium-ion batteries for non-vehicle and vehicle applications, in its home country and overseas, and is considered a technology leader in this field. Most of the manufacturing processes employed are proprietary, designed and developed in-house in cooperation with LG Group's Production Research Center in Pyungteak, Korea.

The processes are already developed to make the product that will be made in the US. The volume capability can be assured by comparison with the same or similar equipment that is already producing in Korea. The equipment and machinery for this plant and project will be all new, duplicated from machines proven in volume production in Korea, specifically designed to meet the product and volumes required for the identified business. Equipment includes: [A] Electrode Manufacturing consisting of mixing, coating, roll pressing, and slitting. [B] Assembly Operations consisting of film notching, vacuum drying, and dry-room assembly. [C] Formation consisting of an aging process, and [D] De-gassing, grading, and package/shipping of the battery cells. The equipment is designed, and will be ready in advance of production requirements. A plant layout has been prepared and detail design of the building is in progress.

3. Building Description

The building consists of a state-of-the-art facility specifically engineered to support the CPI lithium-ion battery cell manufacturing process. Phase I (of III) construction consists of an approximately 450,000 sq. ft. footprint. The three story construction will enclose a total of approximately 650,000 sq. ft. for manufacturing and office space, a detached storage building, and a safety orientation building. The facility utilizes the most modern insulated architectural metal panel construction for most of the exterior and interior walls.

Capable of manufacturing high quantities of lithium-ion polymer battery cells, the layout of the plant supports a manufacturing process flow for assembly, formation, degassing and electrode coating. From the exterior, the facility has been designed with a neutral texture, white exterior panels with a grey color band, blue reflective glass windows, and canopies' over the building entrances. A parking lot is conveniently located in front of the building for employees and visitors. The landscaping will feature a large green lawn, shrubs, trees, and a scenic retention pond. The Architect and Owner have chosen a qualitative visual scheme to complement and blend with local community aesthetics.

4. Infrastructure improvements

48th Street will be improved to a three lane industrial roadway and water, sanitary sewer and electrical service extensions will be provided.

C. Identify the types of activities that will occur in the proposed Renewable Energy Renaissance Zone (RERZ).

Design and Build a New Manufacturing Facility: The initial activity is the construction of the new manufacturing building. Work to be performed will include designing and preparing site, material and labor to build the structure in collaboration with a Design Build team, and order, install and operate assembly lines.

Complete Machinery and Equipment Inventory, Build and Installation: Using detailed information developed during initial production in Korea, the team will develop a complete inventory of the machinery and equipment required for the Holland facility. Orders will be placed with machine and equipment builders, utilizing US based suppliers wherever practically possible and experienced non US suppliers where proprietary or critical processes with high levels of technical expertise are required. When machinery and equipment has been qualified at the supplier, contractors will be hired to work with CPI personnel to complete installation in the new plant.

Set-up and Operation of Assembly Lines in Holland Facility: This activity is associated with the manufacture of first representative production cells from the Holland plant's production lines. Electrodes produced in LGC's Korean plant will be used for initial production in the new CPI Holland assembly line; however, a similar scale electrode coating line will be ready to operate in mid-2013.

MICHIGAN RENAISSANCE ZONE PROGRAM

Renewable Energy Renaissance Zone
Part 2 – Description of the Project - Continued

E. How many new jobs will be created at the renewable energy facility? 300

	First Year of Operation		Third Year of Operation		Fifth Year of Operation	
	Year Ending:		Year Ending:		Year Ending:	
Job Category (add categories that reflect your company)	New Full Time Jobs Created	Avg Weekly Wage	New Full Time Jobs Created	Avg Weekly Wage	New Full Time Jobs Created	Avg Weekly Wage
Mgmt/Prof	8	4,120	1	4,244	1	4,371
Technical/Sales	10	1,660	5	1,710	3	1,761
Clerical/Service	8	1,660	4	1,710	3	1,761
Skilled/Unskilled	142	1,080	61	1,112	54	1,146
TOTAL	168		71		61	

F. What is your current workforce at the facility? Construction team and general contractor/subcontractors [0 workers at current facility]

G. Describe the benefit package provided to the employees:

Medical, dental, vision, 401k, life insurance, long term disability, tuition reimbursement, paid holidays and personal / sick days, vacation, and discretionary bonus pay.

H. Total number of acres to be included within the zone ~120 Acres

I. Does Company have Ownership or Control of the Property? ☒ Yes ☐ No

J. Is the Property a Contiguous Geographic Area? ☒ Yes ☐ No

K. Property Parcel ID#(s):
03-02-03-300-018
03-02-03-300-019

L. Legal Description of the property to be included in the Renewable Energy Renaissance Zone.

Refer to Next Page

M. What will be the anticipated economic impact on the community?

The establishment of CPI's lithium ion cell manufacturing plant will generate 300 direct jobs over the next three years, with potential for further job growth as the market for electric vehicles grows. In addition, this plant positions Holland at the center of the North American lithium ion cell production, which is a promising emerging market. This dynamic offers the community the opportunity to develop the workforce for an entirely new industry. At a time when the unemployment rate in the City of Holland has exceeded 17%, the new jobs and the spinoff effect are greatly needed.

APPENDIX E

EGLE FOIA Documentation

CATEGORY D
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

Property Located at
859 East 48th Street
Holland, Michigan

Prepared for

Mr. Kee Eun
CPI/LG
1857 Technology Drive
Troy, Michigan 48083

Atwell, LLC Project No. 09002247

May 24, 2010

RECEIVED
JUN 21 2010
MDEQ-KAL-RRD

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866.850.4200

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2.0	**INTRODUCTION**	**1**
3.0	**PROPERTY DESCRIPTION AND INTENDED HAZARDOUS SUBSTANCE USE**	**2**
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5.0	**LIKELIHOOD OF OTHER CONTAMINATION**	**8**
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FIGURES

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1. Description of Atwell Soil Borings
2. Summary of Atwell Analytical Results for Soil Samples
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5. Maximum Concentrations of Contaminants in Groundwater Samples

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A. Atwell Staff Resumes
B. Atwell's Phase I ESA
C. Material Safety Data Sheets (MSDS)
D. Atwell's Phase II Subsurface Investigation

1.0 IDENTIFICATION OF AUTHOR AND DATE OF BEA COMPLETION

This BEA was completed under the supervision of Mr. Allan R. Longyear, PG, Project Manager for Atwell, LLC (Atwell). Mr. Longyear has more than twenty years of professional experience and is responsible for QA/QC review, client satisfaction, staff supervision, and administration for environmental services.

His personal experience includes evaluating hazardous waste sites, conducting environmental site assessments, coordinating with regulatory agencies, conducting remedial investigation and feasibility studies, designing remediation plans, and conducting various geophysical investigations for hazardous waste sites.

Mr. Anthony R. Robinson, Environmental Specialist for Atwell, was the person primarily responsible for the data assembly, interpretation, and technical conclusions presented in this BEA. The BEA was conducted on May 6, 2010 and completed on May 24, 2010. Atwell staff resumes are included in **Attachment A.**

2.0 INTRODUCTION

Atwell was retained by Compact Power Inc. (CPI)//LG Chem, LTD. (LG) to conduct a Baseline Environmental Assessment (BEA) for the property located at 859 East 48th Street Holland, Allegan County, Michigan, (hereafter referred to as "subject site"). This BEA has been conducted pursuant to Section 20126(1)(c) of 1994 PA 451, Part 201, as amended, and the Rules promulgated thereunder.

The subject property is located near an industrial area in Holland, Allegan County, Michigan, and consists of four separate parcels comprising approximately 120-acres of land. Only one of the four parcels (an approximate 67-acre parcel identified for tax purposes as 03-02-03-300-015) was identified as an environmental "facility".

Historical records indicate that the majority of the subject site has been undeveloped agricultural land (i.e., row crops) since at least 1932. Prior to 1932, a residential dwelling and associated outbuildings were constructed on the southern portion of the subject site (815 East 48th Street), which were demolished in 1995. From 1995 through the present, the former homestead has consisted of vacant land

CPI/LG purchased the property located at 859 East 48th Street Holland, Allegan County, Michigan on May 21, 2010 and intends to operate the subject site as a manufacturing facility producing lithium ion batteries), which will use and store of hazardous substances dissimilar to those presently found on the property. Accordingly, this BEA is intended to satisfy the requirements of a Category "D" BEA as specified in the MDRNE revised Interim Technical Standards dated March 11, 1999.

3.0 PROPERTY DESCRIPTION AND INTENDED HAZARDOUS SUBSTANCE USE

The subject site is located in the southwest quarter of Section 3, Township 4 North, Range 15 West, in the City of Holland and Fillmore Township, Allegan County, Michigan. A legal description (Parcel Numbers 03-02-03-300-015; 53-02-03-300-017; 03-06-003-027-10; and 03-06-003-020-00) for the subject site is presented below. The location of the subject site is presented on the Site Location Map in **Figure 1**.

Atwell contacted the City of Holland and Fillmore Township municipal offices to determine the zoning specifications for the subject site. The subject site parcels located within the City of Holland (53-02-03-300-015 and 53-02-03-300-017) are currently zoned I-2 (Industrial Park) and the two parcels located within Fillmore Township (03-06-003-027-10 and 03-06-003-020-00) are currently zoned R-1 (Residential).

Parcel 03-02-03-300-015
SE1/4 SW1/4 ALSO S 16 A NE1/4 SW1/4 ALSO ALL THAT PT E 3/4 SW1/4 SW1/4 BND ON E & S SIDES BY E & S LN SD SW1/4 ON W BY E LN RR ROW ON N BY A LN RUNNING PAR WITH S LN SEC AND 52 RDS THEREFROM EXC THE E 116 FT OF S 455 FT W1/2 SW1/4 ALSO EXC COM 949.93 FT E OF SW COR SEC TH CONT E 123.26 FT TH N35^38'W 176.72 FT TH S 54^21'W 100 FT TO ELY LN RR TH S 35^38'E 104.65 FT TO POB SEC 3 T4N R15W 67.19 A M/L

Parcel 53-02-03-300-017
THE E 116 FT OF S 455 FT W1/2 SW1/4 SEC 3 T4N R15W

Parcel 06-003-020-00
N 24 A OF NE 1/4 SW 1/4 ALSO W 26 A OF NW 1/4 SE 1/4 EX COM 185' E OF CTR OF SEC TH E 157' ALONG E & W 1/4 LIN TH S 306' TH W 157' TH N 6' TH W 729' TH N 300' TO E & W 1/4 LIN TH E 729' ALONG SD 1/4 LIN TO POB SEC 3 T4N R15W (2001)

Parcel 06-003-027-10
COM AT S 1/4 COR TH N 02 DEG 26'42" W 1319.49' TH E 1623.39' TH S 07 DEG 35'16" W 406.86' TH S 47 DEG 53'43" W 296.89' TH S 02 DEG 28'40" E 414.58' TH W 365' TH S 02 DEG 28'40" E 303' TH W 959.16' TO POB SEC 3 T4N R15W (08).

Atwell reviewed the United States Geological Survey (USGS) 7.5 Minute Topographic Map of the subject site and surrounding area. The topographic map reviewed was the Holland East, Michigan Quadrangle. Surface drainage at the subject site appears to be generally to the southeast, towards the North Branch of the Macatawa River. According to the EDR, Physical Setting Source Summary, no groundwater flow direction data has been reported within one-mile of the subject site. Unless otherwise noted, the surface drainage flow direction has been inferred from a review of regional topographical data. Site-specific conditions may vary due to a variety of factors, including geologic anomalies, utilities, nearby pumping wells (if present), and other developments.

Atwell observed the subject site to be comprised of approximately 120-acres of undeveloped, agricultural land located on the north side of East 48th Street, Holland/Fillmore Township, Michigan. The area surrounding the site is a mixture of unimproved agricultural land and commercial/industrial developments.

The subject site is not currently connected to any municipal or public utilities. Drinking water, sanitary sewer and electric service are available through the Holland Board of Public Works. Natural gas is available through SEMCO.

CPI/LG has purchased the property located at located at 859 East 48th Street Holland, Allegan County, Michigan and described as 120-Acres of Undeveloped Land. CPI/LG intends to develop the subject site as a lithium battery manufacturing facility, which will use and storage of hazardous substances dissimilar to those presently found on the property. (i.e., solvents).

The following is a listing of the hazardous substances that will be used and/or stored at the subject property:

CAS #	Chemical Component	Product(s)
12057-17-9	Lithium Manganese Oxide	Cathode Activation Material
1344-28-1	Lithium Manganese Nickel Cobalt Oxide	Cathode Activation Material
7429-90-5	Aluminum	AL Foil
24937-79-9	Polyvinyldene Fluoride	PVDF Binder
1333-86-4	Carbon	Denka Black
872-50-4	1-Methyl-2-Pyrolidinone	NMP
7782-42-5	Graphite	Graphite
133-86-4	Carbon	Carbon
7440-50-8	Copper	Cu Foil
N/A	Carboxylated Emulsion of Modified Acrylic Copolymer in Water Solution	SBR
9004-32-4	Sodium Carboxymethyl Cellulose	CMC
N/A	H2O	DI Water
N/A	Polyerized Olefin	A Polyolefin Flat Sheet Membrane
N/A	PVDF HFP	
9010-75-7	Chlorotrifluoroethene Polymer with 1,1-Difluoroethene	CTFE(32008)
37297-28-2	Cyano Ethyl Poly Vinyl Alcohol	Cyano-resine
1344-28-1	Aluminum Oxide	Al2O3
12047-27-7	Barium Titan Oxide	BaTiO3
67-64-1	Acetone	Acetone
96-49-1	Ethylene Carbonate	Electrolyte
105-58-8	Diethyl Carbonate	Electrolyte
616-38-6	Dimethyl Carbonate	Electrolyte
623-53-0	Ethylmethyl Carbonate	Electrolyte
108-32-7	Propylene Carbonate	Electrolyte
21324-40-3	Lithium Hexafluorophosphate	Electrolyte
1120-71-4	1,3-Propane Sultone	Electrolyte
872-36-6	Vinylene Carbonate	Electrolyte
7429-90-5	Aluminum	Al Tap
7440-50-8	Nickel	Cu Tap

Notes:

1. Some products also included various non-hazardous mixtures, proprietary compounds, trade secret compounds, dyes, and/or fragrances that were not specifically identified on the MSDS sheets.
2. * - Asterisk indicates that the chemical compound is listed as hazardous

Copies of the individual Material Safety Data Sheets (MSDS), including chemical composition, for the products listed above are included in **Attachment B**.

4.0 KNOWN CONTAMINATION

A Phase I ESA was conducted by Atwell dated November 13, 2009. The Phase I identified several RECs associated with the potential offsite properties that may have adversely impacted the subject site. In response to the RECs, a subsurface investigation was conducted in January 2010. The results of that investigation are presented below. Subsequent to that investigation, a new Phase I ESA incorporating all 120 acres and updating information related to the 67-acre parcel was completed, with a report dated May 7, 2010. The May 7, 2010 Phase IESA report is included as **Attachment C.**

Atwell Subsurface Investigation

In January of 2010, Atwell was retained to conduct a subsurface investigation to evaluate other potential areas of environmental concern at the site and to address due care obligations for CPI/LG. Atwell retained Mateco Drilling Company (Mateco) of Rockford, Michigan to provide soil boring and temporary monitoring well installation services to evaluate the RECs identified on the subject site. The soil borings were conducted with the use of a track-mounted rotary drilling rig (CME 55LC), using 4.25-inch continuous flight, hollow-stem augers. Soil samples were collected from stainless steel split-spoon samplers. These soil borings were advanced at the site to address the RECs identified during Atwell's preliminary site evaluation. Soil boring locations are depicted in **Figure 2**. Upon completion of each soil boring, the borehole was backfilled with its own soil cuttings and additional bentonite chips as necessary. The locations of the five (5) soil borings are described in **Table 1**.

TABLE 1
DESCRIPTION OF SOIL BORINGS

Boring I.D.	Depth (bsg)	Location
AH-1	30.0'	Northwestern portion of subject site, near adjacent USF Holland site
AH-2	30.0'	Northwestern portion of subject site, near adjacent Global Concepts site
AH-3	20.0'	Central portion of subject site, offsite LUST, UST and BEA
AH-4	25.0'	Western most northwestern portion of subject site, near railroad easement
AH-5	20.0'	Southwestern portion of subject site, near SEMCO Energy easement

Atwell observed the decontamination of augering and sampling equipment (i.e., stainless steel augers, stainless steel split-spoon samplers) used during the subsurface investigation. Between each borehole, samplers and equipment were decontaminated following the USEPA recommended protocol of: (1) washing and scrubbing utilizing a non-phosphate detergent solution; (2) rinsing with clean tap water; (3) rinsing with deionized water; and (4) air drying. Decontamination equipment included a high-pressure power washer, buckets, Alconox detergent, scrub brushes, and waste storage bags.

Copies of soil boring logs are presented in **Appendix A** of **Attachment D**.

In general, four (4) to six (6) soil samples were collected from each boring for potential laboratory analysis. The soil samples were selected based on one or more of the following criteria: (1) the sample interval emitting the highest PID reading and/or with any visual staining or olfactory abnormalities; (2) the sample at the contact interval between sand soils and any native soils which may act as a confining layer (i.e., clays); (3) the sample at a respective depth indicative to a particular surface and/or subsurface physical feature (i.e., surface staining, aboveground material storage, underground utility, current/former underground hydraulic hoist, UST, etc.); (4) the sample immediately above the water table/saturated zone, if encountered; and/or (5) the borehole terminus.

The Atwell Environmental Geologist: (1) examined one-half of each soil sample as it was extracted from the plastic sleeve and field-screened it for total volatile organic compounds with a PID; (2) collected and preserved, according to USEPA Method 5035 methanol preservation for soil samples, the remaining portions of each sample in containers provided by an analytical laboratory; (3) temporarily stored the soil samples between zero and six degrees Centigrade in ice-cooled containers; and (4) delivered the soil samples, under appropriate chain-of-custody (COC) to an independent testing laboratory for potential analysis.

Saturated soil (i.e., groundwater) was encountered in one of the soil borings (AH-2) conducted at the subject site. Atwell instructed the drilling contractor to convert soil boring AH-2 into a corresponding temporary monitoring well using new, two-inch diameter, PVC slotted screening and casing. Atwell collected groundwater sample from the temporary well (AH-2W) after achieving the following: (1) evacuating at least three times the initial volume of the monitoring well's casing, (2) purging the well until measured parameters (temperature, oxidation reduction, dissolved oxygen, pH, conductivity, and turbidity) had stabilized, or (3) purging the well dry. Groundwater samples were collected from each of the temporary monitoring wells using disposable tubing and a low-flow rate peristaltic pump.

Based on information obtained during the Phase II Subsurface Investigation, the soil stratigraphy at the subject site was determined to generally consist of a zone of clay soil, which has sand seams throughout, that extends to the maximum explored depth of approximately 30.0-feet bsg. More specifically, dry and moist, brown and/or gray, medium-stiff clay soils (containing varying amounts of sand) were generally encountered at each of the soil borings beginning from just below the ground surface (i.e., topsoil). However, at soil boring AH-2, dry to moist, brown, silty sand soil was encountered from just below the ground surface to a depth of approximately 7.0-foot bsg. Below the dry to moist, silty sand soil at soil boring AH-2, a saturated, brown, silty sand soil was encountered and extended to the depth of approximately 9.0-feet bsg. Beneath the saturated silty sand soils a dry to moist, gray, medium-stiff silty clay soil zone to the borehole terminus of 30.0-feet bsg.

Groundwater was identified in one soil boring (AH-2) conducted at the subject site. In general, groundwater was encountered within the upper silty sand soil zone and at depths between

approximately 7.0 and 9.0-feet bsg. Based on information obtained during the Phase II Subsurface Investigation, Atwell determined that the near surface groundwater at the subject site is perched and should not be considered as groundwater in an aquifer.

The soil and groundwater, along with completed chain-of-custody (COC) documentation, with relinquished to Fibertec Environmental Services, Inc. of Holt, Michigan. Soil samples were submitted for one or more of the following analyses: volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs) and the ten Michigan metals (10MM) via various approved USEPA test methods. All VOC samples were collected in accordance with EPA method 5035 (Methanol Preservation). Atwell's analytical results for soil and groundwater are summarized in **Table 2** and **Table 3**. Laboratory analytical data reports, including a copy of each completed COC form, are presented in **Appendix B** of **Attachment D.**

4.1 HAZARDOUS SUBSTANCES

Laboratory analytical results obtained throughout the course of the investigations indicate that concentrations of arsenic, are present in soil that exceed MDNRE generic residential criteria Additionally concentration of bis(2-ethylhexyl)phthalate, are present in groundwater that exceed MDNRE generic residential criteria classifying the site (parcel 03-02-03-300-015) as an environmental "facility".

In terms of VOCs in soil, the review of analytical results indicated that no concentrations of VOCs were detected above the respective laboratory reporting limits (RLs) in soil samples. Accordingly, there were no exceedances of the applicable MDNRE Part 201 Generic Residential and Commercial I criteria.

In terms of SVOCs in soil, the review of analytical results indicated no concentrations of SVOCs were detected above the respective laboratory RLs in soil samples. Accordingly, there were no exceedances of the applicable MDNRE Part 201 Generic Residential and Commercial I criteria.

In terms of metals in soil, the review of the analytical results indicated that one or more of the following: arsenic, barium, cadmium, chromium, copper, lead, selenium and zinc were detected above the respective laboratory RLs in all soil samples submitted for analysis. However, only the concentration of arsenic in soil sample AH-4 (3-5') was determined to exceed the applicable MDNRE Part 201 Generic Residential and Commercial I criteria.

Please refer to **Table 2** for complete specifications regarding individual constituents, soil samples and criterion values.

In terms of VOCs in groundwater, the review of analytical results indicated that toluene was detected above the respective laboratory RL in groundwater sample AH-2W. However, the

identified concentration was determined to be well below the applicable MDNRE Part 201 Generic Residential and Commercial I criteria.

In terms of SVOCs in groundwater, the review of analytical results indicated that bis(2-ethylhexyl)phthalate was detected at concentrations above the respective laboratory RLs in groundwater sample AH-2W. Additionally, the identified concentration was determined to exceed the applicable MDNRE Part 201 Generic Residential and Commercial I criteria.

In terms of metals in groundwater, the review of the analytical results indicated that barium was detected above the respective laboratory RL in groundwater sample AH-2W. The identified concentration was determined not to exceed the MDNRE Part 201 Generic Residential and Commercial I Drinking Water Criteria.

Please refer to **Table 3** for complete specifications regarding individual constituents, groundwater samples and criterion values.

Maximum concentrations for contaminants in soil and groundwater are presented on **Table 4** and **Table 5**, respectively.

5.0 LIKELIHOOD OF OTHER CONTAMINATION

As part of the BEA preparation, Atwell's ASTM E-1527 Phase I Environmental Site Assessment (ESA) report, dated November 13, 2009 and updated May 7, 2010. As part of the Phase I ESA investigation, a database search was conducted to address the potential environmental impacts from sites of known or suspected contamination in the vicinity of the subject property. These concerns were addressed as part of the Phase II subsurface investigation conducted on the subject property by Atwell in January 2010. Based on the historical research conducted and the findings of the subsurface investigations, Atwell determined that it is unlikely that hazardous substances other than those identified are present at the subject site. A copy of Atwell's Phase I ESA report is presented in **Attachment C**, while a copy of Atwell's Phase II Subsurface Investigation is included as **Attachment D**.

6.0 ALTERNATIVE APPROACHES

CPI/LG intends to operate the subject site as a lithium battery manufacturing facility, which will use and storage of hazardous substances dissimilar to those presently found as facility contaminants on the property (arsenic and bis (2-ethylhexyl) phthalate). Since this operation will include the use and/or storage of hazardous substances on the subject property different than those identified as facility contaminants, this will provide a verifiable means of assuring that any release that may occur in the future can be distinguished from pre-existing contamination. As such, alternative approaches will not be necessary.

7.0 CONCLUSIONS

Based on the review of the analytical results obtained during Atwell's Phase II Limited Subsurface Investigation, Atwell concluded that the levels of, arsenic detected in soil and bis (2-ethylhexyl) phthalate detected in groundwater above the MDNRE's applicable Residential and Commercial I Criterion qualify the site as a "facility" as defined in Part 201 of the Natural Resources Environmental Protection Act, 1994 PA 451, as amended.

The subsurface investigation conducted at the subject site identified evidence of bis (2-ethylhexyl) phthalate in shallow (approximately 7-feet to 9-feet below surface grade) perched groundwater located within the western portion of the subject site. This contamination is believed to be migrating onto the subject property from an off-site source.

The subsurface investigation also identified the arsenic at concentrations above residential criteria in shallow soil at depths from just below ground surface to a depth of approximately 4.0-feet below surface grade. The arsenic is likely present resulting from past agricultural use of pesticides and/or herbicides or as naturally occurring background conditions. Based on information obtained during completion of the Phase I ESA, no evidence was found indicating that herbicides or pesticides were applied improperly or illegally at the subject property.

Based on the information obtained during the site investigations and in consideration of the proposed use, it will not be necessary for CPI/LG to implement alternative approaches including engineering controls at the subject property. The areas intended for future site use will include the use and storage of solvent and metal products. Through laboratory analysis, Atwell has documented the current concentrations of the contaminants at the site. In conjunction with the vertical and horizontal definition of known and suspected subsurface impact on the site and the knowledge that the known contaminants are different from those chemicals that will be used in the future, Atwell stipulates the body of information is sufficient to distinguish existing (old) contamination from any potential future releases.

CPI/LG has purchased the property located at 859 East 48th Street Holland, Allegan County, Michigan and intends to operate the subject site as a lithium battery manufacturing facility, which will use and store of hazardous substances dissimilar to those presently found on the property. Accordingly, this BEA is intended to satisfy the requirements of a Category "D" BEA as specified in the MDRNE revised Interim Technical Standards dated March 11, 1999.

8.0 REFERENCES

All sources of property related data, information, and/or conclusions presented in this BEA, were obtained from the Phase I ESA completed by Atwell and the subsurface investigation conducted by Atwell. The Phase I ESA report and subsurface investigation information are included as

attachments to this BEA submittal. The resumes of the Atwell staff have also been included as **Attachment A**.

9.0 ATTACHMENTS

The Attachments included with this BEA are as follows:

(A) Atwell Staff Resumes

(B) Material Safety Data Sheets

(C) Atwell Phase I ESA report and update

(D) Atwell's Phase II Subsurface Investigation

Atwell, LLC Project No. 09002247

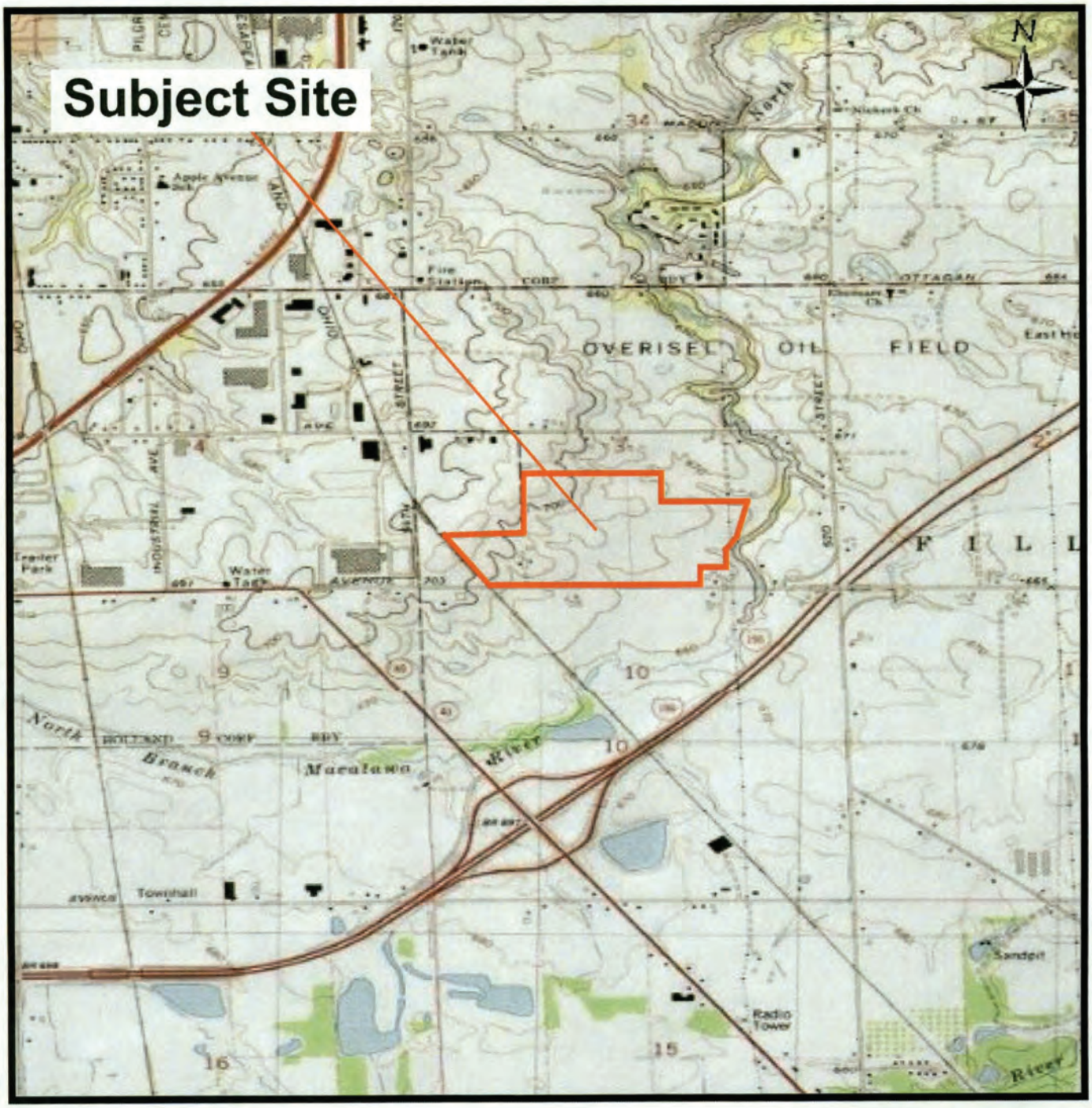
This report submitted by:

Anthony R. Robinson
Environmental Specialist

Allan R. Longyear, PG
Project Manager

ARL/mu
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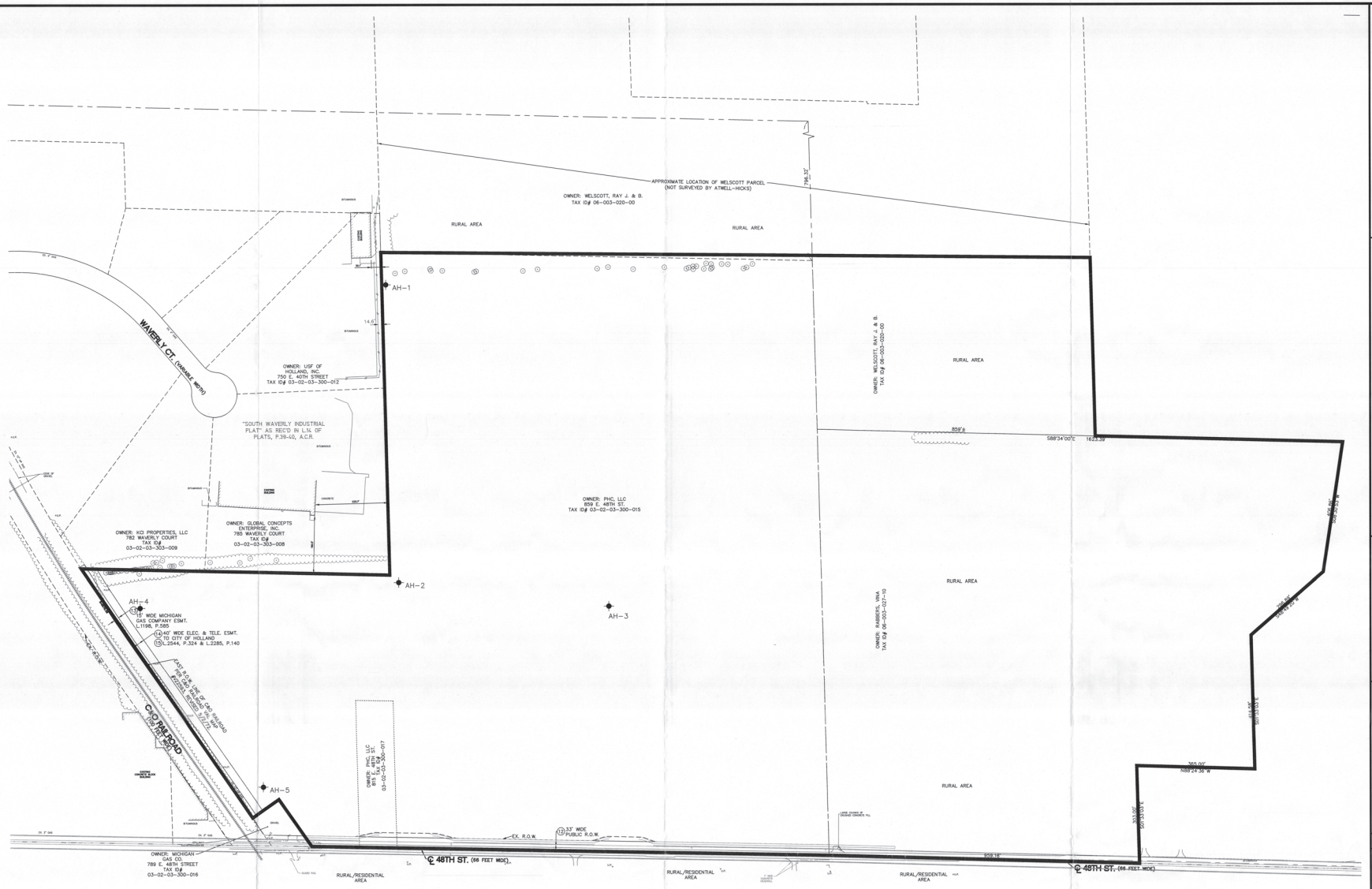
FIGURES



ATWELL

FIGURE 1: SITE LOCATION MAP
120-Acres Undeveloped Land
859 East 48th Street
Holland/Fillmore Township, Michigan

PREPARED FOR: CPI/LG
PROJ. MGR: Allan R. Longyear **DATE: 05/07/2010**
DRAWN BY: Rebecca Payne **PROJ. #: 10000866**



LEGEND

- CENTERLINE
- EXIST. RIGHT-OF-WAY
- PROPERTY BOUNDARY
- SETBACK LINE
- EXIST. WETLAND
- EXIST. TREE OR BRUSH LIMIT
- EXIST. DECIDUOUS TREE
- EXIST. CONIFEROUS TREE
- EXIST. LIGHT POLE
- EXIST. SIGN
- EXIST. UTILITY POLE
- EXIST. FENCE
- EXIST. CURB AND GUTTER
- EXIST. BUILDING
- PARKING TAG
- PROP. TREE OR BRUSH LIMIT
- PROP. CURB AND GUTTER
- PROP. LIGHT POLE
- PROP. SIGN
- PROP. FENCE
- PROP. HEAVY DUTY BITUMINOUS PAVEMENT
- PROP. HEAVY DUTY CONCRETE PAVEMENT

N

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ALLEGAN COUNTY, MICHIGAN

CLIENT: COMPACT POWER INC. / LG CHEM LTD.

FIGURE 2
OVERALL SITE PLAN
WITH SOIL BORING LOCATIONS

DATE: MAY 7, 2010

REVISIONS

ATWELL
SCALE 0 50 100
1" = 120 FEET
DR. CMB CH. AL
P.M. A. LONGYEAR
FIGURE 2
CAD FILE: 09002247EV-04
JOB 10000866
FILE CODE: EV-04-01
SHEET NO. FIGURE 2

TABLES

Table 2

SUMMARY OF ATWELL ANALYTICAL RESULTS FOR SOIL SAMPLES

Northeast of East 48th Street and South Waverly Road, Holland, Michigan

Sample Date(s): January 25 and 26, 2010

Sample I.D.	Reporting Limit	AH-1	AH-2	AH-3	AH-4	AH-5	AH-5	MDNRE Part 201 Residential and Commercial I			
								Drinking Water Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria	Direct Contact Criteria
Sample Depth		24.5-25.5'	3-5'	1-3'	3-5'	0.1-1.5'	13-15'				
VOLATILE ORGANIC COMPOUNDS (VOCs) - 5035/8260B											
All VOCs	Varies	<	<	<	<	<	<	N/A	N/A	N/A	N/A
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) - 3550B/8270C											
All SVOCs	Varies	<	<	<	<	<	<	N/A	N/A	N/A	N/A
MICHIGAN 10 ELEMENTS (M10E) - 3050B/6020/7471A											
Arsenic	100	2,900	360	5,300	8,500	2,900	3,300	5,800*	NLV	NLV	7,600
Barium	1,000	17,000	14,000	49,000	43,000	28,000	33,000	1,300,000	NLV	NLV	37,000,000
Cadmium	50	<	<	54	<	<	<	6,000	NLV	NLV	550,000
Chromium	500	5,100	5,300	11,000	14,000	8,000	8,200	30,000	NLV	NLV	2,500,000
Copper	1,000	6,700	2,400	13,000	15,000	3,900	9,200	5,800,000	NLV	NLV	20,000,000
Lead	1,000	3,200	2,300	6,100	11,000	8,000	46,000	700,000	NLV	NLV	400,000
Mercury	50	<	<	<	<	<	<	1,700	48,000	52,000	160,000
Selenium	200	330	310	<	<	380	290	4,000	NLV	NLV	2,600,000
Silver	100	<	<	<	<	<	<	4,500	NLV	NLV	2,500,000
Zinc	1,000	29,000	9,800	48,000	74,000	24,000	33,000	2,400,000	NLV	NLV	170,000,000

Notes:

1. Presented in ug/kg (ppb)
2. < = Less than method detection limit
3. NLV = Chemical is not likely to volatilize under most soil conditions
4. N/A = Not Applicable
5. NA = Not Available
6. NLL = Chemical is not likely to leach under most conditions
7. ID = Insufficent data to develop criterion
8. RED indicates value exceeds the applicable Part 201 Residential & Commercial I Criteria

TABLE 3
SUMMARY OF ATWELL ANALYTICAL RESULTS FOR GROUNDWATER
Northeast of East 48th Street at South Waverly Road, Holland, Michigan
Sample Date(s): January 25 and 26, 2010

Sample I.D.	Reporting Limit	AH-2W	MDNRE Part 201 Residential and Industrial-Commercial		
			Residential & Commercial I Drinking Water Criteria	Residential and Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria
VOLATILE ORGANIC COMPOUNDS (VOCs) - 5030B/8260B					
Toluene	1.0	2.7	790	530,000	530,000
All Other VOCs	Varies	<	N/A	N/A	N/A
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) - 3510C/8270C					
Bis(2-ethylhexyl)phthalate	5.0	170	6.0	NLV	320
All Other SVOCs	N/A	NS	N/A	N/A	N/A
MICHIGAN 10 ELEMENTS (M10E) - 3005A/6020/7470A					
Barium	100	180	2,000	NLV	14,000,000
All Other M10E	N/A	<	N/A	N/A	N/A

NOTES:

1. Presented in ug/L (ppb)
2. < = Less than method detection limit
3. NLV = Chemical is not likely to volatilize under most conditions
4. N/A = Not Applicable
5. NS = Not selected for analysis
6. ID = Insufficent data to develop criterion
7. RED indicates value exceeds the applicable Part 213 Residential & Commercial I Criteria

Table 4

SUMMARY OF MAXIMUM CONCENTRATIONS OF CONTAMINANTS IN SOIL SAMPLES

Northeast of East 48th Street and South Waverly Road, Holland, Michigan

Sampling Date(s): January 25 and 26, 2010

Compound	Chemical Abstract Service Number (CAS#)	Maximum Concentration	Sample Location	Depth in feet (bsg)	MDNRE Part 201 Industrail and Commercial II, III and IV			
					Industrial and Commercial Drinking Water Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Direct Contact Commercial III
VOLATILE ORGANIC COMPOUNDS (VOCs)								
All VOCs	N/A	<	All Locations	N/A	N/A	N/A	N/A	N/A
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)								
All SVOCs	N/A	<	All Locations	N/A	480,000	1,000,000,000	780,000,000	150,000,000
MICHIGAN 10 ELEMENTS (M10E)								
Arsenic	7440382	8,500	AH-4	3-5'	5,800*	NLV	NLV	46,000
Barium	7440393	49,000	AH-3	1-3'	1,300,000	NLV	NLV	150,000,000
Cadmium	7440439	54	AH-3	1-3'	6,000	NLV	NLV	2,100,000
Chromium	185840299	14,000	AH-4	3-5'	30,000	NLV	NLV	10,000,000
Copper	7440508	15,000	AH-4	3-5'	5,800,000	NLV	NLV	79,000,000
Lead	7439921	46,000	AH-5	13-15'	700,000	NLV	NLV	400,000
Mercury	7439976	<	All Locations	N/A	1,700	89,000	62,000	650,000
Selenium	7782492	380	AH-5	0.1-1.5'	4,000	NLV	NLV	10,000,000
Silver	7440224	<	All Locations	N/A	13,000	NLV	NLV	9,800,000
Zinc	7440666	74,000	AH-4	3-5'	5,000,000	NLV	NLV	690,000,000

Notes:

1. Presented in ug/kg (ppb)
2. < = Less than method detection limit
3. NLV = Chemical is not likely to volatilize under most soil conditions
4. N/A = Not Applicable
5. NS = Not selected for analysis
6. NLL = Chemical is not likely to leach under most soil conditions
7. ID = Insufficent data to develop criterion
8. RED indicates value exceeds the applicable Part 201 Residential & Commercial I Criteria
9. * = Statewide Default Background Level

Table 5

SUMMARY OF MAXIMUM CONCENTRATIONS FOR GROUNDWATER SAMPLES

Northeast of East 48th Street and South Waverly Road, Holland, Michigan

Sampling Date(s): January 25 and 26, 2010

COMPOUND	Chemical Abstract Service Number (CAS#)	Maximum Concentration	Sample Location	Depth in feet (bsg)	MDNRE Part 201 Residential and Industrail-Commercial		
					Industrial & Commercial II, III, & IV Groundwater Drinking Water Criteria	Industrial & Commercial II, III, and IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria
VOLATILE ORGANIC COMPOUNDS (VOCs)							
Toluene	108883	2.7	AH-2W	N/A	790	530,000	530,000
All Other VOCs	N/A	<	AH-2W	N/A	N/A	N/A	N/A
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)							
Bis(2-ethylhexyl)phthalate	117817	170	AH-2W	N/A	6.0	NLV	320
All Other SVOCs	N/A	<	AH-2W	N/A	N/A	N/A	N/A
MICHIGAN 10 ELEMENTS (M10E)							
Barium	7440393	180	AH-2W	N/A	2,000	NLV	14,000,000
All Other M10E	N/A	<	AH-2W	N/A	N/A	N/A	N/A

NOTES:

1. Presented in ug/L (ppb)
2. < = Less than method detection limit
3. NLV = Chemical is not likely to volatilize under most soil conditions
4. N/A = Not Applicable
5. NS = Not selected for analysis
6. NLL = Chemical is not likely to leach under most soil conditions
7. ID = Insufficent data to develop criterion
8. RED indicates value exceeds the applicable Part 201 Residential & Commercial I Criteria

ATTACHMENT C

ATWELL PHASE I ENVIRONMENTAL SITE ASSESSMENT

Phase I Environmental Site Assessment Report

for the

120-Acres Undeveloped Land
North Side of East 48th Street
Holland/Fillmore Township, Michigan

Prepared For:

Mr. Kee Eun
CPI/LG
1857 Technology Drive
Troy, Michigan 48083

Atwell, LLC Project No. 10000866

May 7, 2010

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Detail Report

1.0 General Information

Project Information:
Phase I ESA - CPI/LG 120-Acres
10000866

Consultant Information:
Atwell, LLC
Two Towne Square, Suite 700
Southfield, Michigan 48076
Phone: 248-447-2000
Fax: 248-447-2001
E-mail Address: rpayne@atwell-group.com
Inspection Date: April 30, 2010
Report Date: May 7, 2010

Site Information:
120-Acres Undeveloped Land
859 East 48th Street
Holland/Fillmore Township, Michigan
County: Allegan
Latitude, Longitude: 42.756300, -86.071200
Site Access Contact: Mr. Kee Eun

Client Information:
CPI/LG
Mr. Kee Eun
1857 Technology Drive
Troy, Michigan 48083

Site Assessor:
Rebecca A. Payne
Environmental Specialist

Senior Reviewer:
Allan R. Longyear, PG
Project Manager

General Notes:

Atwell conducted the Phase I Environmental Site Assessment (ESA) in order to provide an independent, professional opinion of the possible presence of Recognized Environmental Conditions (RECs) or other possible environmental concerns (if any) associated with the subject site as part of environmental due diligence.

An REC is defined as the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicated an existing release, a past release, or a material threat of a release of any hazardous or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

In accordance with the United States Environmental Protection Agency, 40 Code of Federal Regulations (CFR) Part 312, "All Appropriate Inquiry" (AAI), Atwell is providing the following Environmental Professional (EP) declarations.

EP Certification:

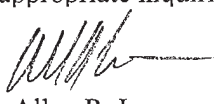
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 312.10 of this part.



Allan R. Longyear, PG - Project Manager

AAI Certification:

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.



Allan R. Longyear, PG - Project Manager

2.0 Executive Summary

Current Use of Property

During the site reconnaissance, Atwell observed the subject site to be comprised of approximately 120-acres of undeveloped land located along the north side of East 48th Street, Holland/Fillmore Township, Michigan. The subject site is comprised of three legal parcels, two located within the City of Holland and one located within Fillmore Township (commonly referred to as the Rabber's parcel), and a portion of a four parcel, located within Fillmore Township (commonly referred to as the Wescott parcel). The subject site consists of unimproved land and agricultural fields (i.e., row crops) with no existing structures.

Database/Records Review

EDR identified one RCRA-Small Quantity Generator (SQG) site, two RCRA-Conditionally Exempt Small Quantity Generator (CESQG) sites, one RCRA-Non Generator (Non-Gen) site, two LUST/UST sites, one LUST/UST/Aboveground Storage Tank (AST) site, one UST site, and one LUST/UST/SHWS/Baseline Environmental Assessment (BEA)/AST site located within one-quarter mile of the subject site. According to the EDR report, one of the four RCRA generator sites has no reported RCRA violations. The remaining three RCRA generator sites have reported violations; however, they have all achieved and/or maintained compliance and therefore, it is the opinion of the EP that the RCRA hazardous waste generator sites should not represent an REC to the subject site. In addition, the LUST/UST and LUST/UST/AST sites have either been granted regulatory closure by the MDNRE, are located cross or down-gradient of the inferred local groundwater flow, or have been sufficiently evaluated during previous subsurface investigations conducted at the subject site. Based on this information, it is the opinion of the EP that the sites listed in the EDR report should not represent RECs to the subject site.

The EDR report identified the USF Holland Inc. site to be located greater than one-quarter mile northwest of the subject site. However, Atwell determined that this site is actually located adjacent to the northwest of the subject site. According to the EDR report, the site previously utilized one, 1,000-gallon used oil UST; one, 10,000-gallon used oil UST and one, 12,000-gallon diesel UST that were installed in 1972 and removed from the site in 1989. A petroleum product release was reported in 1989; however, the Michigan Department of Natural Resources and Environment (MDNRE), formerly the Michigan Department of Environmental Quality (MDEQ), granted closure for the release in 1991. A MDNRE closure indicates that site investigation and/or remediation activities have been completed to render site contaminates to within the applicable MDNRE Part 213 cleanup criteria. However, the EDR report further indicates that two additional 12,000-gallon diesel USTs were installed in 1989 and are noted to be "temporarily out of use". Atwell reviewed the local topographic map and the MDNRE Groundwater Mapping Project interactive mapping program, which indicate that the local surficial (and likely hydraulic) gradient appears to be to the southeast, placing this site up-gradient to the subject site. Atwell reviewed the available MDNRE files for the site, which indicated that various volatile organic compounds (VOCs), poly-nuclear aromatics (PNAs) and lead compounds were detected in soil at concentrations less than the applicable cleanup Part 213 criteria and closure was recommended for the site.

The EDR report also identified the 48th Street (635) E/Nabisco Brands/Life Savers site, located between one-eighth and one-quarter mile west of the subject site, as a LUST/UST, SHWS, BEA and AST site. Atwell determined that this site is actually located approximately 600-feet west of the subject site. The EDR report indicates that in 1989 one, 440-gallon gasoline UST was removed from the site. A release was reported on September 12, 1989; however, the MDNRE granted closure for the release on September 22, 1989. In addition, the site is listed as a SHWS with on-going"Interim Response". Further, the site is listed as a BEA site that indicates the presence of soil and/or groundwater contamination at concentrations greater than the MDNRE Part 201 cleanup criteria. Finally, the site previously utilized one, 25,000-gallon AST (contents unknown), that is no longer in use. According to discussions with the local MDNRE representative, Ms. Ann Porter, the local groundwater flow is variable, with some areas flowing to the northwest toward Lake Macatawa and some areas flowing to

2.0 Executive Summary (continued)

Database/Records Review (continued)

the southeast toward the Macatawa River. A review of the available MDNRE files for the 48th Street (635) E/Nabisco Brands/Life Savers site revealed that in 1989, various VOC concentrations were non-detect; however, Total Petroleum Hydrocarbon (TPH) concentrations were elevated and therefore, approximately 500-cubic yards of impacted soils were removed and properly disposed. Additionally, the file indicated that the site was no longer operating as of August 2003.

Historical/Document Review

Atwell-Hicks, LLC and Atwell, LLC have performed the following activities at the subject site: Phase I ESA Report, dated September of 2009, a Phase I ESA Report, dated November of 2009 and a Phase II Subsurface Investigation report, dated January of 2010. Additionally, Atwell was provided with and reviewed the following environmental reports prepared for the subject site: All Appropriate Inquiry Compliant Phase I ESA Report, date September 9, 2009, and All Appropriate Inquiry Compliant Phase I ESA Report, date September 9, 2009, both prepared by Driesenga and Associates, Inc.

The previous Phase I ESA reports identified two off-site properties (Nabisco and USF Holland) that had the potential to impact the subject site environmental resources (USTs, unresolved environmental concerns and/or are located up-gradient) as RECs. In January of 2010, Atwell was retained to conduct a subsurface investigation to evaluate the RECs identified at the subject site. Soil and groundwater samples were submitted for one or more of the following analyses: VOCs, PNAs, PCBs, and M10E (chemical to be used by future site occupant). A review of the laboratory analytical results indicated that various VOCs, SVOCs and metals are present in the subject site soil and groundwater at concentrations greater than the method detection limits. However, only concentrations of arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater exceed the MDNRE generic residential criteria. Therefore, two of the subject site parcels (parcels: 03-02-03-300-015 and 06-003-027-10) meet the definition of a "facility" as defined in Part 201 of the National Resources and Environmental Protection Act (NREPA), 1994, PA 451, as amended. Although contamination has been identified at the subject site, likely associated with off-site properties, the previous subsurface investigations conducted by Atwell, LLC in 2010 have sufficiently evaluated the identified the off-site concerns and no additional work is necessary at this time.

Atwell submitted a Freedom of Information Act request to the MDNRE to determine if any files were on record for the subject site. According to a response from the MDNRE Resource and Redevelopment Division (RRD), Water Bureau, and the Waste and Hazardous Materials Division, no records are on file for the subject site.

During the site inspection Atwell observed a drinking water well-head located on the southern portion of the subject site, in the area of the former homestead (815 E 48th Street). Atwell recommends that if the well is going to be utilized, the water should be sampled. However, if the well will no longer be utilized, Atwell recommends that the well be properly abandoned per local and state regulations. In addition, based on the age of the former homestead (constructed prior to 1932), it is likely that the residence utilized a septic system. Septic systems can be recipient to a variety of materials depending on site operations (i.e., manufacturing, automotive repair, etc.). However, based on the residential use of the subject site, it unlikely that previous septic systems would have impacted the subsurface environment. Therefore, it is the opinion of the EP that previous septic systems should not represent an REC. Further, according to assessing records, a portion of the subject site utilized natural gas as a heating fuel source. According to a review of the previous Phase I ESA reports prepared by Driesenga, the former residence located at the subject site, also utilized heating oil as a fuel source for the heating system. However, during the various site inspections conducted by Atwell-Hicks, LLC, Atwell, LLC and Driesenga, no evidence of potential heating oil tanks were observed at the subject site.

Based on information gathered during the site investigation and a review of aerial photographs, historical address indexes, municipal records and interviews, Atwell concluded that since at least 1932,

2.0 Executive Summary (continued)

Historical/Document Review (continued)

a residential dwelling and associated outbuildings were constructed on the southern portion of the subject site (815 East 48th Street) and the remainder of the subject site consisted of undeveloped agricultural land (i.e., row crops). In 1995, the residence and associated outbuildings were demolished. From 1995 through the present, the subject site has been undeveloped agricultural land (i.e., row crops).

Site Reconnaissance Findings

During the site reconnaissance, Atwell evaluated the subject site for the potential presence of the following Recognized Environmental Conditions: (1) hazardous substances; (2) petroleum products; (3) evidence of the presence of underground storage tanks (USTs); (4) evidence of the presence of aboveground storage tanks (ASTs); (5) other suspect containers; (6) polychlorinated biphenyl (PCB)-containing equipment; (7) interior or exterior staining/corrosion; (8) discharge features (i.e., current or former septic/leaching fields, floor drains, oil/water separators); (9) pits, ponds or lagoons; (10) evidence of excavation and/or landfilling activities; (11) evidence of surface soil/surface water stains and/or stressed vegetation; (12) water supply and/or groundwater monitoring wells, and (13) observations of adjacent property uses and potential evidence of adverse environmental impacts associated with adjoining properties.

During the site reconnaissance, Atwell observed/identified the following potential RECs:

- minor amounts of construction debris (i.e., concrete, shingles, wood, bricks, etc.) was observed in the area of the former homestead (815 E 48th Street) and along the eastern site boundary. It is the opinion of the EP that considering the inert nature of construction debris, the observed debris should not represent an REC, and

- A review of the EDR Physical Setting Source Summary indicates that an oil/gas production wells may have been located on the subject site or adjacent to the subject site. Older oil and gas well drilling activities likely included the excavation of a pit near the wellheads into which drilling muds, that often contain brine and petroleum residues, were discharged. Atwell reviewed the MDNRE Geological Division oil/gas maps and associated well logs from the area of the subject site. According to the map and well logs, the oil/gas well was located on the southwestern portion of the subject site. However, the well was noted to be a "dry well", which indicates that no petroleum was identified at that location. Additionally, a oil/natural gas well was identified on the Rabbers parcel; however, according to review of the well log, Atwell determined that this well was located to the northeast of the subject site boundary. Further, during review of the historical aerial photographs, no evidence of potential drilling or excavation activities were identified on or near the subject site. Therefore, it is the opinion of the EP that it is unlikely that the drilling activities associated with the subject site natural gas "dry well" and northeastern adjacent oil/gas well have impacted that subject site and should not represent RECs.

Other Environmental Considerations

During the site reconnaissance, Atwell did not observe any evidence (i.e., cases of cold tablets, diet pills, several containers of solvents) of controlled substances or any situations suggestive of continuing environmental obligations (i.e., institutional limitations, engineering controls) on the subject site.

The scope of services for this Phase I ESA did not include: (1) an evaluation for the presence of suspect asbestos-containing materials; (2) an evaluation of the presence of lead-based paint on the subject site; (3) an evaluation for the potential presence of Radon in the area of the subject site; (4) an evaluation of suspect wetland areas on the subject site; (5) a mold evaluation; (6) an evaluation of items of non-compliance with applicable local, state, or federal regulations, and (7) addressing any client-specific items for the subject site.

2.0 Executive Summary (continued)

Findings and Opinions

During the course of this Phase I ESA, Atwell identified and evaluated the following known or suspect RECs associated with the subject site or nearby properties:

- The previous Phase I ESA reports identified two off-site properties (Nabisco and USF Holland) that had the potential to impact the subject site environmental resources (USTs, unresolved environmental concerns and/or are located up-gradient) as RECs. In January of 2010, Atwell conducted a subsurface investigation to evaluate the off-site concerns. A review of the laboratory analytical results indicated that various VOCs, SVOCs and metals are present in the subject site soil and groundwater at concentrations greater than the method detection limits. However, only concentrations of arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater exceed the MDNRE generic residential criteria. Therefore, two of the subject site parcels (parcels: 03-02-03-300-015 and 06-003-027-10) meet the definition of a "facility" as defined in Part 201 of the National Resources and Environmental Protection Act (NREPA), 1994, PA 451, as amended.

Conclusions

Atwell has performed this Phase I ESA in general conformance with the scope and limitations of ASTM Practice E1527-05 and AAI specifications for the approximately 120-acres of undeveloped agricultural land located along the north side of East 48th Street, Holland/Fillmore Township, Michigan. During the course of this Phase I ESA, the EP identified a potential REC associated with the subject site. However, it is the opinion of the EP that previous subsurface investigations conducted by Atwell, LLC, have sufficiently evaluated the REC and no additional subsurface investigations are necessary at this time.

As the subject site meets the definition of a "facility" as defined in Part 201 of the NREPA, 1994, PA 451, as amended, Atwell recommends that a BEA and a Section 7A Due Care Plan be prepared for new owners/operators/occupants of the subject site in order to qualify as an innocent landowner and prevent possible exacerbation of the identified contamination.

Suggested Actions to Address Business Environmental Risk

The scope of services for this Phase I ESA did not include providing suggested actions to address business environmental risk.

Disclaimer

This report was prepared solely for the benefit of CPI/LGC, Roncelli, Butzel Long, City of Holland, Lakeshore, Ghafari, and Rosetti and no other party or entity shall have any claim against Atwell due to the performance or nonperformance of the services presented herein. Only CPI/LGC, Roncelli, Butzel Long, City of Holland, Lakeshore, Ghafari, and Rosetti may rely upon this report for the sole purpose of obtaining financing, obtaining refinancing, acquisition of the subject site, lease of the subject site, or sale of the subject site. Any other parties seeking reliance upon this report must obtain Atwell's prior written approval. Atwell specifically renounces any and all claims by parties asserting a third party beneficiary status.

3.0 Introduction

3.1 Purpose

Atwell conducted the Phase I Environmental Site Assessment (ESA) in order to provide an independent, professional opinion of the possible presence of Recognized Environmental Conditions (RECs) or other possible environmental concerns (if any) associated with the subject site as part of environmental due diligence. As defined in American Society for Testing and Materials (ASTM) Designation: E 1527-05, the term Recognized Environmental Conditions 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".

Performance of the Phase I ESA was intended to reduce, but not eliminate, uncertainty regarding the existence of Recognized Environmental Conditions in connection with the subject site.

3.2 Scope of Work

Atwell performed the Phase I ESA while using standards typically adhered to by other environmental consulting professionals. Atwell adheres to such professional standards in an effort to maintain innocent landowner defense options for sellers, bona fide prospective purchasers, lenders and/or contiguous property owners under guidelines set forth in the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Phase I ESA was performed to meet the standard of "All Appropriate Inquiry" (AAI) as promulgated by the United States Environmental Protection Agency (USEPA) to qualify for the CERCLA innocent landowner defenses.

The Phase I ESA was conducted in general conformance with the ASTM Designation: E 1527-05, Standard Practice For Conducting Environmental Site Assessments and 40 Code of Federal Regulations (CFR) Part 312, AAI.

This Phase I ESA was performed to evaluate environmental risk and does not include any investigation involving business environmental risks.

The Scope of Work for the Phase I ESA included:

- A visual inspection of the subject site on April 30, 2010, and all improvements thereon to evaluate general environmental conditions;
- Establishing the present and past land uses at and adjacent to the site through the review of: (1) historical aerial photographs; (2) city directories; (3) the local topographic map; (4) local Assessment/Building Department/Tax records; (5) historical Sanborn Fire Insurance Maps, if available; (6) the local Fire Department, and (7) interviews with present and past owners, operators and/or occupants, when available;
- A review and evaluation of the following databases of federal, tribal, state, and local known or suspected sites of environmental contamination within the applicable ASTM recommended distance from the subject site, including but not limited to: (1) The United States Environmental Protection Agency's (USEPA's) National Priority List (NPL) records including, current NPL sites, proposed NPL sites, de-listed NPL sites and NPL recovery (Superfund Liens) sites; (2) The USEPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) list of known or suspected hazardous waste sites; (3) The USEPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)-No Further Remedial Action Planned (NFRAP) list of known or suspected hazardous waste sites; (4) The USEPA's Resource Conservation Recovery Act (RCRA) Corrective Action Report (CORRACTS) list for facilities that produce small quantities, large quantities, or transport, store, or dispose (TSD) of hazardous materials that are subject to corrective action under RCRA; (5) The USEPA's Resource

3.0 Introduction (continued)

3.2 Scope of Work (continued)

Conservation Recovery Information System (RCRIS) Non-CORRACTS notifier list for facilities that generate small quantities, large quantities, or TSD of hazardous materials; (6) The USEPA's Emergency Response Notification System (ERNS) list for reported releases of oil and hazardous substances; (7) USEPA's listing of sites with activity use limitations (AUL), engineering controls (US Eng. Controls), or sites with institutional controls in place (US Inst. Controls); (8) USEPA's listing of Brownfields sites; (9) state and tribal-equivalent, prioritized listing of known sites of environmental contamination [State Hazardous Waste Sites (SHWS)]; (10) state and tribal-equivalent listing of NPL sites; (11) state and tribal-equivalent listing of CERCLA sites; (12) state and tribal-equivalent listing of current and formerly licensed and/or unlicensed landfill and disposal facilities (SWF/LF); (13) state and tribal-equivalent listing of Leaking Underground Storage Tank (LUST) sites; (14) state and tribal-equivalent listing of Registered Aboveground or Underground Storage Tanks (AST/UST); (15) state and tribal-equivalent listing of sites subject to engineering controls (Eng Controls); (16) state and tribal-equivalent listing of sites which are subject to institutional controls (Inst Controls); (17) state and tribal-equivalent listing of Voluntary Clean-up Sites (VCP); (18) state and tribal-equivalent listing of sites listing of Brownfield sites; (19) proprietary and state-specific environmental database sites within one-quarter mile of the subject site, and

- Atwell has also provided a list of references used to complete the project (**Appendix A**).

The Phase I ESA was conducted between the period of April 27, 2010 through May 7, 2010.

This Phase I ESA was completed by Mr. Garnett Johnson, Project Coordinator, and Ms. Rebecca Payne, Environmental Specialist and Environmental Professional (EP) of Atwell, under the supervision of Mr. Allan R. Longyear, Project Manager and EP. The EP's involvement includes the project planning; supervision; reviewing and interpreting all data collected; formation of findings and opinions; report review, and recommendations for any further investigations, if warranted. Personnel resumes are included in **Appendix B**.

3.3 Significant Assumptions

During the course of this Phase I ESA, no significant assumptions were made.

3.4 Limitations and Exceptions

Atwell has concluded that aerial photograph data failure prior to 1950 and between the years 1982 and 1991; City Directory coverage was not available prior to 1973 and Sanborn Maps were not available for the subject site. As of the date of this report, Atwell has not received a current respons from the Holland Fire Department. During the site reconnaissance, not all of the surface features were visible due to the presence limited areas of wooded land and/or dense vegetation located on the subject site. These gaps, conditions or absences of information represent data failure in records pertaining to the subject site.

The information obtained from external sources, to the extent it was relied upon to form Atwell's opinion about the environmental condition of the site, was assumed to be complete and correct. Atwell cannot be responsible for the quality and content of information from these sources. However, based on a review of readily available and reasonably ascertainable information, Atwell concluded that these limitations/data gaps should not materially limit the reliability of the report and that a thorough documentation of the subject site's environmental condition has been conducted.

3.0 Introduction (continued)

3.5 Deviations From the ASTM Standard

No deviations from the recommended scope of ASTM Standard E 1527-05 or AAI were performed as part of this Phase I ESA with the exception of any additions noted in Detailed Scope of Services or any additional items addressed in Section 9.0 (Other Environmental Considerations).

3.6 Special Terms and Conditions

Authorization to perform this assessment was given by the client on April 27, 2010. Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by Mr. Kee Eun.

3.7 Reliance

Atwell stipulates that, as of the date of the report, the information and opinions included in this Phase I ESA may be used and relied upon by CPI/LGC, Roncelli, Butzel Long, City of Holland, Lakeshore, Ghafari, and Rosetti.

4.0 Site Description

4.1 Location and Legal Description

The subject site is located in the southwest quarter of Section 3, Township 4 North, Range 15 West, within the City of Holland and Fillmore Township, Allegan County, Michigan. A legal description (Parcel Numbers 03-02-03-300-015; 53-02-03-300-017; 03-06-003-027-10; and 03-06-003-020-00) for the subject site is presented in **Appendix H**. The location of the subject site is presented on the Site Location Map in Figure 1 (**Appendix C**). -

4.2 Site and Vicinity Description

During the site reconnaissance, Atwell observed the subject site to be comprised of approximately 120-acres of undeveloped, agricultural land located along the north side of East 48th Street, Holland/Fillmore Township, Michigan. The subject site is comprised of three legal parcels, two located within the City of Holland and one located within Fillmore Township (commonly referred to as the Rabber's parcel), and a portion of a four parcel, located within Fillmore Township (commonly referred to as the Wescott parcel). The area surrounding the site is a mixture of unimproved agricultural land, residential dwellings and commercial/industrial developments. The Site Plan View is included as Figure 2 (**Appendix C**).

4.3 Current Use of Property

The subject site is comprised of four separate parcels totaling approximately 120-acres of unimproved land primarily occupied by agricultural fields (i.e., row crops).

4.4 Description of Structures and Other Improvements

With the exception of public utilities, no other improvements are located on the subject site. Refer to Section 6.2 for further information.

Other Improvements

4.0 Site Description (continued)

4.5 Current Adjoining Property Information

Direction From Site	Shared Border?	Across What?	Current Use
North	Yes	NA	Agricultural
Occupant(s) Name	**Address**		
Agricultural Land	5298 40th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the northern adjacent property.			

Direction From Site	Shared Border?	Across What?	Current Use
East	Yes	NA	Agricultural
Occupant(s) Name	**Address**		
Wooded land and a portion of the Matakawalka River	NA		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the eastern adjacent property.			

Direction From Site	Shared Border?	Across What?	Current Use
South	Yes	NA	Residential
Occupant(s) Name	**Address**		
Residential Dwelling	5253 146th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the southern adjacent property.			

Direction From Site	Shared Border?	Across What?	Current Use
South	No	48th Street (146th Avenue)	Residential
Occupant(s) Name	**Address**		
Residential Dwelling	914 48th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the southern adjacent property.			

Direction From Site	Shared Border?	Across What?	Current Use
South	No	48th Street (146th Avenue)	Agricultural
Occupant(s) Name	**Address**		
Agricultural Land	836-850 48th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the southern adjacent property.			

Direction From Site	Shared Border?	Across What?	Current Use
Southwest	Yes	NA	Natural Gas Main
Occupant(s) Name	**Address**		
SEMCO	789 48th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the southwestern adjacent property.			

4.0 Site Description (continued)

4.5 Current Adjoining Property Information (continued)

Direction From Site	Shared Border?	Across What?	Current Use
West	No	Railroad	Commercial/ Industrial
Occupant(s) Name	**Address**		
Gold Standard Marine	759 48th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the western adjacent property. Refer to Section 6.1 for information.			

Direction From Site	Shared Border?	Across What?	Current Use
Northwest	Yes	NA	Commercial/ Industrial
Occupant(s) Name	**Address**		
Global Concepts Enterprise, Inc.	785 Waverly Court		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the northwestern adjacent property. Refer to Section 6.1 for information.			

Direction From Site	Shared Border?	Across What?	Current Use
Northwest	Yes	NA	Industrial
Occupant(s) Name	**Address**		
GLW Finishing	750 Waverly Court		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the northwestern adjacent property. Refer to Section 6.1 for information.			

Direction From Site	Shared Border?	Across What?	Current Use
Northwest	Yes	NA	Industrial
Occupant(s) Name	**Address**		
USF Holland	750 40th Street		
Observations and/or Potential Environmental Concerns			
During the site reconnaissance, Atwell did not observe any potential RECs associated with the northwestern adjacent property. Refer to Section 6.1 for discussion.			

5.0 User Provided Information

5.1 Title Records

Limited title records were provided to Atwell during the Phase I ESA. According to the provided information, Prince Holdings Corporation sold a portion of the subject site, parcel 03-02-03-300-015, to PHC, LLC in 1996. No other title records were provided by the user/client. Please refer to the Records Review section for current and historical ownership/use of the subject site. The provided title work is included within **Appendix E**.

5.2 Environmental Liens and Activity/Use Limitations

No statement or documentation was provided by the user/client regarding any environmental liens or activity/use limitations in connection with the subject site.

5.0 User Provided Information (continued)

5.3 Specialized Knowledge

No specialized knowledge in connection with the current or historical use of the subject site, facility operations or adjacent properties was identified by the user/client.

5.4 Purchase Price and Market Value Comparison

The user/client stated that, to their knowledge, the purchase price for this property reflects the fair market value.

5.5 Valuation Reduction for Environmental Issues

No environmental issues were identified by the user/client that could result in property value reduction.

5.6 Owner, Property Manager, and Occupant Information

No other pertinent information in connection with the subject site was provided by the owner, the property manager or the occupant.

5.7 Reason For Performing Phase I

The Phase I ESA is being conducted for CPI/LGC, Roncelli, Butzel Long, City of Holland, Lakeshore, Ghafari, and Rosetti as part of environmental due diligence prior to property transfer or refinancing. The User Provided Information questionnaire is included in **Appendix E**.

6.0 Records Review

6.1 Standard Environmental Records Sources

Atwell retained EDR of Milford, Connecticut, to review federal, tribal, state and EDR proprietary records related to the subject site and nearby properties within the ASTM approximate minimum search radius (as seen on the table below). However, Atwell typically reviews local, state, tribal or federal database records of those sites of known environmental contamination (i.e., SHWS, LUST, CERCLIS, and NPL sites) within a one-quarter mile radius of the subject site. Atwell considers sites within this specified search radius as having the most potential to impact the subject site. Also, Atwell typically reviews local, state, tribal or federal database records of those sites of suspected environmental contamination (i.e., UST, Indian UST and RCRA generator sites), which adjoin the subject site, or, in the professional opinion of Atwell, are of such nature and proximity to the subject site to represent RECs.

EDR identified one RCRA-Small Quantity Generator (SQG) site, two RCRA-Conditionally Exempt Small Quantity Generator (CESQG) sites, one RCRA-Non Generator (Non-Gen) site, two LUST/UST sites, one LUST/UST/Aboveground Storage Tank (AST) site, one UST site, and one LUST/UST/SHWS/Baseline Environmental Assessment (BEA)/AST site located within one-quarter mile of the subject site. According to the EDR report, one of the four RCRA generator sites has no reported RCRA violations. The remaining three RCRA generator sites have reported violations; however, they have all achieved and/or maintained compliance and therefore, it is the opinion of the EP that the RCRA hazardous waste generator sites should not represent an REC to the subject site.

The EDR Orphan Summary report (compilation of properties with inadequate address information) did not identify any sites of known or suspect contamination located within one-quarter mile of the subject site.

6.0 Records Review (continued)

6.1 Standard Environmental Records Sources (continued)

Atwell also submitted a Freedom of Information Act (FOIA) request to the MDNRE to determine if any files were on record for the subject site. According to a response from the MDNRE Resource and Redevelopment Division (RRD), Water Bureau, and the Waste and Hazardous Materials Division, no records are on file for the subject site.

The *EDR Radius Report with GeoCheck Report* is included in **Appendix G**.

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1	0	0	0	0	NR	0
DELISTED NPL		1	0	0	0	0	NR	0
CERCLIS		0.5	0	0	0	NR	NR	0
CERCLIS-NFRAP		0.5	0	0	0	NR	NR	0
CORRACTS		1	0	0	0	0	NR	0
RCRA-TSDF		0.5	0	0	0	NR	NR	0
RCRA-LQG		0.25	0	0	NR	NR	NR	0
RCRA-SQG		0.25	0	1	NR	NR	NR	1
RCRA-CESQG		0.25	0	2	NR	NR	NR	2
US ENG CONTROLS		0.5	0	0	0	NR	NR	0
US INST CONTROL		0.5	0	0	0	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
US BROWNFIELDS		0.5	0	0	0	NR	NR	0
RCRA-NonGen		0.25	0	1	NR	NR	NR	1
SHWS		1	0	1	0	0	NR	1
LUST		0.5	0	2	2	NR	NR	4
UST		0.25	0	3	NR	NR	NR	3
AST		0.25	0	1	NR	NR	NR	1
LIENS		TP	NR	NR	NR	NR	NR	0
AUL		0.5	0	0	0	NR	NR	0
BROWNFIELDS		0.5	0	0	0	NR	NR	0
BEA		0.5	0	1	0	NR	NR	1
INDIAN LUST		0.5	0	0	0	NR	NR	0
INDIAN UST		0.25	0	0	NR	NR	NR	0
INDIAN VCP		0.5	0	0	0	NR	NR	0
INDIAN ODI		0.5	0	0	0	NR	NR	0
INDIAN RESERV		1	0	0	0	0	NR	0

Site Name: USF HOLLAND INC
Databases: LUST, UST
Address: 750 EAST 40TH STREET
Distance: ADJACENT TO THE NORTHWEST
Direction: NORTHWEST
Elevation: HIGHER
Comments: The EDR report identified the USF Holland Inc. site to be located greater than one-quarter mile northwest of the subject site. However, Atwell determined that this site is actually located adjacent to the northwest of the subject site. According to the EDR report, the site previously utilized one, 1,000-gallon used oil UST; one, 10,000-gallon used oil UST and one, 12,000-gallon diesel UST that were installed in 1972 and removed from the site in 1989. A petroleum product release was reported in 1989; however, the Michigan Department of Natural Resources and Environment (MDNRE), formerly the Michigan Department of Environmental Quality (MDEQ), granted closure for the release in 1991. A

6.0 Records Review (continued)

6.1 Standard Environmental Records Sources (continued)

Comments: MDNRE closure indicates that site investigation and/or remediation activities have been completed to render site contaminates to within the applicable MDNRE Part 213 cleanup criteria. However, the EDR report further indicates that two additional 12,000-gallon diesel USTs were installed in 1989 and are noted to be "temporarily out of use". Atwell reviewed the local topographic map and the MDNRE Groundwater Mapping Project interactive mapping program, which indicate that the local surficial (and likely hydraulic) gradient appears to be to the southeast, placing this site up-gradient to the subject site. Although the site is a "closed" LUST site and no new releases have been reported since 1989, based on the shared property boundary, up-gradient location and existing USTs, it is the opinion of the EP that the USF Holland, Inc. site has the potential to impact the subject site and represents an REC. A review of the available MDNRE files for the USF Holland, Inc. site revealed that site various volatile organic compounds (VOCs), poly-nuclear aromatics (PNAs) and lead were detected in soil at concentrations less than the applicable cleanup criteria and closure was recommended for the site. Atwell conducted a subsurface investigation at the subject site in January of 2010 to address the potential concerns associated with off-site sources. A review of the soil and groundwater analytical results indicate that concentrations of VOCs were detected at levels greater than the MDNRE generic cleanup criteria. Although contamination has been identified at the subject site, likely associated with off-site properties, the previous subsurface investigations conducted by Atwell, LLC in 2010 have sufficiently evaluated the identified RECs and no additional work is necessary at this time.

Site Name: 48TH STREET (635) E./NABISCO BRANDS/LIFE SAVERS INC.
Databases: SHWS, BEA, LUST/UST, AST
Address: 635 E. 48TH STREET
Distance: 600-FEET
Direction: WEST
Elevation: HIGHER
Comments: The EDR report identified the 48th Street (635) E/Nabisco Brands/Life Savers site, located between one-eighth and one-quarter mile west of the subject site, as a LUST/UST, SHWS, BEA and AST site. Atwell determined that this site is actually located approximately 600-feet west of the subject site. The EDR report indicates that in 1989 one, 440-gallon gasoline UST was removed from the site. A release was reported on September 12, 1989; however, the MDNRE granted closure for the release on September 22, 1989. In addition, the site is listed as a SHWS with a score of 36. The EDR report indicates that "Interim Response is in Progress". Further, the site is listed as a BEA site that indicates the presence of soil and/or groundwater contamination at concentrations greater than the MDNRE Part 201 cleanup criteria. Finally, the site previously utilized one, 25,000-gallon AST (contents unknown), that is no longer in use. According to discussions with the local MDNRE representative, Ms. Ann, the local groundwater flow is variable, with some areas flowing to the northwest toward the Lake and some areas flowing to the southeast toward the river. Therefore, based on the variable groundwater flow direction, known soil/groundwater contamination and on-going remediation activities, the potential exists for contamination associated with the 48th Street (635) E/Nabisco Brands/Life Savers site to have impacted the subject site and represents an REC. A review of the available MDNRE files for the 48th Street (635) E/Nabisco Brands/Life Savers site revealed that in 1989, BTEX concentrations were non-detect; however, Total Petroleum Hydrocarbon (TPH) concentrations were elevated and therefore, approximately 500-cubic yards of impacted soils were removed and disposed off-site. Additionally, the file indicated that the site was no longer operating as of August 2003. Atwell conducted a subsurface investigation at the subject site in January of 2010 to address the potential concerns associated with off-site sources. A review of the soil and groundwater analytical results indicates that concentrations of VOCs were detected at levels greater than the MDNRE generic cleanup

6.0 Records Review (continued)

6.1 Standard Environmental Records Sources (continued)

Comments: criteria. Although contamination has been identified at the subject site, likely associated with off-site properties, the previous subsurface investigations conducted by Atwell, LLC in 2010 have sufficiently evaluated the identified RECs and no additional work is necessary at this time.

Site Name: AMERICAN AEROSOLS
Databases: LUST, UST
Address: 636 E 40TH ST
Distance: 1,300-FEET
Direction: NORTHWEST
Elevation: HIGHER
Comments: The EDR report identified the American Aerosols site, located just greater one-quarter mile northwest of the subject site, as a LUST/UST site. According to the EDR report, the site previously utilized 26 USTs, ranging in in size from 4,000 to 12,000-gallons, that contained various hazardous materials and petroleum products. A release was reported during the removal of the 26 USTs in 1991 that remains "open". An "open" LUST indicates that various VOC compounds are present in the soil and/or groundwater at concentrations greater than the applicable cleanup criteria. A review of the MDNRE file indicates that in 1998, a release of approximately 4,800-gallons of a hazardous material was released into a secondary containment feature at the site. Reportedly, none of the released material came into contact with the soil and/or groundwater at the site. The product was removed via a vacuum truck and properly disposed. A Groundwater Monitoring Report, dated January of 2010 indicates that groundwater remediation activities are on-going at the site. Groundwater flow direction at this location was determined to be to the northwest, down-gradient of the subject site. Although groundwater impact is present at the site greater than the MDNRE cleanup criteria, based on the down-gradient location to the subject site, it is the opinion of the EP that the American Aerosols site should not represent an REC.

Site Name: TIARA YACHTS (FORMERLY S-2)
Databases: LUST, AST, UST
Address: 725 E 40TH ST
Distance: 1,200-FEET
Direction: NNW
Elevation: Higher
Comments: The EDR report identified the Tiara Yachts (Formerly S-2) site, located between one-eighth and one-quarter mile northwest of the subject site, as a LUST/UST and AST site. The EDR report indicates that the site previously utilized three USTs, ranging in size from 2,000 to 10,000-gallons, containing petroleum products. Three releases have been reported for the site: two in 1995 and one in 1996. However, the MDNRE granted closure for the releases in 1995, 1996, and 1997. The site currently utilizes one, 8,000-gallon flammable liquid AST with no reported releases. It is the opinion of the EP that based on the closure status, source removal (USTs), and no reported release from the existing AST, the Tiara Yachts (Formerly S-2) site should not represent an REC.

Site Name: BIG DUTCHMAN CYCLONE, INC
Databases: UST
Address: 694 E 40TH ST
Distance: 1,284-FEET
Direction: NORTHWEST
Elevation: HIGHER
Comments: The EDR report identified the Big Dutchman Cyclone, Inc. site, located approximately one-quarter mile northwest of the subject site, as a UST site. The EDR report indicates

6.0 Records Review (continued)

6.1 Standard Environmental Records Sources (continued)

Comments: that the site previously utilized one, 1,000-gallon diesel UST that was removed from the site in 1990. No petroleum product releases have been reported for the site and therefore, it is the opinion of the EP that the Big Dutchman Cyclone, Inc. site should not represent an REC.

6.2 Additional Environmental Record Sources

Atwell reviewed current and historical files maintained by the City of Holland, Fillmore Township and Allegan County municipal offices for the subject site. The review of municipal records was conducted in order to identify possible environmental concerns (e.g., suspect building materials, USTs, ASTs, etc.) associated with the subject site. The subject site is comprised of three complete parcels and a portion of a fourth larger parent parcel, all which are currently vacant land (agricultural) with no existing structures. The western portion of the subject site is located within the City of Holland, while the eastern portion of the subject site is located within Fillmore Township. Historic assessing records for the subject site indicate that a residential dwelling and associated outbuildings were previously located on the southern portion of the subject site; parcel 03-02-03-300-017 (815 48th Street). Assessing records indicate that the structures were demolished in 1995. No other structures have been located on the subject site since at least the 1940s. According to City of Holland Assessing Department representatives, the subject site address is 850/859 East 48th Street; however, this address was previously known as 5345 146th Avenue (146th Avenue is an "out-of-city" road name), prior to annexation into the City of Holland. Atwell contacted Mr Jerome Bush, Fillmore Township Assessor, who indicated that he has been associated with the township for at least 25 years and is not aware of any potential environmental concerns associated with the subject site, specifically the two Fillmore Township parcels. He further stated that the parcels located within Fillmore Township have always been agricultural land (i.e., row crops). Records documentation is included in **Appendix H** and Interview documentation is included in **Appendix I**.

Atwell contacted the City of Holland and Fillmore Township municipal offices to determine the zoning specifications for the subject site. The subject site parcels located within the City of Holland (53-02-03-300-015 and 53-02-03-300-017) are currently zoned I-2 (Industrial Park) and the two parcels located within Fillmore Township (03-06-003-027-10; and 03-06-003-020-00) are currently zoned R-1 (Residential).

Atwell submitted a freedom of information act (FOIA) request to the Holland Fire Department and attempted to contact the Graafscap Fire Department for information regarding current or former USTs or ASTs at the subject site, as well as, any hazardous material storage, spill response records or commonly known information that may be available from fire department representatives. According to Fire Chief Haverdink, he is not aware of any potential environmental concerns associated with the subject site. Chief Haverdink stated that the Fillmore Township parcels have always been agricultural land. As of the date of this report, a response from the City of Holland Fire Department has not been received. However, as described in the previous Phase I ESA report prepared by Atwell-Hicks, LLC, Fire Marshal Todd Szakacs was not aware of any potential concerns associated with the subject site and did not have records of USTs located at the subject site. Records documentation is included in **Appendix H**.

The subject site is not currently connected to any municipal or public utilities. Drinking water, sanitary sewer and electric service are available through the Holland Board of Public Works. Natural gas is available through SEMCO. During the site inspection Atwell observed a drinking water well-head located on the southern portion of the subject site, in the area of the former homestead (815 E 48th Street). Atwell recommends that if the well is going to be utilized, the water should be sampled. However, if the well is not planned for future use, Atwell recommends that the well be properly abandoned per local and state regulations. In addition, based on the age of the former homestead (constructed prior to 1932), it is likely that the residence utilized a septic system. Septic systems can

6.0 Records Review (continued)

6.2 Additional Environmental Record Sources (continued)

be recipient to a variety of materials depending on site operations (i.e., manufacturing, automotive repair, etc.). However, based on the residential use of the subject site, it unlikely that previous septic systems would have impacted the subsurface environment. Therefore, it is the opinion of the EP that previous septic systems should not represent an REC. Further, according to assessing records, a portion of the subject site utilized natural gas as a heating fuel source. As discussed in Section 6.4.5, according to a review of the previous Phase I ESA reports prepared by Driesenga, the former residence located at the subject site, also utilized heating oil as a fuel source for the heating system. However, during the various site inspections conducted by Atwell-Hicks, LLC, Atwell, LLC and Driesenga, no evidence of potential heating oil tanks were observed at the subject site.

The Allegan County Environmental Health Department (ACEHD) maintains environmental files for sites throughout Allegan County. The files contain field inspection reports from city inspectors, reported environmental problems, results of right-to-know programs and other miscellaneous data. Atwell submitted a FOIA request to the ACEHD for any information regarding water wells, septic systems, hazardous material storage or any commonly known information that may be available from ACEHD representatives. A response from ACEHD indicates that no records exist for the subject site. Documentation is included in **Appendix H** and **Appendix I**.

Atwell reviewed the MDEQ, Remediation and Redevelopment Division (RRD) Perfected Lien List, dated March 30, 2010 regarding any recorded environmental liens for the subject site. Atwell did not identify any RRD environmental liens on file for the subject site or parent parcel. Records documentation is included in **Appendix H**.

6.3 Physical Setting Sources

Atwell reviewed the USGS 7.5 Minute Topographic Map of the subject site and surrounding area. The topographic map reviewed was the Holland East, Michigan Quadrangle. Surface drainage at the subject site appears to be generally to the southeast, towards the North Branch of the Macatawa River. According to the EDR, Physical Setting Source Summary, no groundwater flow direction data has been reported within one-mile of the subject site. Unless otherwise noted, the surface drainage flow direction has been inferred from a review of regional topographical data. Site-specific conditions may vary due to a variety of factors, including geologic anomalies, utilities, nearby pumping wells (if present), and other developments.

6.4 Historical Use Information

6.4.1 Historical Summary

Based on information gathered during the site investigation and a review of aerial photographs, historical address indexes, municipal records and interviews, Atwell concluded that since at least 1932, a residential dwelling and associated outbuildings were constructed on the southern portion of the subject site (815 East 48th Street) and the remainder of the subject site consisted of undeveloped agricultural land (i.e., row crops). In 1995, the residence and associated outbuildings were demolished. From 1995 through the present, the subject site has been undeveloped agricultural land (i.e., row crops).

6.4.2 City Directories

Atwell retained EDR to conduct a review of historical cross-index directories (i.e., Bresser's and Polk's) on file for the subject site and immediately adjoining properties. Bresser's and Polk's Cross-Index Directories compile historical addresses for sites located throughout southern Michigan. EDR reviewed

6.0 Records Review (continued)

6.4 Historical Use Information (continued)

6.4.2 City Directories (continued)

the Bresser's and Polk's Allegan County area indexes in approximately five-year intervals for the time period between 1931 to 2009 and as observed during the April 30, 2010 site reconnaissance. Due to the undeveloped and residential use of the subject site and the majority of the surrounding properties, Atwell did not identify any occupants of environmental concern located on or adjacent to the subject site. Therefore, it is the opinion of the EP that city directories have not identified any RECs associated with the subject site or adjacent properties. The EDR City Directory Abstract is included in **Appendix F**.

6.4.3 Aerial Photos

Atwell reviewed aerial photographs for the years 1950, 1955, 1960, 1967, 1974, 1981, 1992, 1997, 2002, 2005 and 2008 on file with EDR Aerial Photography Database and TerraServer.com. Aerial photographs for the years 1950 and 2008 are included in **Appendix F**.

In the 1950 through 2008 aerial photographs, the majority of the subject site appears as it does today, undeveloped land occupied by agricultural fields (i.e., row crops) with the exception of one former homestead. In the 1950 through 1974 aerial photographs, the southern portion of the subject site (parcel ID 53-02-03-300-017) appears to be developed with a residential dwelling and several outbuildings. In the 1981 through 1997 aerial photographs, fewer structures appear to be present and in the 2002 through 2008 aerial photographs, no structures are present. In the 1950 through 2008 aerial photographs, the northern, eastern and southern adjacent properties appear to be agricultural land with a few residential dwellings. In the 1950 through 1992 aerial photographs, the western and northwestern adjacent properties appear to be primarily undeveloped agricultural land. Beginning in 1997, the western and northwestern adjacent properties are generally developed with commercial/industrial properties, with additional developments present in 2002 to the northwest of the subject site. No evidence of landfilling activities, waste dumping, unexplained excavation, or hazardous material storage activities were observed during the review of historical aerial photographs.

6.4.4 Sanborn/Historical Maps

Atwell submitted a request to EDR for copies of available Sanborn Fire Insurance Maps that cover the subject site and surrounding adjacent properties. These historical maps may provide information pertaining to adverse land uses and the presence and/or location of USTs. EDR concluded that Sanborn/Fire Insurance Maps were not available for the subject site. The Sanborn Map *No Coverage* receipt is included in **Appendix F**.

6.4.5 Other Environmental Reports

Atwell has performed the following activities at the subject site: Phase I ESA Report, dated September of 2009, a Phase I ESA Report, dated November of 2009 and a Phase II Subsurface Investigation report, dated January of 2010. Additionally, Atwell was provided with and reviewed the following environmental reports prepared for the subject site: All Appropriate Inquiry Compliant Phase I ESA Report, date September 9, 2009, and All Appropriate Inquiry Compliant Phase I ESA Report, date September 9, 2009, both prepared by Driesenga and Associates, Inc.

Document Title/Source	Date	Conducted For	Conducted By
Phase I ESA Report	September 10, 2009	Rossetti	Atwell-Hicks, LLC

6.0 Records Review (continued)

6.4 Historical Use Information (continued)

6.4.5 Other Environmental Reports (continued)

Findings
Atwell-Hicks, LLC preformed a Phase I ESA report for approximately 64-acres of undeveloped land located in Holland, Michigan. Atwell-Hicks, LLC identified two off-site properties (Nabisco and USF Holland) that have the potential to impact the subject site environmental resources due to the following: currently utilize USTs, share the subject site property boundary, have unresolved environmental concerns and/or are located up-gradient of the subject site. Atwell-Hicks, LLC recommended a subsurface investigation to assess the potential off-site concerns.

Document Title/Source	**Date**	**Conducted For**	**Conducted By**
Phase I ESA Report	November 11, 2009	Rossetti	Atwell-Hicks, LLC
Findings			
Atwell-Hicks, LLC preformed a second Phase I ESA report for approximately 80-acres of undeveloped land (original 64-acres plus an additional 20-acres) located in Holland and Fillmore Township, Michigan. Atwell-Hicks, LLC identified the same RECs as were identified in the September 10, 2009 Phase I ESA report and recommended a subsurface investigation to address the off-site concerns.			

Document Title/Source	**Date**	**Conducted For**	**Conducted By**
All Appropriate Inquiry Compliant Phase I ESA Report	September 8, 2009	PHC, LLC	Driesenga and Associates, Inc
Findings			
Driesenga and Associates, Inc. (Driesenga) preformed a Phase I ESA report for approximately 64-acres of undeveloped land located in Holland, Michigan. A review of the previous report identified the following RECs: 1) The First Search report identified American Aerosols, an "open" LUST site, located to the northeast of the subject site and potentially up-gradient of the subject site, and 2) the use of heating oil as a heat fuel source that may have been contained within a UST, associated with the former residential dwelling located on the subject site. Driesenga recommended a regulatory file review of the off-site American Aerosols property.			

Document Title/Source	**Date**	**Conducted For**	**Conducted By**
All Appropriate Inquiry Compliant Phase I ESA Report	December 30, 2009	Lakeshore Advantage	Driesenga and Associates, Inc
Findings			
Driesenga preformed a Phase I ESA report for approximately 56-acres of undeveloped land located in Fillmore Township, Michigan. A review of the previous report did not identify any RECs associated with the subject site.			

Document Title/Source	**Date**	**Conducted For**	**Conducted By**
Phase II Subsurface Investigation Report	January of 2010	Rossetti	Atwell, LLC
Findings			
In January of 2010, Atwell was retained to conduct a subsurface investigation to evaluate the identified RECs. Based on information obtained during the Phase II Subsurface Investigation, the soil stratigraphy at the subject site was determined to generally consist of clay soil with sand seams throughout, that extends to the maximum explored depth of approximately 30.0-feet below surface grade (bsg). Saturated soil (i.e., groundwater) was identified in one of the five soil borings advanced at the subject site. In general, groundwater was encountered within the upper silty sand soil zone and at depths between approximately 7.0 and 9.0-feet bsg. Based on information obtained during the Phase II Subsurface Investigation, Atwell determined that the near surface groundwater at the subject site is perched and should not be considered as groundwater in an aquifer. Soil samples were submitted for one or more of the following analyses: VOCs, PNAs, PCBs, and M10E (chemical to be used by future site occupant).			

6.0 Records Review (continued)

6.4 Historical Use Information (continued)

6.4.5 Other Environmental Reports (continued)

A review of the laboratory analytical results indicate that various VOCs, SVOCs and metals compounds are present in the subject site soil and groundwater at concentrations greater than the method detection limits. However, only the concentrations of arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater exceed the MDNRE generic residential criteria. Therefore, two of the subject site parcels (parcels: 03-02-03-300-015 and 06-003-027-10) meet the definition of a "facility" as defined in Part 201 of the NREPA, 1994, PA 451, as amended. The presence of soil and groundwater contamination at the subject site represents an REC. However, the previous subsurface investigation conducted by Atwell, LLC, has sufficiently evaluated the concerns and no additional subsurface investigations are necessary at this time.

7.0 Site Reconnaissance

7.1 Methodology and Limiting Conditions

On April 30, 2010, Mr. Garnett Johnson, Project Coordinator for Atwell conducted a walking reconnaissance of the subject site. During the site reconnaissance, Atwell evaluated the subject site for the potential presence of the following Recognized Environmental Conditions: (1) hazardous substances; (2) petroleum products; (3) evidence of the presence of underground storage tanks (USTs); (4) evidence of the presence of aboveground storage tanks (ASTs); (5) other suspect containers; (6) polychlorinated biphenyl (PCB)-containing equipment; (7) interior or exterior staining/corrosion; (8) discharge features (i.e., current or former septic/leaching fields, floor drains, oil/water separators); (9) pits, ponds or lagoons; (10) evidence of excavation and/or landfilling activities; (11) evidence of surface soil/surface water stains and/or stressed vegetation; (12) water supply and/or groundwater monitoring wells, and (13) observations of adjacent property uses and potential evidence of adverse environmental impacts associated with adjoining properties (addressed in Section 4.5).

On April 30, 2010 the weather condition at the time of the site reconnaissance was clear and approximately 70 degrees Fahrenheit. The visual reconnaissance consisted of observing the boundaries of the property and systematically traversing the site to provide an overlapping field of view, wherever possible. The periphery and interior portions of the subject site were inspected. However, during the site reconnaissance, not all of the surface features were visible due to the presence of limited areas of wooded and/or dense vegetation. Photographs of pertinent site features identified during the site reconnaissance are included in **Appendix D**.

7.2 General Site Setting

During the site reconnaissance, Atwell observed the subject site to be comprised of approximately 120-acres of unimproved agricultural land located along the north side of East 48th Street in the City of Holland and Fillmore Township, Michigan. The Site Inspection Environmental Checklist is included in **Appendix I**.

7.3 Site Visit Findings

7.3.1 Hazardous Substances

No hazardous substances were identified on the subject site during the site reconnaissance.

7.0 Site Reconnaissance (continued)

7.3 Site Visit Findings (continued)

7.3.2 Petroleum Products

No petroleum products were identified on the subject site during the site reconnaissance.

7.3.3 USTs

Atwell evaluated the subject site for the possible presence of USTs. Typical indicators of USTs include: (1) gas pumps or pump islands; (2) vent pipes; (3) fill ports; or (4) unusual depressions. During the site reconnaissance, Atwell did not observe any readily apparent evidence of the current/former presence of USTs at the subject site.

The lack of visible evidence of any potential USTs and the fact that the individuals and agencies identified in this report were not aware of or did not have record of the presence of any USTs does not preclude the possibility that USTs could be present at the subject site property. Visible evidence of USTs, such as fill ports or vent pipes, may have been obscured from view and USTs could have been used at the subject site property without the knowledge of the current owner/operator, site contact or government agency.

7.3.4 ASTs

No readily apparent evidence of ASTs was identified on the subject property during the site reconnaissance.

7.3.5 Other Suspect Containers

No other suspect containers were identified on the subject property during the site reconnaissance.

7.3.6 Equipment Likely to Contain PCBs

Atwell did not observe any readily apparent evidence for suspect PCB-containing equipment located on the subject site.

7.3.7 Staining/Corrosion

During the site reconnaissance, Atwell did not observe any staining/corrosion located in the subject building and/or on the subject site.

7.3.8 Discharge Features

Other than a drainage swale located along the southern boundary of the subject site and irrigation drainage areas located throughout the agricultural areas of the subject site, no discharge features (septic systems, floor drains, catch basins, oil/water separators, etc.) were observed on the subject property during the site reconnaissance.

7.3.9 Pits, Ponds, And Lagoons

No pits, ponds or lagoons were observed on the subject property during the site reconnaissance.

7.0 Site Reconnaissance (continued)

7.3 Site Visit Findings (continued)

7.3.10 Solid Waste Dumping/Landfills

During the site reconnaissance, Atwell observed minor amounts of construction debris (i.e., concrete, shingles, wood, bricks, etc.) in the area of the former homestead (815 E 48th Street) and along the eastern site boundary. It is the opinion of the EP that considering the inert nature of construction debris/materials, the observed debris should not represent an REC. No other readily apparent evidence of solid waste dumping (i.e., unusual mounding, debris piles, or depressions), suspect fill material, or landfilling was identified on the subject property during the site reconnaissance.

7.3.11 Stained Soil/Stressed Vegetation

No stained soil or stressed vegetation was observed on the subject property during the site reconnaissance.

7.3.12 Wells

As discussed in Section 6.2, Atwell observed a drinking water well-head located on the southern portion of the subject site in the area of the former homestead (815 E 48th Street). The well appeared to be properly capped off and in good condition. In addition, a review of the EDR Physical Setting Source Summary indicates that an oil/gas production well may have been located on the subject site or adjacent to the subject site. Older oil and gas well drilling activities likely included the excavation of a pit near the wellheads into which drilling muds, that often contain brine and/or petroleum residues, were discharged. Atwell reviewed the MDNRE Geological Division oil/gas maps and associated well logs from the area of the subject site. According to the map and well logs, the oil/gas well was located on the southwestern portion of the subject site. However, the well was noted to be a "dry well", which indicates that no petroleum was identified at that location. Additionally, a oil/natural gas well was identified on the Rabbers parcel; however, according to review of the well log, Atwell determined that this well was located to the northeast of the subject site boundary. Further, during review of the historical aerial photographs, no evidence of potential drilling or excavation activities were identified on or near the subject site. Therefore, it is the opinion of the EP that it is unlikely that the drilling activities associated with the subject site natural gas "dry well" and northeastern adjacent oil/gas well have impacted that subject site and should not represent RECs. Documentation is included in **Appendix J**.

8.0 Interviews

With the exception of previously mentioned interviews and/or information received from the Client, owner, occupants and/or municipal offices, no other interviews were conducted during the course of this Phase I ESA.

9.0 Other Environmental Considerations

9.1 Controlled Substances

The presence of controlled substances on the subject site must be evaluated if the client is applying for or has been awarded a grant under CERCLA/EPA or if the property is considered abandoned.

The term "controlled substance" means a drug or other substance, or immediate precursor, included in schedule I, II, III, IV, or V of part B of 21 US Code 802. The drugs include but are not limited to ephedrine and pseudoephedrine, which are suppressants that are used in common over-the-counter weight control and decongestant drugs, as well as, acetone, toluene and other solvents. These "controlled substances" are used to manufacture various drugs for recreational use. Unusually large

9.0 Other Environmental Considerations (continued)

9.1 Controlled Substances (continued)

quantities (i.e., cases of cold tablets, diet pills, unexplained containers of solvents) would be observed if the substances were being misused and site use should be taken into account when evaluating for "controlled substances". The term does not include distilled spirits, wine, malt beverages, or tobacco, as those terms are defined or used in subtitle E of the Internal Revenue Code of 1986.

During the site reconnaissance, Atwell did not observe any evidence of controlled substances on the subject site.

9.2 Continuing Obligations

Owners or operators of real property may be subject to certain land use restrictions or institutional controls as part of continued occupancy of a site. These obligations may include resource restrictions; conducting reasonable steps with respect to hazardous substance releases; provide full cooperation, assistance, and access to persons that are authorized to conduct response actions or natural resource restorations; comply with federal information requests and administrative subpoenas, and provide all legally required notices. During the site reconnaissance and review of reasonably ascertainable records, Atwell did not identify any situations suggestive of continuing environmental obligations (i.e., institutional limitations, engineering controls).

9.3 Asbestos-Containing Materials

The scope of services for this Phase I ESA did not include an inspection or sampling of suspect ACMs.

9.4 Lead-Based Paint

The scope of services for this Phase I ESA did not include an evaluation of the presence of lead-based paint on the subject site.

9.5 Radon

The scope of services for this Phase I ESA did not include an evaluation for the potential presence of Radon in the area of the subject site.

9.6 Wetlands

The scope of services for this Phase I ESA did not include an evaluation of suspect wetland areas on the subject site.

9.7 Mold Evaluation

The scope of services for this Phase I ESA did not include a mold evaluation on the subject site.

9.8 Items of Non-Compliance

The scope of services for this Phase I ESA did not include an evaluation of items of non-compliance with applicable local, state, or federal regulations.

9.0 Other Environmental Considerations (continued)

9.9 Client-Specific Items

The scope of services for this Phase I ESA did not include addressing any client-specific items for the subject site.

10.0 Phase I Findings/Opinions/Conclusions

10.1 Report Findings and Opinions

During the course of this Phase I ESA, Atwell identified and evaluated the following known or suspect RECs associated with the subject site or nearby properties:

- The previous Phase I ESA reports and the EDR report identified two off-site properties (Nabisco and USF Holland) that had the potential to impact the subject site environmental resources (USTs, unresolved environmental concerns and/or are located up-gradient) as RECs. In January of 2010, Atwell conducted a subsurface investigation to evaluate the off-site concerns. A review of the laboratory analytical results indicated that various VOCs, SVOCs and metals are present in the subject site soil and groundwater at concentrations greater than the method detection limits. However, only concentrations of arsenic in soil and bis(2-ethylhexyl)phthalate in groundwater exceed the MDNRE generic residential criteria. Therefore, two of the subject site parcels (parcels: 03-02-03-300-015 and 06-003-027-10) meet the definition of a "facility" as defined in Part 201 of the National Resources and Environmental Protection Act (NREPA), 1994, PA 451, as amended;

- EDR identified one RCRA-SQG site, two RCRA-CESQG sites, one RCRA-Non-Gen site, two LUST/UST sites, one LUST/UST/AST site, one UST site, and one LUST/UST/SHWS/BEA/AST site located within one-quarter mile of the subject site. According to the EDR report, one of the four RCRA generator sites has no reported RCRA violations. The remaining three RCRA generator sites have reported violations; however, they have all achieved and/or maintained compliance and therefore, it is the opinion of the EP that the RCRA hazardous waste generator sites should not represent an REC to the subject site. In addition, the LUST/UST and LUST/UST/AST sites have either been granted regulatory closure by the MDNRE, are located cross or down-gradient of the inferred local groundwater flow, or have been sufficiently evaluated during previous subsurface investigations conducted at the subject site. Based on this information, it is the opinion of the EP that the sites listed in the EDR report should not represent RECs to the subject site;

- A review of the EDR Physical Setting Source Summary indicates that an oil/gas production wells may have been located on the subject site or adjacent to the subject site. Older oil and gas well drilling activities likely included the excavation of a pit near the wellheads into which drilling muds, that often contain brine and petroleum residues, were discharged. According to the oil/gas map and well logs, the oil/gas well was located on the southwestern portion of the subject site. However, the well was noted to be a "dry well", which indicates that no petroleum was identified at that location. Additionally, a oil/natural gas well was identified on the Rabbers parcel; however, according to review of the well log, Atwell determined that this well was located to the northeast of the subject site boundary. Further, during review of the historical aerial photographs, no evidence of potential drilling or excavation activities were identified on or near the subject site. Therefore, it is the opinion of the EP that it is unlikely that the drilling activities associated with the subject site natural gas "dry well" and northeastern adjacent oil/gas well have impacted that subject site and should not represent RECs;

- During the site inspection Atwell observed a drinking water well-head located on the southern portion of the subject site, in the area of the former homestead (815 E 48th Street). Atwell recommends that if the well is going to be utilized, the water should be sampled. However, if the well will no longer be utilized, Atwell recommends that the well be properly abandoned per local and state regulations. In addition, based on the age of the former homestead (constructed prior to

10.0 Phase I Findings/Opinions/Conclusions (continued)

10.1 Report Findings and Opinions (continued)

1932), it is likely that the residence utilized a septic system. Septic systems can be recipient to a variety of materials depending on site operations (i.e., manufacturing, automotive repair, etc.). However, based on the residential use of the subject site, it unlikely that previous septic systems would have impacted the subsurface environment. Therefore, it is the opinion of the EP that previous septic systems should not represent an REC. Further, according to assessing records, the subject site utilized natural gas as a heating fuel source. During the site reconnaissance, Atwell did not observe evidence of potential heating oil tanks (historically utilized as a heating source in older properties), and

- Atwell observed minor amounts of construction debris (i.e., concrete, shingles, wood, bricks, etc.) in the area of the former homestead (815 E 48th Street) and along the eastern site boundary. It is the opinion of the EP that considering the inert nature of construction debris, the observed materials should not represent an REC.

10.2 Conclusions

Atwell has performed this Phase I ESA in general conformance with the scope and limitations of ASTM Practice E1527-05 and AAI specifications for the approximately 120-acres of undeveloped agricultural land located along the north side of East 48th Street, Holland/Fillmore Township, Michigan. Any exceptions to, or deletions from, this practice are described in Section 3.4 of this report. During the course of this Phase I ESA, the EP identified a potential REC associated with the subject site. However, it is the opinion of the EP that previous subsurface investigations conducted by Atwell, LLC, have sufficiently evaluated the REC and no additional subsurface investigations are necessary at this time.

As the subject site meets the definition of a "facility" as defined in Part 201 of the NREPA, 1994, PA 451, as amended, Atwell recommends that a BEA and a Section 7A Due Care Plan be prepared for new owners/operators/occupants of the subject site in order to qualify as an innocent landowner and prevent possible exacerbation of the identified contamination.

BLDI Environmental Engineering | *Working for you*

Baseline Environmental Assessment

Conducted Pursuant to Section 20126(1)(c) of 1994 PA 451, Part 201, as Amended

For the Property Located at:

741 Waverly Court
City of Holland, Michigan 49423

Tax Parcel ID:

03-02-03-303-010

Prepared For:

GreenTrust Capital Management, LLC
& 741 Waverly Court, LLC
505 East Central Avenue
Zeeland, Michigan 49464

May 2, 2018

BLDI Project No.: 174428.03

Corporate Office | 150 Fountain Street NE | Grand Rapids, MI 49503 | 616.459.3737
bldi@bldi.com | www.bldi.com

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1.0 INTRODUCTION AND DISCUSSION

This Baseline Environmental Assessment (BEA) for the property located at 741 Waverly Court in the City of Holland, Allegan County, Michigan (the Property) has been prepared to meet the requirements of Section 20126(1)(c) of Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA). The location of the Property is presented in Figure 1 in Appendix A.

A. Owner/Operator Information

Name of the legal entity that formerly **owned and operated** at the Property: GreenTrust Capital Management, LLC

Street Address: 741 Waverly Court
City: City of Holland
State: Michigan
Zip: 49423

Contact Person (Name and Title): Jeremy Fogg, Owner Representative
Telephone: (616) 403-6363
E-Mail: jeremy.fogg@yahoo.com

Name of the legal entity that currently **owns and operates** the Property: 741 Waverly Court, LLC

Street Address: 741 Waverly Court
City: City of Holland
State: Michigan
Zip: 49423

Contact Person (Name and Title): Jeremy Fogg, Owner Representative
Telephone: (616) 403-6363
E-Mail: jeremy.fogg@yahoo.com

B. Intended Use of the Property

On March 21, 2018 GreenTrust Capital Management, LLC purchased the Property and began maintenance and upkeep of the Property.

On April 20, 2018 741 Waverly Court, LLC purchased the Property and began maintenance and upkeep of the Property. 741 Waverly Court, LLC intends to lease the Property for the operation of a machine shop (i.e., fabrication of plastics/steel/stainless steel/other metals) in the Property building.

C. Executive Summary of All Appropriate Inquiry (AAI)

In preparing this BEA, a Phase I Environmental Site Assessment (ESA), under the ASTM Standard Practice E1527-13, was conducted in January 2018 by BLDI, Inc. (BLDI). A copy of the January 2018 BLDI Phase I ESA is presented in Appendix C of this BEA. In addition, Phase II ESA investigative activities were conducted at the Property in March 2018 by BLDI. A copy of the March 2018 BLDI Phase II ESA report is provided in Appendix D. In the professional opinion of BLDI, the 2018 BLDI Phase I and Phase II ESAs constitute all appropriate inquiry with regard to the environmental condition of the Property and were conducted in a manner that is consistent with good commercial and customary practice pursuant to the landowner liability defenses set forth in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Section 20126 of Part 201 of NREPA, as amended.

January 2018 BLDI Phase I ESA

BLDI conducted an ASTM E1527-13 Phase I ESA on behalf of GreenTrust Capital Management, LLC and Lake Michigan Credit Union on January 23, 2018. In addition, BLDI recognizes that, as of May 2, 2018, 741 Waverly Court, LLC is also relying on the contents of the January 2018 BLDI Phase I ESA. The January 2018 BLDI Phase I ESA identified recognized environmental conditions (RECs)[1] as defined by ASTM Standard Practice E-1527-13, which were investigated during February 2018 BLDI Phase II ESA investigative activities. The RECs consisted of:

REC Number 1: The Property has been utilized for industrial (i.e., wood finishing) operations since 1996. These operations have included coating, painting, and finishing operations, with significant quantities of hazardous substances and petroleum products observed to be stored (and formerly used) at the Property. The long-term industrial use of the Property with significant chemical usage is considered to be a REC.

REC Number 2: The potential for impact to migrate to the Property from off-site sources is considered a REC.

May 2010 AKT Peerless Phase I ESA

A Phase I ESA was conducted for the Property by AKT Peerless in May 2010. This Phase I ESA identified no RECs associated with the Property, and no further assessment was recommended at the time. A copy of this report's text and figures is provided in Appendix G of the January 2018 BLDI Phase I ESA provided in Appendix C. A full copy of this report, excluding the original database, may be provided upon request.

Phase II ESA

The Phase II ESA is discussed below in Section F.

[1] "Recognized Environmental Condition" (REC) is defined by ASTM Standard E 1527-13 as: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property:(1) due to any release to the environment; (2) under conditions indicative of a release to the environment; (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

D. Exceptions to or Deletions from the AAI Rule 40 CFR 312 or ASTM E1527-13

This work contains no exceptions to, or deletions from, either the AAI Rule 40 CFR 312 or ASTM Standard E1527-13.

E. Data Gaps

The fact that the first developed use of the Property could not be identified is considered a data failure. The oldest reasonably ascertainable historical use information for the Property that shows actual features of the Property is the 1938 aerial photograph (please refer to Section 5.4.1 of the January 2018 BLDI Phase I ESA). On this aerial photograph the Property is being utilized for agricultural purposes. It is unlikely that the identification of uses of the Property prior to those described by the oldest reasonably ascertainable historical use information (i.e., the 1938 aerial photograph) could result in the discovery of additional RECs. This interpretation is based on the fact that the area of the Property was utilized for agricultural purposes and was not likely used for industrial purposes or for other uses that may have involved the use of hazardous material prior to this time. Therefore, this data failure is not considered a significant data gap and does not influence the integrity of this BEA.

It is considered a limiting condition that BLDI could not observe all exterior portions of the Property at the time of the December 2017 BLDI Property reconnaissance due to the presence of several inches of snow. However, because the long-term industrial use of the Property was already identified as a REC, this limiting condition is not considered a significant data gap and does not influence the integrity of this BEA.

It is considered a limiting condition that BLDI could not observe all areas of all floors of the oil houses in the interior of the Property building at the time of the December 2017 BLDI Property reconnaissance due to the presence of several chemical containers. However, because the long-term industrial use of the Property, including the storage and use of significant quantities of hazardous substances and petroleum products, is already identified as a REC, this limiting condition is not considered a significant data gap and does not influence the integrity of this BEA.

F. Discussion of the Sampling Completed at the Property

March 2018 BLDI Phase II ESA

Purpose and Methods

BLDI conducted Phase II ESA field activities on February 8, 2018 to investigate REC Number 1 identified in the BLDI January 2018 Phase I ESA. The migration exemption[2] was utilized to mitigate REC Number 2; therefore, this REC was not investigated during this Phase II ESA.

[2] The migration exemption under Michigan regulation states that the following persons are not liable "owner or operator of a property onto which contamination has migrated unless that person is responsible for an activity causing the release that is the source of the contamination" (Section 26(4)(c) of Part 201 of NREPA (MCL 324.20126(4)(c))). The owner/operator may have due care/continuing obligations related to such migration.

Details of the performance and results of the February 2018 BLDI Phase II ESA investigation are provided in the March 2018 BLDI Phase II ESA report presented as Appendix D of this BEA.

The following table summarizes the REC investigated in the March 2018 BLDI Phase II ESA, as well as the sample identification and analytical parameters used to investigate the REC.

REC #	Concern	Sample Identification	Analytical Parameters	Sampling Rationale
REC 1	Long-term industrial use of Property with significant chemical usage.	HA-1 (4.5-5) HA-2 (3.5-4) HA-3 (0.5-1) HA-4 (0.5-1) GP-1 (1.5-2) GP-2 (4.5-5) GP-2 (water) GP-3 (4.5-5) GP-3 (water)*	VOCs PNAs MI-10 Metals	Boring locations were selected based on most likely locations of potential releases from an underground storage tank (UST) (GP-2), oil/water separator (OWS) (GP-3), exterior scrap metal storage (HA-4), trench drain in building interior (GP-1), and hazardous chemical storage in building interior (HA-1, HA-2, HA-3).

VOC = Volatile Organic Compound
PNA = Polynuclear Aromatic Hydrocarbon
MI 10 metals = arsenic, barium, cadmium, total chromium, copper, lead, total mercury, selenium, silver, zinc
* Not analyzed for VOCs
Samples collected but not analyzed: HA-2 (0.5-1), HA-3 (4.5-5), HA-4 (4.5-5), GP-1 (1-1.5), GP-1 (9.5-10)

Method of Soil Investigation

BLDI advanced six soil borings at the Property using hand-auger techniques outlined in ASTM publication D4700-91 "Standard Guide for Soil Sampling from the Vadose Zone" and one soil boring using direct-push (Geoprobe®) techniques as outlined in ASTM publication D 6282-98 "Standard Guide for Direct Push Soil Sampling for Environmental Site Characterization".

The soil was assessed using visual, olfactory and electronic methods (Minirae 3000 (10.6eV lamp) photoionization detector (PID)). The soil horizon most indicative of impact using field screening methods was selected for laboratory analysis. If no positive indications of impact were identified throughout the soil boring, the soil horizon associated with the most likely location of a potential release, or from immediately above the water table, was sampled for laboratory analysis.

Observations were recorded in the field at each boring location on soil boring logs (see Appendix A of the January 2018 Phase I ESA). Soil samples were collected following procedures outlined in ASTM publication D4700 "Standard Guide for Soil Sampling from the Vadose Zone". Please refer to Figure 3 for the soil boring locations.

Method of Groundwater Investigation

In soil borings where groundwater was encountered, and as indicated in the scope of work, a temporary 1" polyvinyl chloride (PVC) monitoring well was installed and a 5-foot well screen was placed within the saturated zone. Groundwater was purged using a peristaltic pump until three well casing volumes had been purged. Groundwater samples were collected following

procedures outlined in United States Environmental Protection Agency (USEPA) Operating Procedure SESDPROC-301-R3.

Soil Results

- As shown in Table 1, no target VOCs or PNAs were detected at concentrations above laboratory method reporting limits in the soil samples collected during this investigation.
- Also shown in Table 1, several target metals were detected at concentrations above laboratory method reporting limits in soil samples collected during this investigation. Of these detected metals, arsenic was detected at concentrations exceeding its applicable Part 201 GRCC.

Analytical data obtained from the soil samples collected at the Property is summarized in Table 1, Appendix B.

A scaled Property map showing Property structures, sample locations, sample depths, and detected hazardous substance concentrations (for those hazardous substances that are present at concentrations above their respective GRCC) is presented as Figure 3 of this BEA.

Groundwater Results

- As shown in Table 2, tetrachloroethene was the only VOC detected at a concentration above laboratory method reporting limits in the groundwater samples collected during this investigation. However, tetrachloroethene was not detected at a concentration exceeding its applicable Part 201 GRCC.

- Also shown in Table 2, no target PNAs or metals were detected at concentrations above laboratory method reporting limits in the groundwater samples collected during this investigation.

Analytical data obtained from the groundwater samples collected at the Property is summarized in Table 2, Appendix B.

A scaled Property map showing Property structures, sample locations, sample depths, and detected hazardous substance concentrations (for those hazardous substances that are present at concentrations above their respective GRCC) is presented as Figure 3 of this BEA.

G. General Location of Known Hazardous Substances and/or Petroleum Products

Based on the analytical results obtained from the soil samples collected throughout the investigations of the Property, impacted soil (containing hazardous substances at concentrations in exceedance of Part 201 GRCC) is present beneath the concrete slab in the southeastern portion of the Property building (HA-2) and in the area of the oil water separator along the southwestern exterior of the Property building (GP-3). Based upon inspection of these soil samples during the investigation, the impacted soil is present to depths of at least 4 feet (HA-2) to 5 feet (GP-3)

below the ground surface. The extent of the contamination at the Property has not been defined as of the date of this BEA.

H. Basis for Facility Status

Because arsenic was detected at concentrations exceeding its respective Part 201 GRCC for soil, the Property meets the definition of a "facility" as defined under Part 201 of NREPA (MCL324.20101(1)(s)).

2.0 PROPERTY INFORMATION

A. Legal Description

The legal description of the Property is presented in Appendix B of the January 2018 BLDI Phase I ESA.

B. Property Location Map

A Property location map showing the Property as referenced to nearby roads and major topographical features is presented as Figure 1 (Property Location Map) of this BEA.

C. Scaled Area Map

A scaled area map showing the Property in relation to the surrounding properties and their uses is presented as Figure 2 (Property Layout Map) of this BEA.

D. Scaled Property Map

A scaled Property map showing Property structures, sample locations, sample depths, and detected hazardous substance concentrations (for those hazardous substances that are present at concentrations above their respective GRCC) is presented as Figure 3 (Sample Location Map) of this BEA.

E. Survey Map

A survey map showing the Property boundary, Property tax identification number, and if applicable, parcel boundaries, is presented as Figure 4 (Survey Map) of this BEA.

F. Property Location

The Property is located at:

Street Address:	741 Waverly Court
City:	City of Holland
State:	Michigan
Zip:	49423

G. Spatial Data

Please refer to the BEA Submittal Form for the required spatial data.

3.0 FACILITY STATUS

A. Data Summary Tables

Soil

The maximum concentrations of the hazardous substances detected in the soil as a result of the February 2018 BLDI Phase II ESA activities that exceed their respective Part 201 GRCC are presented in Table 3 in Appendix B of this BEA.

Groundwater

The maximum concentrations of the hazardous substances detected in the groundwater as a result of the February 2018 BLDI Phase II ESA activities that exceed their respective Part 201 GRCC are presented in Table 4 in Appendix B of this BEA.

4.0 AUTHOR AND DATE OF COMPLETION

The collection of data for the evaluation of the site conditions was conducted by Mrs. Emma Zawisza of BLDI, Inc. The interpretation of the data, the technical conclusions, and the preparation of the BEA document were conducted by Mrs. Emma Zawisza and reviewed by Ms. Heidi Vogel and Mrs. Leslie DeBoer, EP of BLDI, Inc. The BEA was conducted on April 12, 2018.

The qualifications of the preparers of this BEA are presented below. More detailed qualifications are presented in Appendix E of this BEA.

Joseph Berlin has over 20 years of experience in design and construction of structures, treatment systems, tank systems, as well as regulatory affairs and business operations. Mr. Berlin holds a Bachelor of Science degree in Civil Engineering from Michigan State University, Master of Science degree in Civil Engineering (Water Resources) from Montana State University and MBA from Grand Valley State University. He is a Registered Professional Engineer in Colorado, Michigan, Ohio and Kentucky and certified forensic engineer (NAFE). Mr. Berlin is a Certified Professional (CP #351) under the Ohio Voluntary Action Program (VAP). Mr. Berlin has conducted and been in responsible charge of environmental due diligence projects, including Phase I/II/III ESAs, for over 20 years. Mr. Berlin has managed and conducted numerous projects in Michigan, Ohio, Indiana, Kentucky, Illinois, Iowa, Texas, New York and Arkansas. Mr. Berlin has received training provided by ASTM in the conduct of Phase I ESA, Environmental Transaction Screen, Phase II ESA and Risk-Based Corrective Action. In addition, Mr. Berlin regularly works with lenders on environmental risk management. Mr. Berlin has served as an expert witness nationally in litigation involving environmental contamination, sampling techniques and release mechanism documentation. Based on his education, experience

and training, Mr. Berlin meets the criteria for an Environmental Professional (EP) set forth in USEPA's "all appropriate inquiry rule."

Leslie DeBoer holds a Bachelor of Science degree in Environmental Biology from Taylor University and a Master of Science degree in Environmental Science from Taylor University. She has performed a variety of sampling techniques in soil as well as surface water and groundwater systems. Mrs. DeBoer has conducted and prepared Phase I and Phase II Environmental Site Assessments, Baseline Environmental Assessments, and Section 7a Due Care Plans. Mrs. DeBoer has also conducted investigations at leaking underground storage tank (LUST) sites. She has completed the OSHA 40-Hour HAZWOPER training course, the annual 8-Hour HAZWOPER refresher courses, is a licensed Asbestos Building Inspector, and is a certified lead-based paint inspector. Mrs. DeBoer has over five years of experience conducting Phase I and Phase II ESAs, Baseline Environmental Assessments (BEAs), Due Care/Continuing Obligations, UST removals/investigation and remediation. Based on her education, experience and training, Mrs. DeBoer meets the criteria for an Environmental Professional (EP) set forth in USEPA's "all appropriate inquiry rule."

Heidi Vogel holds a Master of Science degree in Geology and a Bachelor of Science degree in Environmental Geology from Ohio University. She is skilled in a variety of sampling techniques in soil, surface water, and groundwater systems. Ms. Vogel has completed training in the ASTM Environmental Due Diligence Process (ASTM E1527-13), Vapor Encroachment Screening (ASTM E-2600), OSHA 40-Hour and annual 8-Hour HAZWOPER, and is a licensed Asbestos Building Inspector. Ms. Vogel has over four years of experience conducting environmental Phase I and II Environmental Site Assessments, Baseline Environmental Assessments, Section 7A Due Care/Continuing Obligations work, and leaking underground storage tank (LUST) investigations at sites throughout Michigan, Indiana, Ohio, and Pennsylvania.

Emma Zawisza holds a Master of Science degree in Industrial Archaeology from Michigan Technological University and a Bachelor of Arts degree in History from Michigan Technological University. She has received training in a variety of sampling techniques in soil as well as groundwater systems. Mrs. Zawisza has conducted numerous Phase I and Phase II Environmental Site Assessments, Baseline Environmental Assessments, and Section 7a Due Care/Continuing Obligations. She has completed the coursework provided by ASTM related to Phase I Environmental Assessments (ESAs) (ASTM E1257). Additionally, Mrs. Zawisza has completed the OSHA 40-Hour, the annual 8-Hour HAZWOPER refresher course, and is a licensed Asbestos Building Inspector.

The authors may be contacted at:

BLDI, Inc.
150 Fountain Street NE
Grand Rapids, MI 49503
(616) 459-3737

5.0 AAI OR ASTM E1527-13 REPORT

Copies of the ASTM E1527-13 January 2018 BLDI Phase I ESA report (database not included per MDEQ guidance) and the complete March 2018 BLDI Phase II ESA report for this facility are presented in Appendix C and D, respectively, of this BEA. Hazardous substances listed under Part 201 and Part 213 of Michigan's NREPA were included as part of the January 2018 BLDI Phase I ESA and the all appropriate inquiry process for the Property.

6.0 REFERENCES

Materials consulted during the preparation of this BEA include the following:

- ASTM International, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation: E-1527-13
- ASTM International, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, ASTM Designation: E-1903-11
- Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund), as amended by Superfund Amendments and Reauthorization Act of 1986 (SARA) and Small Business Liability Relief and Brownfields Revitalization Act of 2002 (Brownfield Amendments)
- MDEQ, Remediation and Redevelopment Division (RRD) Cleanup Criteria for Response Activity Rules, December 30, 2013
- Part 201 of Michigan's NREPA and associated rules and guidance
- Phase I Environmental Site Assessment Report for 741 Waverly Court, AKT Peerless, May 13, 2010
- Phase I Environmental Site Assessment Report for 741 Waverly Court, BLDI, Inc., January 23, 2018
- Phase II Environmental Site Assessment Report for 741 Waverly Court, BLDI, Inc., March 12, 2018

7.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

Prepared by: Emma Zawisza
Project Scientist

Reviewed by: Heidi Vogel
Assistant Project Manager

Reviewed by: Leslie DeBoer, EP
Project Manager

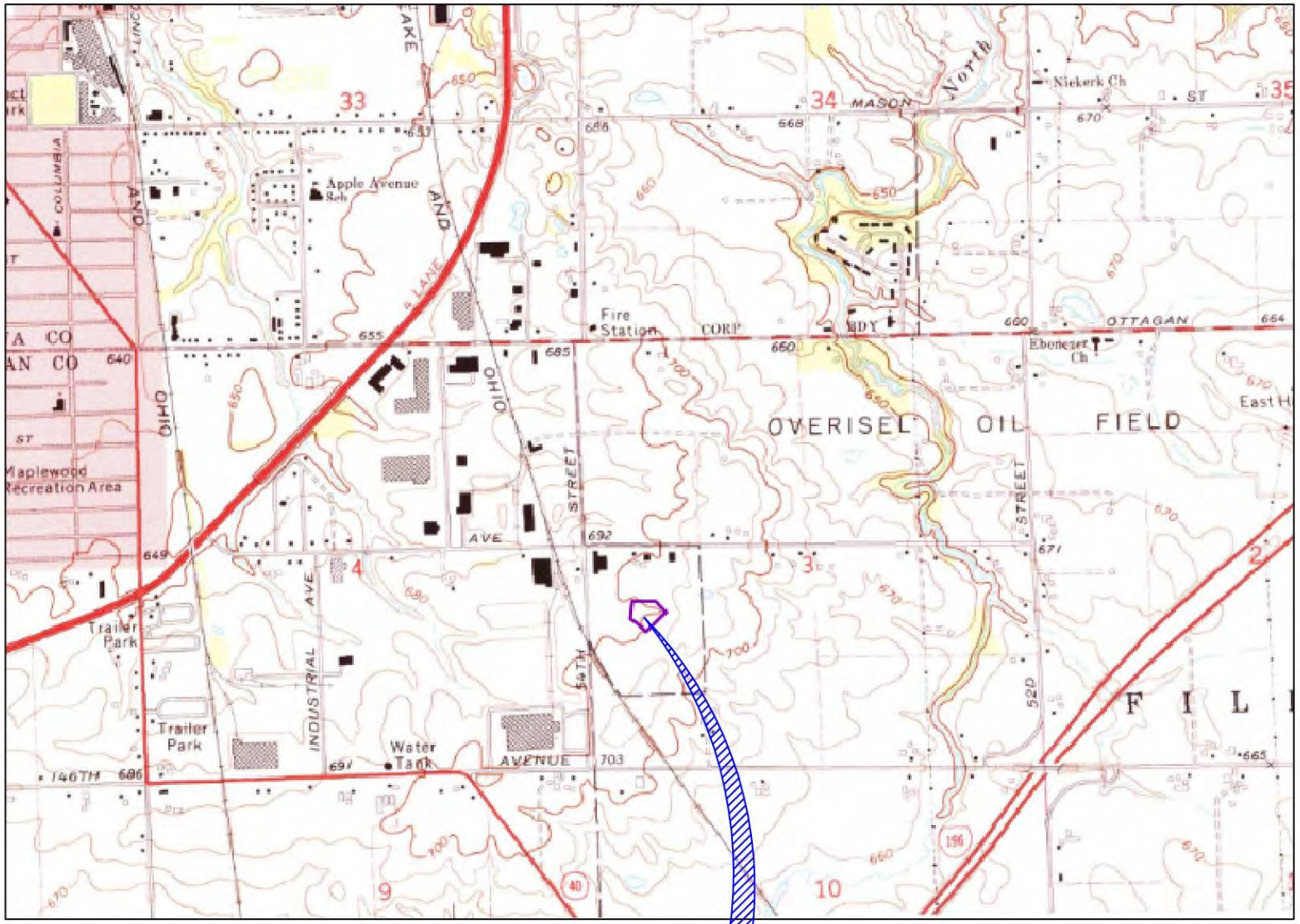
APPENDIX A

Figures

BLDI

Baseline Environmental Assessment

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Environmental Engineering





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FIGURE 1
PROPERTY LOCATION MAP

741 Waverly Court
Holland, Michigan

December 2017 174428

NOT A LEGAL SURVEY

BLDI
Environmental Engineering



Legend

1. Haggerty Logistics Offices
2. Haggerty Logistics
3. School Bus Parking
4. LS Mold
5. ROL ERGO
6. Global Concepts
V. Vacant

— Property Boundaries

CR

0 300 600

APPROXIMATE SCALE IN FEET

FIGURE 2
PROPERTY LAYOUT MAP

741 Waverly Court
Holland, Michigan

December 2017

174428

NOT A LEGAL SURVEY

BLDI
Environmental Engineering



HA-4 (0.5-1) Soil/0.5'-1.0' 2-8-18/BLDI	
As	3,800
Ba	23,000
Cd	< 50
Cr	4,200
Cu	5,600
Pb	5,500
Se	< 200
Zn	22,000

GP-1 (1.5-2) Soil/1.5'-2.0' 2-8-18/BLDI	
As	5,300
Ba	43,000
Cd	120
Cr	9,300
Cu	9,100
Pb	8,400
Se	< 200
Zn	45,000

GP-3 (4.5-5) Soil/4.5'-5.0' 2-8-18/BLDI	
As	**9,300**
Ba	40,000
Cd	53
Cr	8,400
Cu	7,700
Pb	7,600
Se	< 200
Zn	25,000

GP-3 Groundwater/0'-5' 2-8-18/BLDI	
TCE	2.7

HA-3 (0.5-1) Soil/0.5'-1.0' 2-8-18/BLDI	
As	1,200
Ba	7,700
Cd	< 50
Cr	1,800
Cu	2,200
Pb	1,700
Se	< 200
Zn	8,600

HA-2 (3.5-4) Soil/3.5'-4.0' 2-8-18/BLDI	
As	**7,600**
Ba	51,000
Cd	< 50
Cr	14,000
Cu	12,000
Pb	11,000
Se	230
Zn	46,000

HA-1 (4.5-5) Soil/4.5'-5.0' 2-8-18/BLDI	
As	1,300
Ba	7,100
Cd	< 50
Cr	1,800
Cu	1,700
Pb	2,100
Se	< 200
Zn	6,800

GP-2 (4.5-5) Soil/4.5'-5.0' 2-8-18/BLDI	
As	3,500
Ba	30,000
Cd	< 50
Cr	5,300
Cu	6,000
Pb	4,100
Se	< 200
Zn	24,000

GP-2 Groundwater/0'-5' 2-8-18/BLDI	
TCE	NA

Legend

- Sample Locations
- Property Boundaries
- Interior Chemical Storage
- Interior Trench Drain

Sample Location
Sample Media/Sample Depth
Sample Date/Collected By
Analytical Results (ug/kg OR ug/L)
Bold Values Exceed Applicable Criteria

As	Arsenic
Ba	Barium
Cd	Cadmium
Cr	Chromium, Total
Cu	Copper
Pb	Lead
Se	Selenium
TCE	Tetrachloroethylene
Zn	Zinc
NA	Not Applicable

0 60 120
APPROXIMATE SCALE IN FEET

NOT A LEGAL SURVEY

CR

FIGURE 3
SAMPLE LOCATION MAP

741 Waverly Court
Holland, Michigan

March 2018 174428

BLDI
Environmental Engineering



CR

0 80 160

APPROXIMATE SCALE IN FEET

NOT A LEGAL SURVEY

FIGURE 4
SURVEY MAP

741 Waverly Court
Holland, Michigan

March 2018

174428

APPENDIX B

Summary of Analytical Results Tables

BLDI

Baseline Environmental Assessment

Table 1

Summary of Analytical Results for Subsurface Soil Sampling
741 Waverly Court
Holland, MI 49423

Detected Analyte	Sampling Location	Analytical Results (ug/kg)				Residential								
		HA-1 (4.5-5)	HA-2 (3.5-4))	HA-3 (0.5-1)	HA-4 (0.5-1)	Statewide Default Background Levels (ug/kg)‡	Residential Drinking Water Protection Criteria (ug/kg)*	Groundwater Surface Water Interface Protection Criteria (ug/kg)*	Soil Volatilization to Indoor Air Inhalation Criteria (ug/kg)*	Infinite Source Volatile Soil Inhalation Criteria (VSIC) (ug/kg)*	Finite VSIC for 5 Meter Source Thickness (ug/kg)*	Finite VSIC for 2 Meter Source Thickness (ug/kg)*	Particulate Soil Inhalation Criteria (ug/kg)*	Direct Contact Criteria (ug/kg)*
	Sampling Depth (ft)	(4.5' - 5')	(3.5' - 4')	(0.5' - 1')	(0.5' - 1')									
	Sample Date	02/08/18	02/08/18	02/08/18	02/08/18									
Volatiles (EPA 8260B)														
No target VOCs were detected in the soil samples collected														
Semivolatiles, PNAs (EPA 8270C)														
No target PNAs were detected in the soil samples collected														
Metals (EPA 6020A)														
Arsenic (B)		**1,300**	**7,600**	**1,200**	**3,800**	**5,800**	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	7,600
Barium (B)		**7,100**	**51,000**	**7,700**	**23,000**	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7
Cadmium (B)		<50	<50	<50	<50	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5
Chromium, Total (H)		**1,800**	**14,000**	**1,800**	**4,200**	18,000 (total)	30,000	3,300	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6
Copper (B)		**1,700**	**12,000**	**2,200**	**5,600**	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7
Lead (B)		**2,100**	**11,000**	**1,700**	**5,500**	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5
Selenium (B)		<200	**230**	<200	<200	410	4,000	400	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6
Zinc (B)		**6,800**	**46,000**	**8,600**	**22,000**	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8

Note: Table only includes detected analytes; please refer to the laboratory analytical report for the full list of analytes.

Shaded values exceed applicable criteria

Refer to the attached MDEQ document "Footnotes for Generic Cleanup Criteria Tables" for explanation of footnotes included within the table.

* MDEQ, RRD Operational Memorandum No. 1, December 30, 2013

‡ Value obtained from the MDEQ Michigan Background Soil Survey dated 2005, updated 2015

Table 1
Summary of Analytical Results for Subsurface Soil Sampling
741 Waverly Court
Holland, MI 49423

Detected Analyte	Sampling Location	GP-1 (1.5-2)	GP-2 (4.5-5)	GP-3 (4.5-5)	Residential								
	Sampling Depth (ft)	(1.5' - 2')	(4.5' - 5')	(4.5' - 5')	Statewide Default Background Levels (ug/kg)‡	Residential Drinking Water Protection Criteria (ug/kg)*	Groundwater Surface Water Interface Protection Criteria (ug/kg)*	Soil Volatilization to Indoor Air Inhalation Criteria (ug/kg)*	Infinite Source Volatile Soil Inhalation Criteria (VSIC) (ug/kg)*	Finite VSIC for 5 Meter Source Thickness (ug/kg)*	Finite VSIC for 2 Meter Source Thickness (ug/kg)*	Particulate Soil Inhalation Criteria (ug/kg)*	Direct Contact Criteria (ug/kg)*
	Sample Date	02/08/18	02/08/18	02/08/18									
Volatiles (EPA 8260B)													
No target VOCs were detected in the soil samples collected													
Semivolatiles, PNAs (EPA 8270C)													
No target PNAs were detected in the soil samples collected													
Metals (EPA 6020A)													
Arsenic (B)		**5,300**	**3,500**	**9,300**	**5,800**	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	**7,600**
Barium (B)		**43,000**	**30,000**	**40,000**	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7
Cadmium (B)		**120**	<50	**53**	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5
Chromium, Total (H)		**9,300**	**5,300**	**8,400**	18,000 (total)	30,000	3,300	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6
Copper (B)		**9,100**	**6,000**	**7,700**	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7
Lead (B)		**8,400**	**4,100**	**7,600**	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5
Selenium (B)		<200	<200	<200	410	4,000	400	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6
Zinc (B)		**45,000**	**24,000**	**25,000**	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8

Note: Table only includes detected analytes; please refer to the laboratory analytical report for the full list of analytes.
Shaded values exceed applicable criteria
Refer to the attached MDEQ document "Footnotes for Generic Cleanup Criteria Tables" for explanation of footnotes included within the table.
* MDEQ, RRD Operational Memorandum No. 1, December 30, 2013
‡ Value obtained from the MDEQ Michigan Background Soil Survey dated 2005, updated 2015

Table 2

Summary of Analytical Results for Groundwater Sampling
741 Waverly Court
Holland, MI 49423

Detected Analyte	Sampling Location	Analytical Results (ug/l)		Residential Drinking Water Criteria (ug/L)*	Nonresidential Drinking Water Criteria (ug/L)*	Groundwater Surface Water Interface Criteria (ug/L)*	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria (ug/L)*	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria (ug/L)*	Water Solubility (ug/L)*	Flammability and Explosivity Screening Level (ug/L)*
	Sampling Location	GP-2 (Water)	GP-3 (Water)							
	Sampling Depth (ft)	0-5	0-5							
	Sample Date	02/08/18	02/08/18							
Volatiles (EPA 8260B)										
Tetrachloroethylene		NA	2.7	5.0 (A)	5.0 (A)	60 (X)	25,000	1.7E+5	2.0E+5	ID
Semivolatiles, PNAs (EPA 8270C)										
No target PNAs were detected in the groundwater samples collected										
Metals (EPA 6020A)										
No target metals were detected in the groundwater samples collected										

Note: Table only includes detected analytes; please refer to the laboratory analytical report for the full list of analytes.

Shaded values exceed applicable criteria

NA - Not Applicable

Refer to the attached MDEQ document "Footnotes for Generic Cleanup Criteria Tables" for explanation of footnotes included within the table.

* MDEQ, RRD Operational Memorandum No. 1, December 30, 2013

Table 3

Maximum Concentrations of Detected Analytes in Subsurface Soil Samples
741 Waverly Court
Holland, MI 49423

Detected Analyte	Chemical Abstract Number	Maximum Detected Concentration			Residential								
		Concentration (µg/kg)	Sample Location & Depth (ft)	Sample Date	Statewide Default Background Levels (ug/kg)‡	Residential Drinking Water Protection Criteria (ug/kg)*	Groundwater Surface Water Interface Protection Criteria (ug/kg)*	Soil Volatilization to Indoor Air Inhalation Criteria (ug/kg)*	Infinite Source Volatile Soil Inhalation Criteria (VSIC) (ug/kg)*	Finite VSIC for 5 Meter Source Thickness (ug/kg)*	Finite VSIC for 2 Meter Source Thickness (ug/kg)*	Particulate Soil Inhalation Criteria (ug/kg)*	Direct Contact Criteria (ug/kg)*
Volatiles (EPA 8260B)													
No target VOCs were detected in the soil samples collected													
Semivolatiles, PNAs (EPA 8270C)													
No target PNAs were detected in the soil samples collected													
Metals (EPA 6020A)													
Arsenic	7440382	**9,300**	**GP-3 (4.5-5)**	**2/8/2018**	**5,800**	**4,600**	**4,600**	NLV	NLV	NLV	NLV	7.2E+5	**7,600**
Barium (B)	7440393	**51,000**	**HA-2 (3.5-4)**	**2/8/2018**	75,000	1.3E+6	(G)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7
Cadmium (B)	7440439	**120**	**GP-1 (1.5-2)**	**2/8/2018**	1,200	6,000	(G,X)	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5
Chromium, Total (H)	7440473	**14,000**	**HA-2 (3.5-4)**	**2/8/2018**	18,000 (total)	30,000	3,300	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6
Copper (B)	7440508	**12,000**	**HA-2 (3.5-4)**	**2/8/2018**	32,000	5.8E+6	(G)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7
Lead (B)	7439921	**11,000**	**HA-2 (3.5-4)**	**2/8/2018**	21,000	7.0E+5	(G,X)	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5
Selenium (B)	7782492	**230**	**HA-2 (3.5-4)**	**2/8/2018**	410	4,000	400	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6
Zinc (B)	7440666	**46,000**	**HA-2 (3.5-4)**	**2/8/2018**	47,000	2.4E+6	(G)	NLV	NLV	NLV	NLV	ID	1.7E+8

Table 4

Maximum Concentrations of Detected Analytes in Groundwater Samples
741 Waverly Court
Holland, MI 49423

Detected Analyte	Chemical Abstract Number	Maximum Detected Concentration			Residential Drinking Water Criteria (ug/L)*	Nonresidential Drinking Water Criteria (ug/L)*	Groundwater Surface Water Interface Criteria (ug/L)*	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria (ug/L)*	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria (ug/L)*	Water Solubility (ug/L)*	Flammability and Explosivity Screening Level (ug/L)*
		Concentration (ug/kg)	Sample Location & Depth (ft.)	Sample Date							
Volatiles (EPA 8260B)											
Tetrachloroethylene	127184	**2.7**	GP-3 (0-5)	2/8/2018	5.0 (A)	5.0 (A)	60 (X)	25,000	1.7E+5	2.0E+5	ID
Semivolatiles, PNAs (EPA 8270C)											
No target PNAs were detected in the groundwater samples collected											
Metals (EPA 6020A)											
No target metals were detected in the groundwater samples collected											

APPENDIX F

Aerial Photographs

LG Energy Solutions Expansion

875 and 901 E 48th Street

Holland, MI 49423

Inquiry Number: 6857396.8

February 14, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

02/14/22

Site Name:

LG Energy Solutions Expansio
875 and 901 E 48th Street
Holland, MI 49423
EDR Inquiry # 6857396.8

Client Name:

Environmental Consulting Solutions, LLC
523 W. Sunnybrook Drive
Royal Oak, MI 48073
Contact: Julie Pratt

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=625'	Flight Year: 2016	USDA/NAIP
2012	1"=625'	Flight Year: 2012	USDA/NAIP
2009	1"=625'	Flight Year: 2009	USDA/NAIP
2006	1"=625'	Flight Year: 2006	USDA/NAIP
1997	1"=625'	Acquisition Date: May 04, 1997	USGS/DOQQ
1986	1"=625'	Flight Date: June 03, 1986	USDA
1981	1"=625'	Flight Date: May 03, 1981	USDA
1975	1"=625'	Flight Date: May 01, 1975	USGS
1967	1"=625'	Flight Date: September 25, 1967	USDA
1962	1"=625'	Flight Date: June 13, 1962	USDA
1955	1"=625'	Flight Date: October 01, 1955	USDA
1947	1"=625'	Flight Date: October 14, 1947	USGS
1938	1"=625'	Flight Date: August 22, 1938	USDA

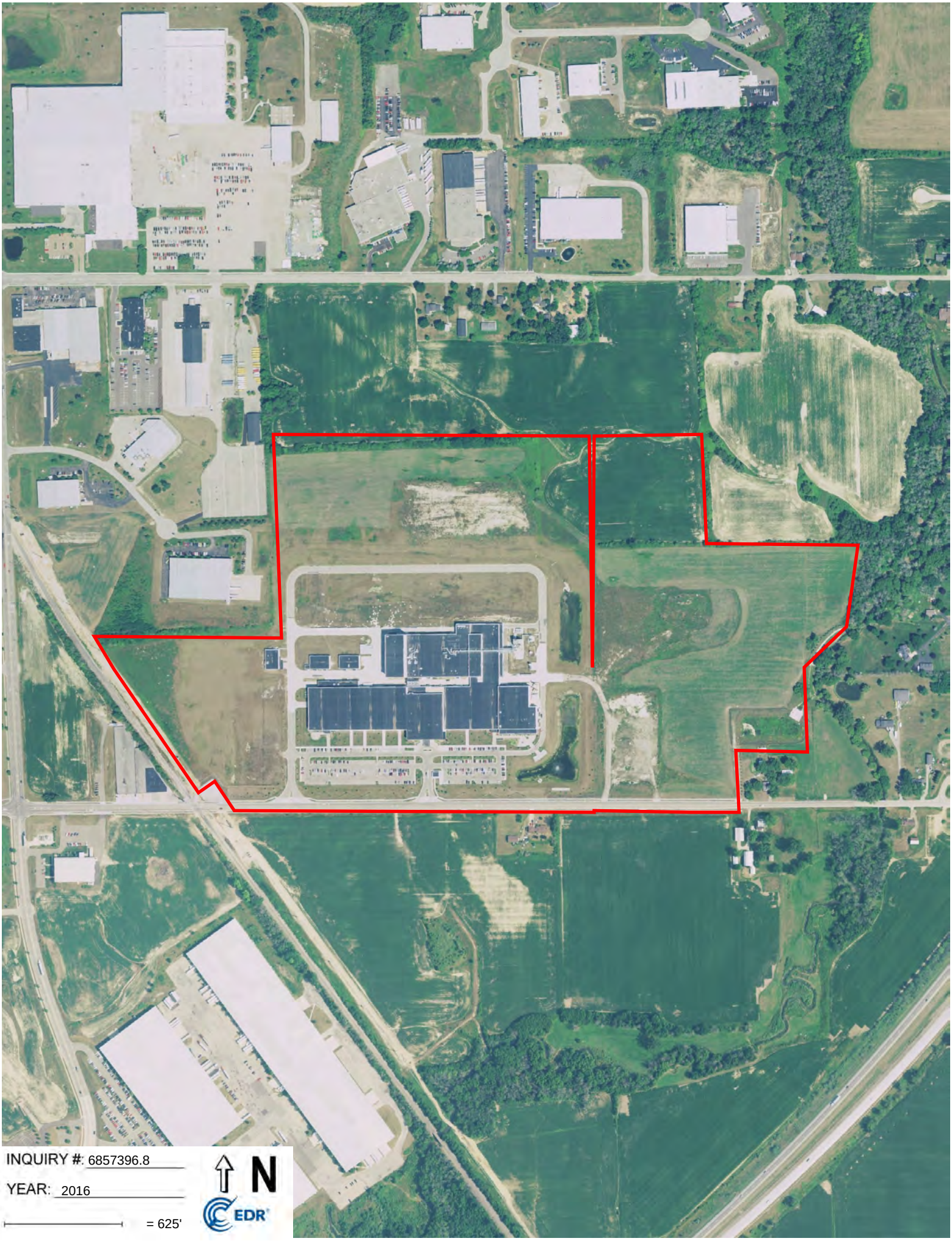
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

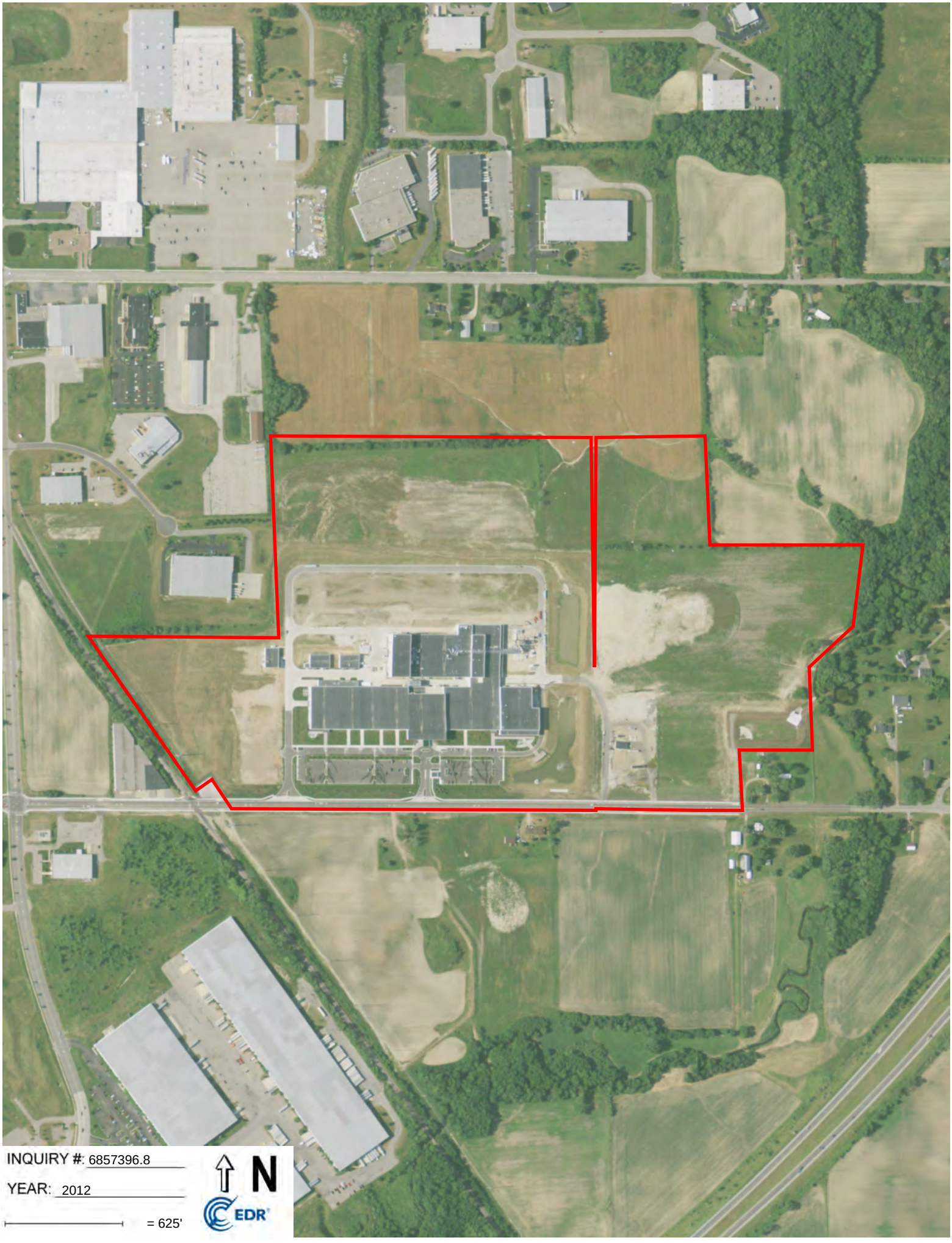
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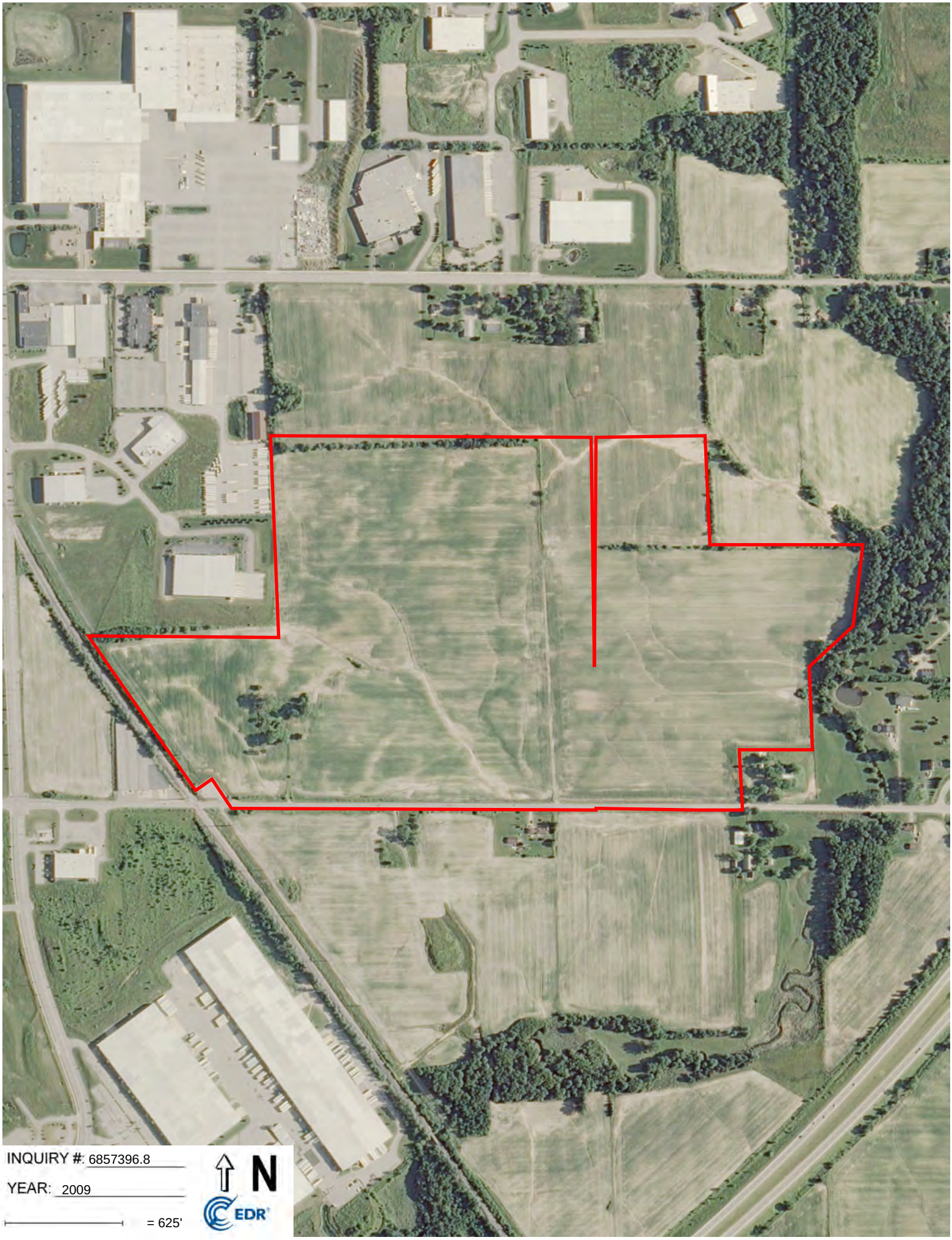
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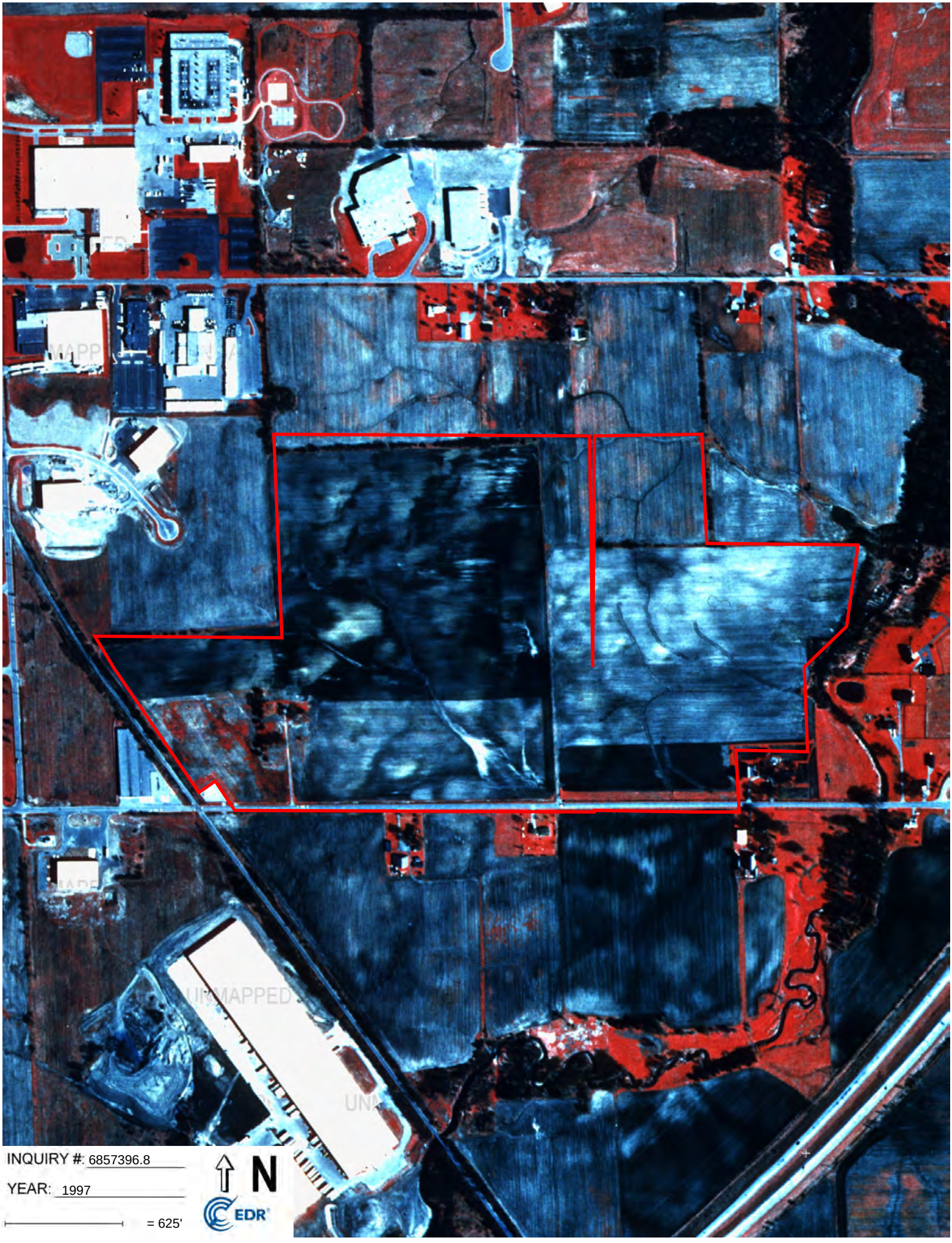
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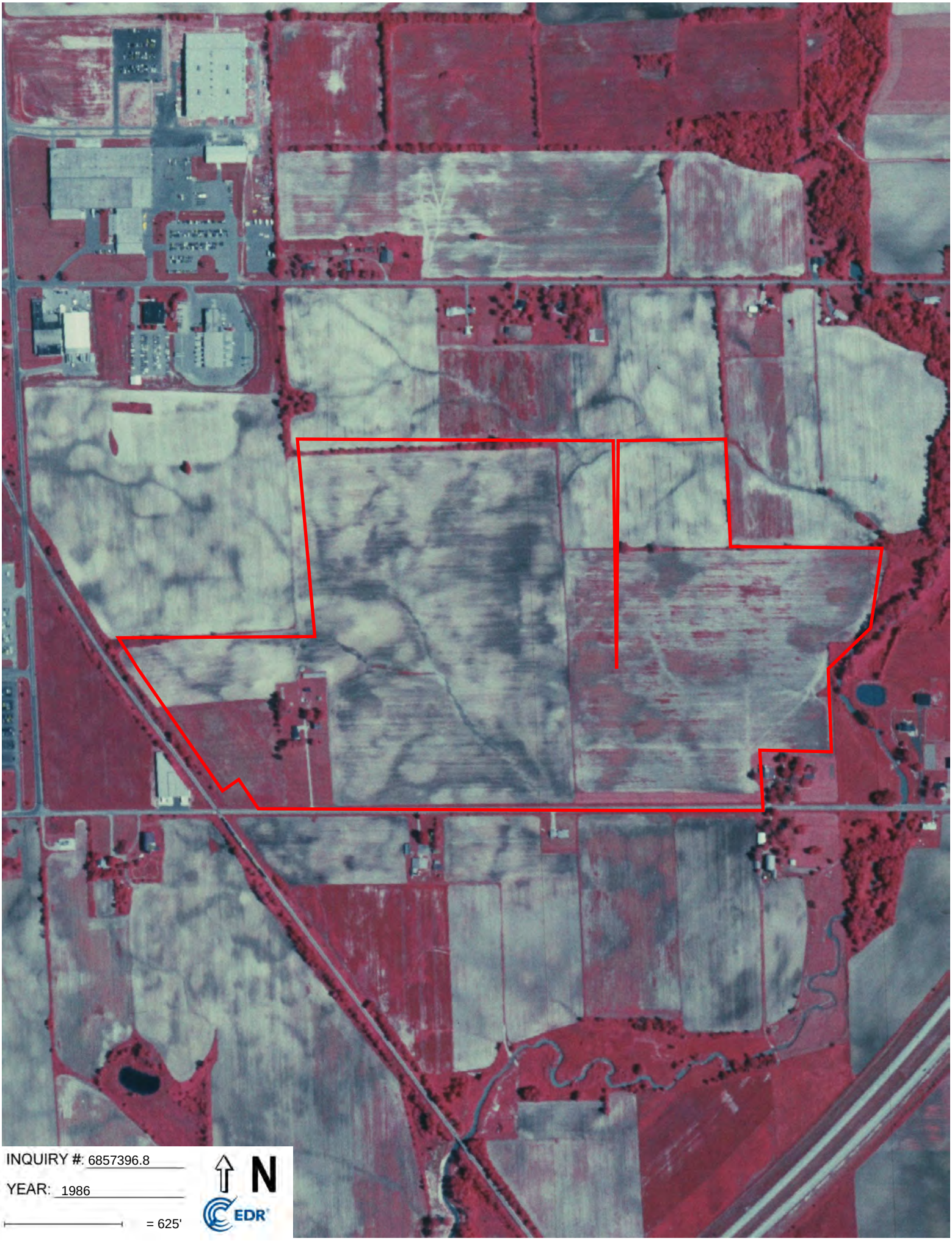

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EDR


INQUIRY #: 6857396.8
YEAR: 2012
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EDR


INQUIRY #: 6857396.8
YEAR: 2009
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EDR

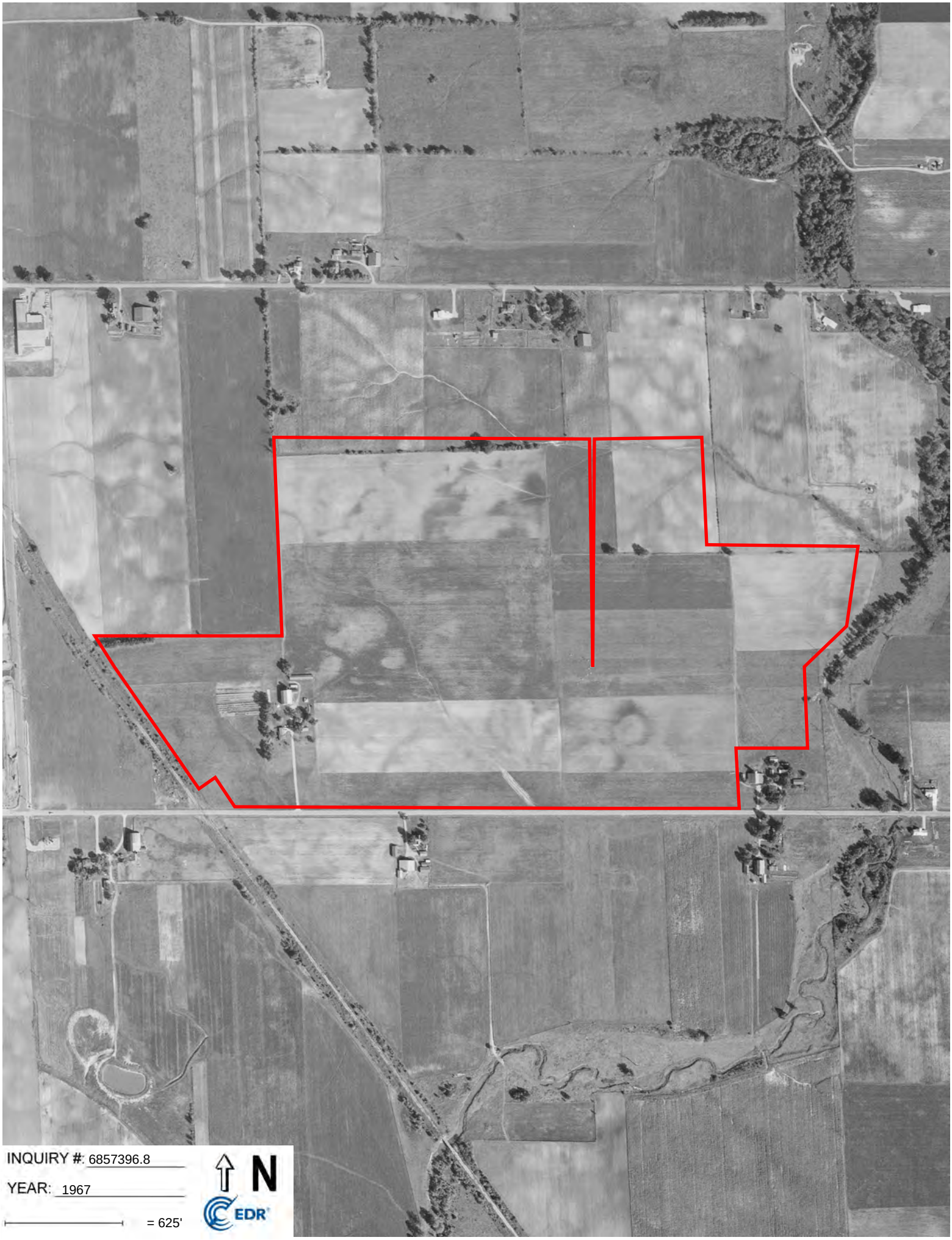

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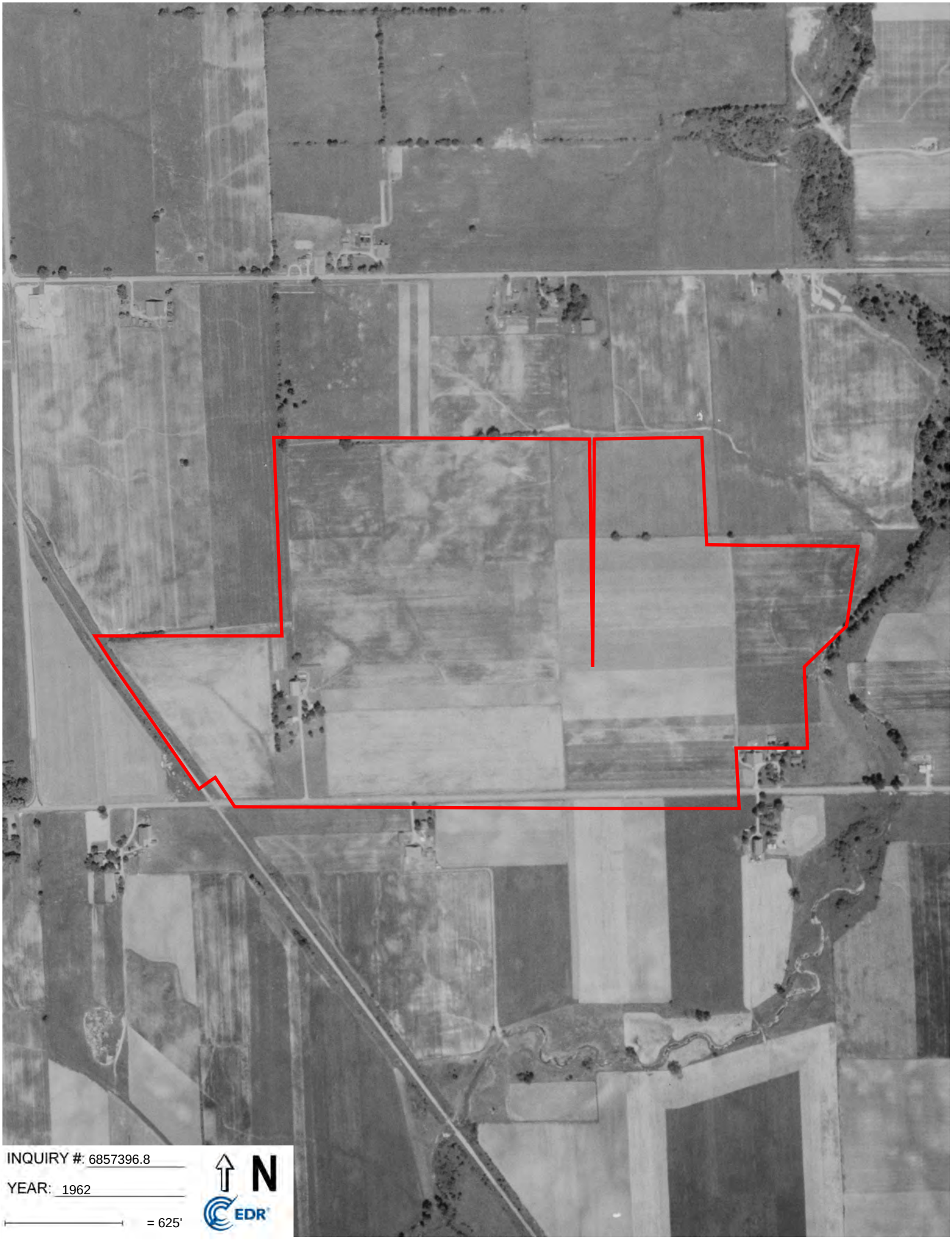

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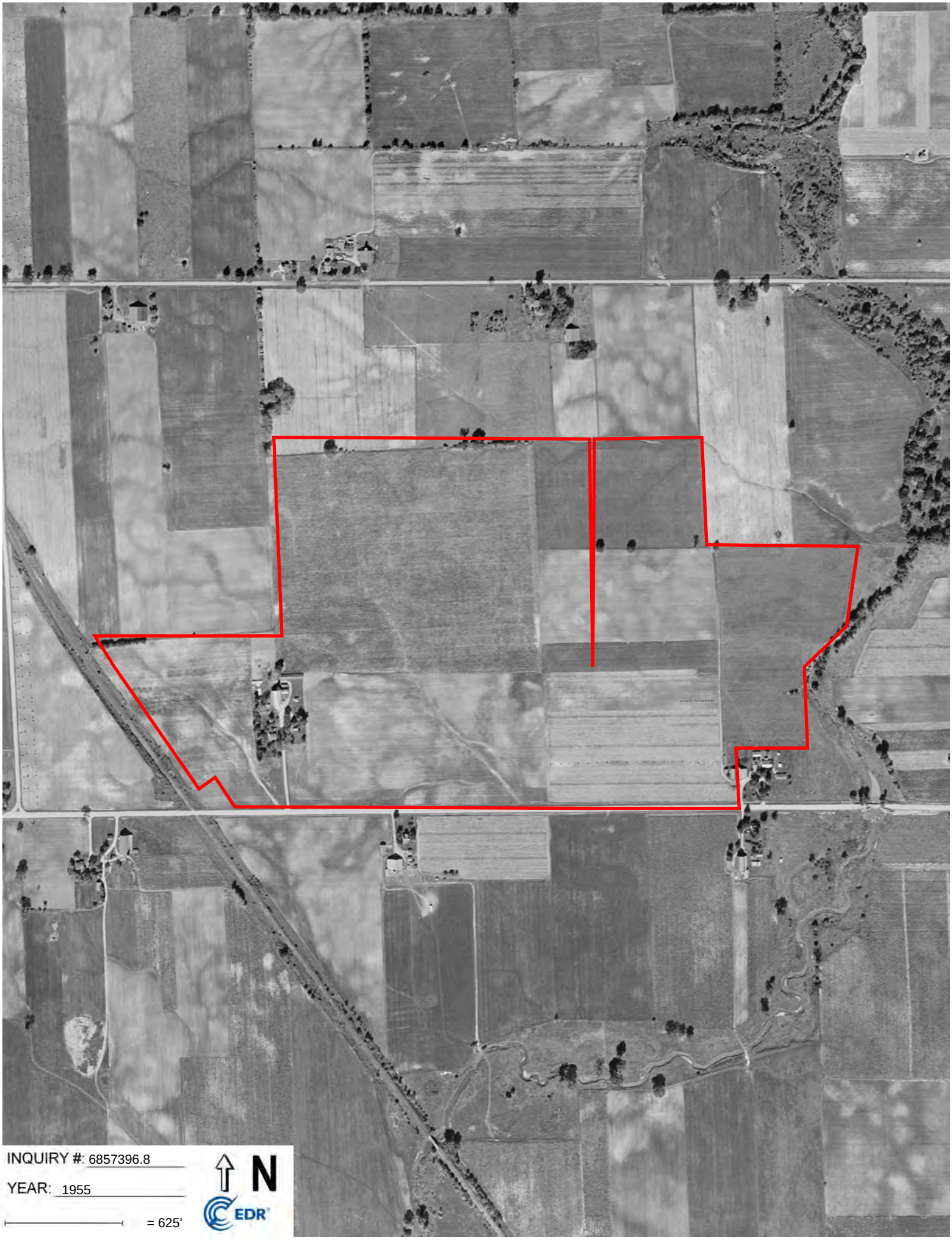

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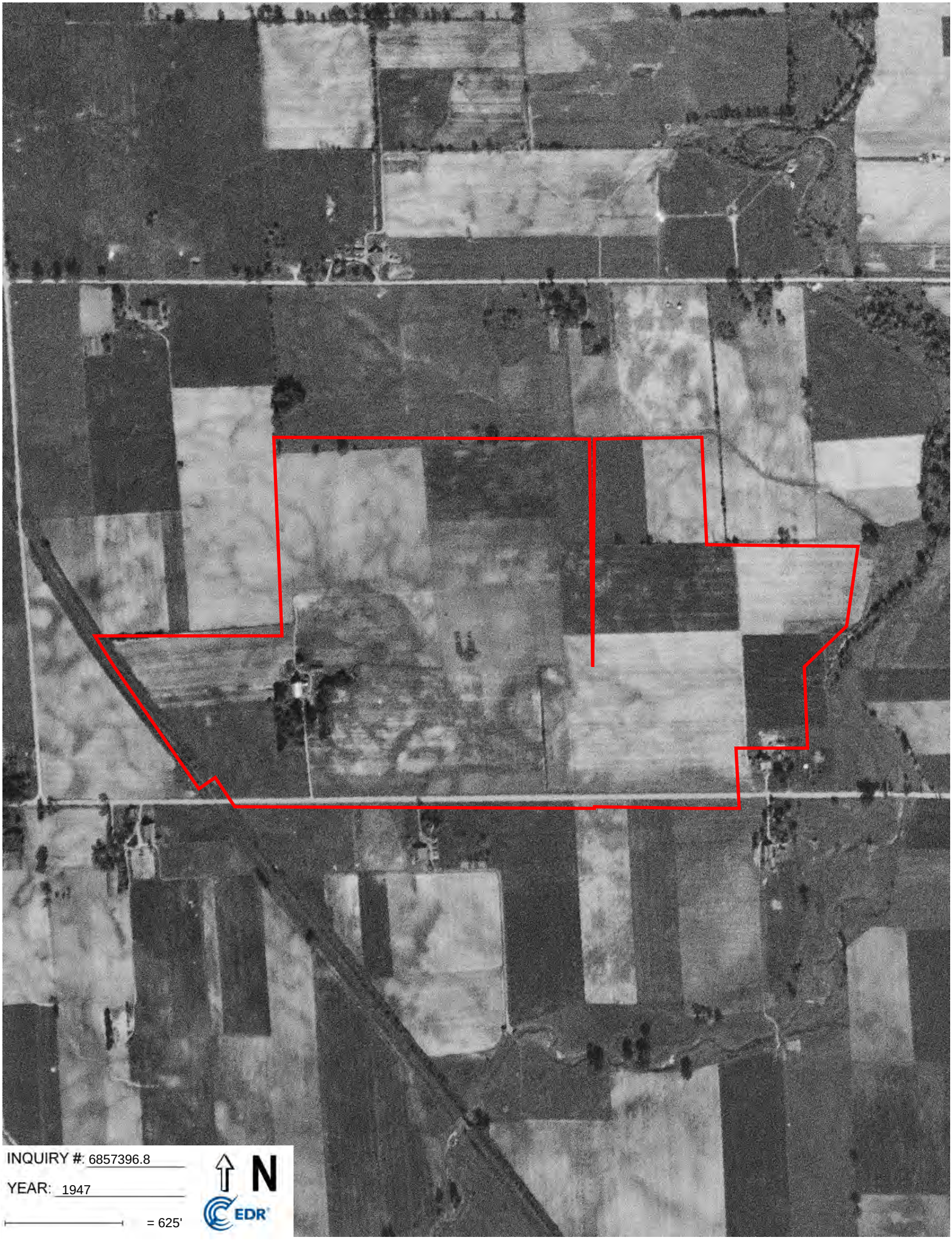

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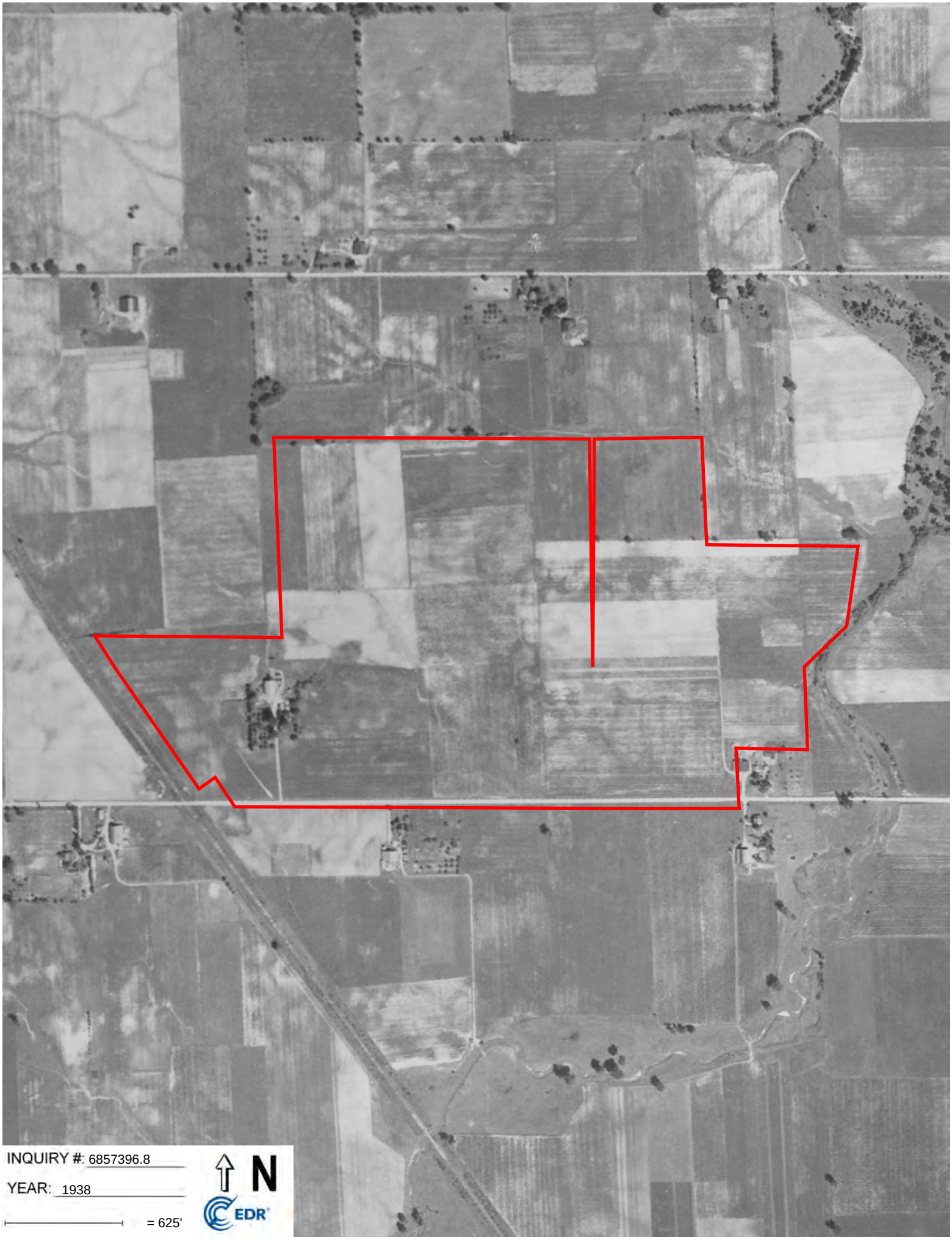

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EDR


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YEAR: 1967
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N
EDR


INQUIRY #: 6857396.8
YEAR: 1962
= 625'
N
EDR


INQUIRY #: 6857396.8
YEAR: 1955
= 625'
N
EDR


INQUIRY #: 6857396.8
YEAR: 1947
= 625'
N
EDR



INQUIRY #: 6857396.8

YEAR: 1938

= 625'

N

EDR

APPENDIX G
Historical Topographic Maps

LG Energy Solutions Expansion
875 and 901 E 48th Street
Holland, MI 49423

Inquiry Number: 6857396.4
February 11, 2022

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

02/11/22

Site Name:

LG Energy Solutions Expansio
875 and 901 E 48th Street
Holland, MI 49423
EDR Inquiry # 6857396.4

Client Name:

Environmental Consulting Solutions, LLC
523 W. Sunnybrook Drive
Royal Oak, MI 48073
Contact: Julie Pratt

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Search Results:

P.O.# NA
Project: A118-0001

Coordinates:

Latitude:	42.756705 42° 45' 24" North
Longitude:	-86.068367 -86° 4' 6" West
UTM Zone:	Zone 16 North
UTM X Meters:	576235.06
UTM Y Meters:	4734218.67
Elevation:	678.74' above sea level

Maps Provided:

2019
2017
2014
1980, 1981
1972
1931, 1932
1928, 1929

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2019 Source Sheets



Holland East
2019
7.5-minute, 24000



Hamilton West
2019
7.5-minute, 24000

2017 Source Sheets



Holland East
2017
7.5-minute, 24000



Hamilton West
2017
7.5-minute, 24000

2014 Source Sheets



Holland East
2014
7.5-minute, 24000



Hamilton West
2014
7.5-minute, 24000

1980, 1981 Source Sheets



Holland East
1980
7.5-minute, 24000
Aerial Photo Revised 1969



Hamilton West
1981
7.5-minute, 24000
Aerial Photo Revised 1976

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1972 Source Sheets



Holland East
1972
7.5-minute, 24000
Aerial Photo Revised 1969

1931, 1932 Source Sheets



Fennville
1931
15-minute, 62500



Holland
1932
15-minute, 62500

1928, 1929 Source Sheets



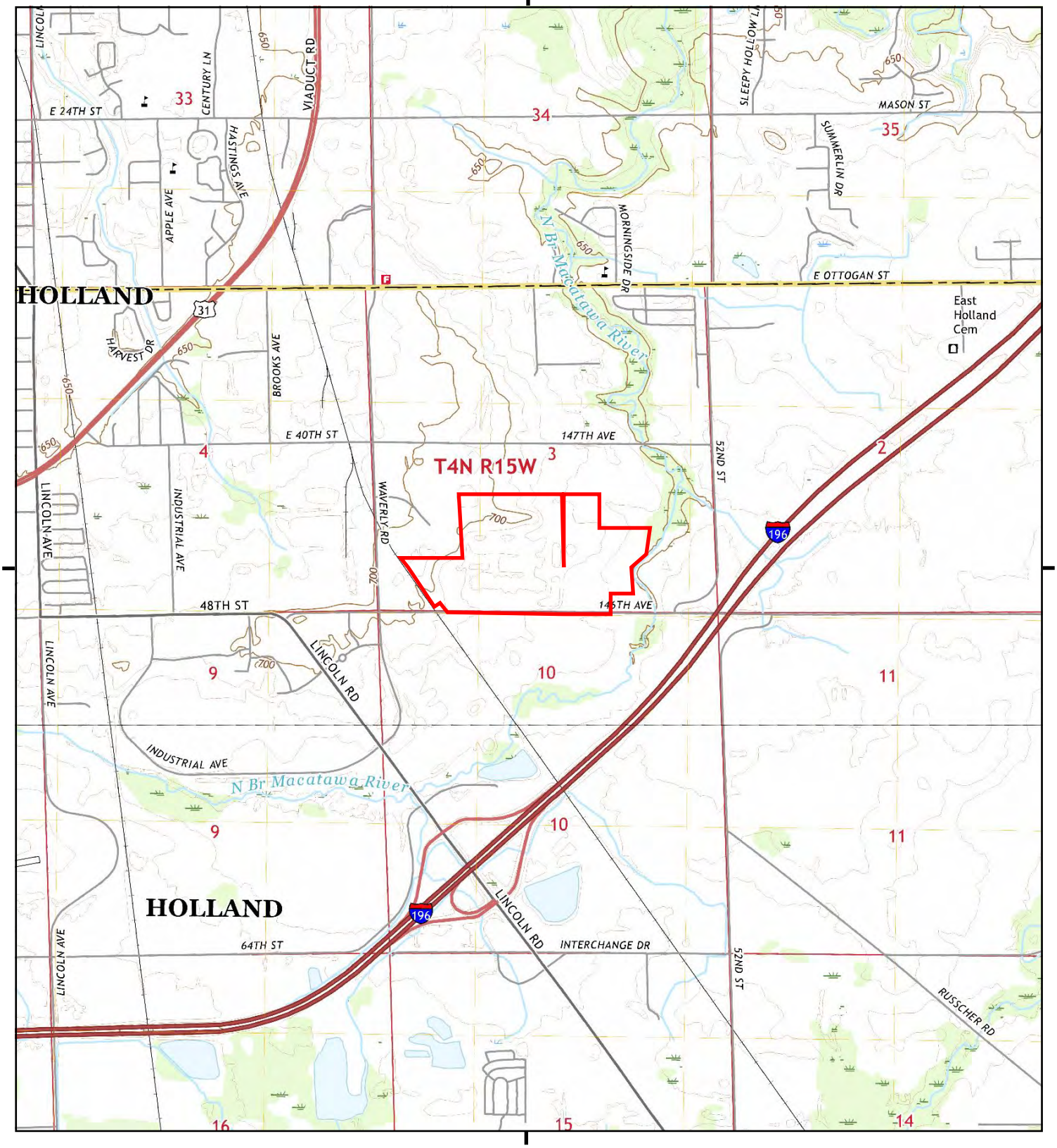
Fennville
1928
15-minute, 62500



Holland
1929
15-minute, 62500

Historical Topo Map

2019



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

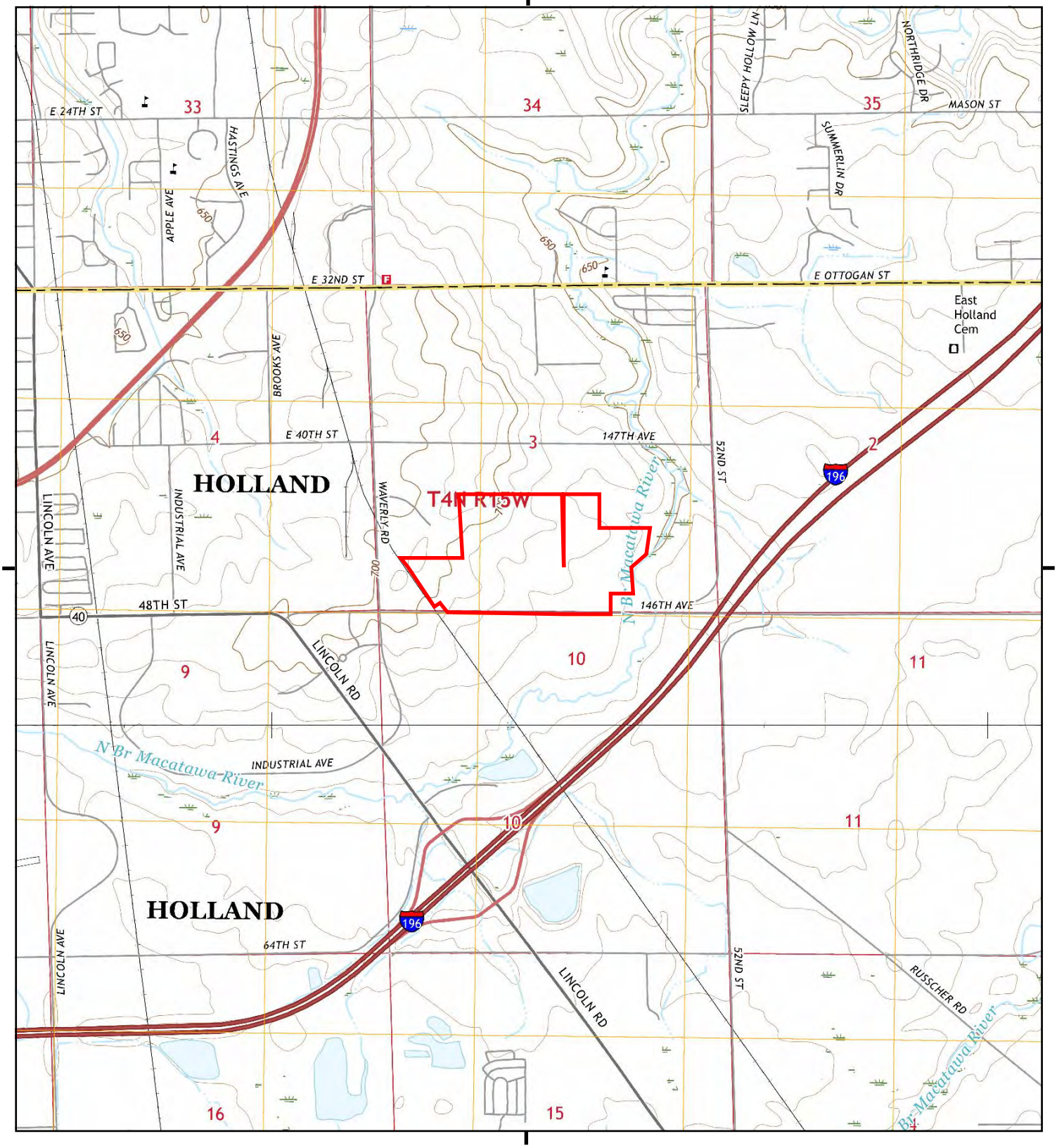
TP, Holland East, 2019, 7.5-minute
S, Hamilton West, 2019, 7.5-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N

Historical Topo Map

2017



This report includes information from the following map sheet(s).

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SW S SE

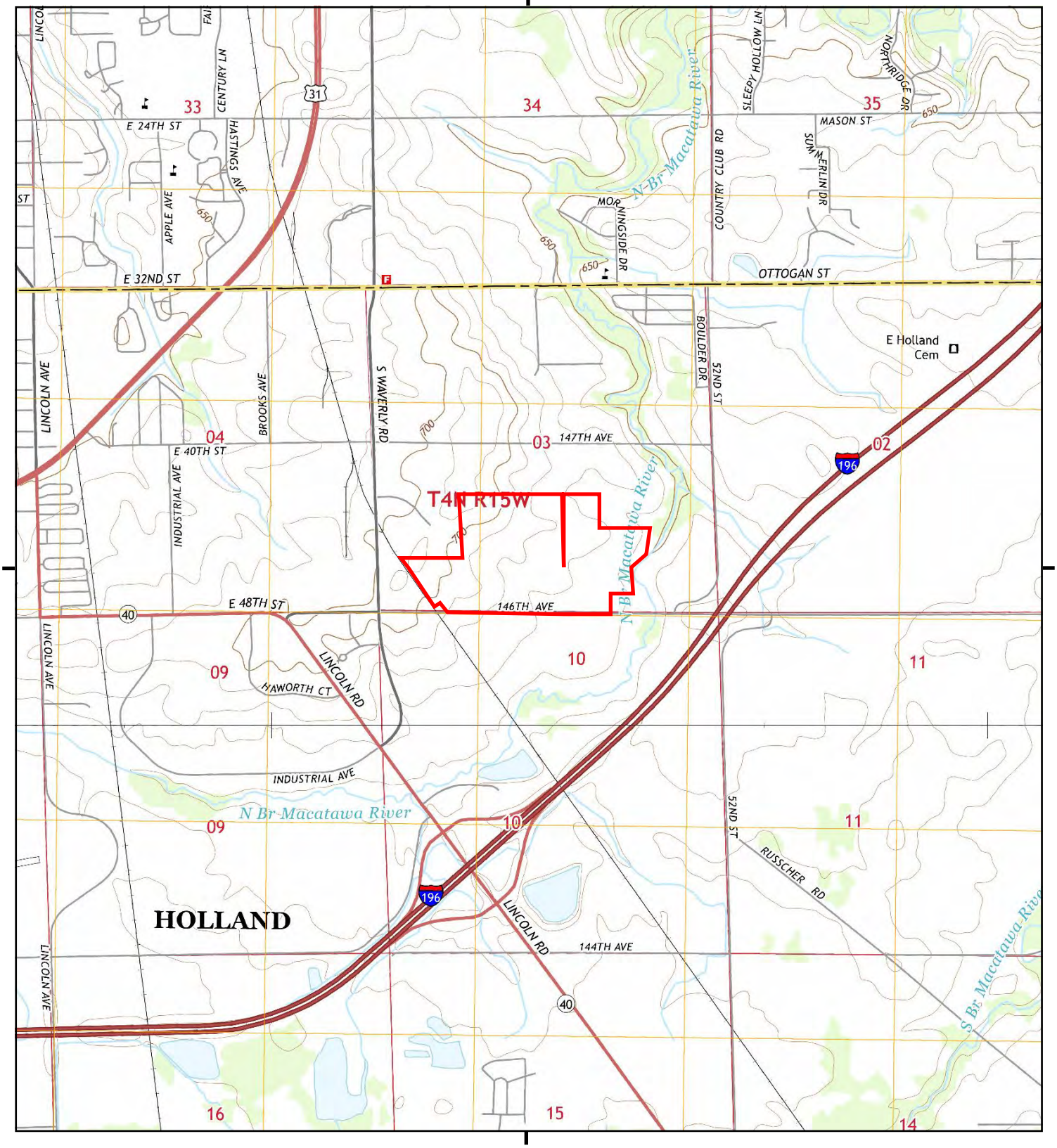
TP, Holland East, 2017, 7.5-minute
S, Hamilton West, 2017, 7.5-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N

Historical Topo Map

2014



This report includes information from the following map sheet(s).

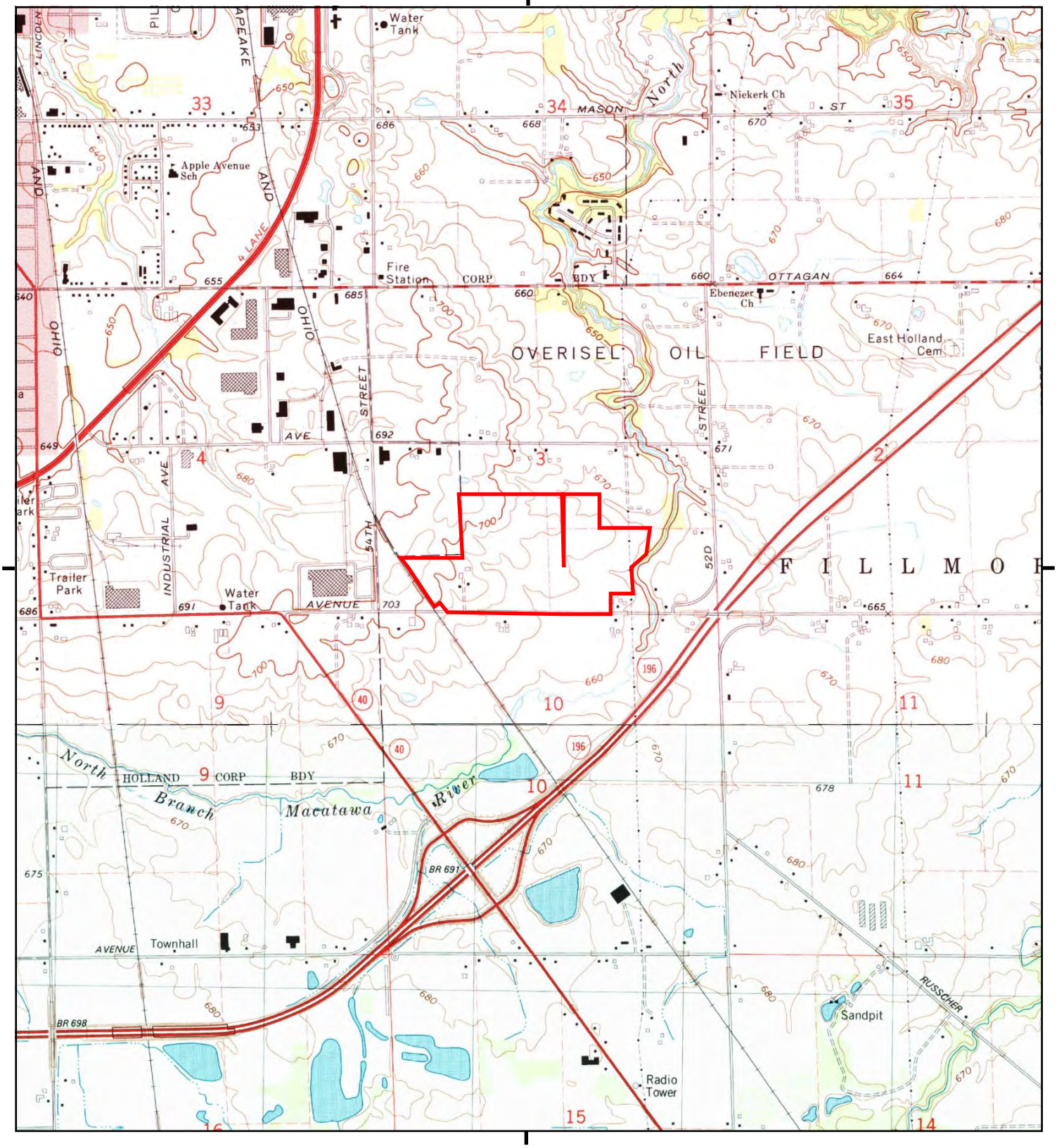
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Holland East, 2014, 7.5-minute
S, Hamilton West, 2014, 7.5-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N



This report includes information from the following map sheet(s).

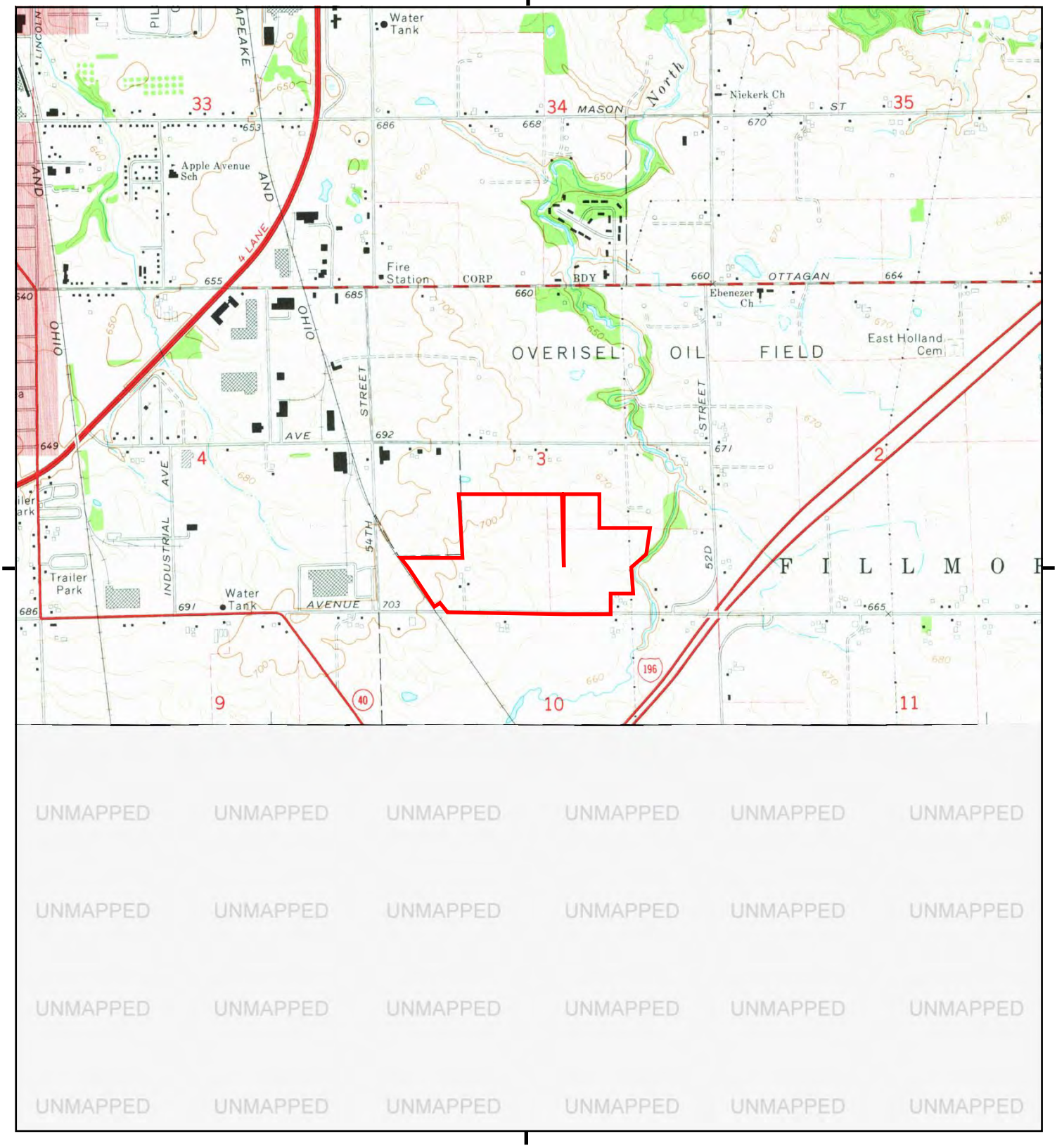
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NW N NE
W E
SW S SE

TP, Holland East, 1980, 7.5-minute
S, Hamilton West, 1981, 7.5-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N



UNMAPPED

This report includes information from the following map sheet(s).

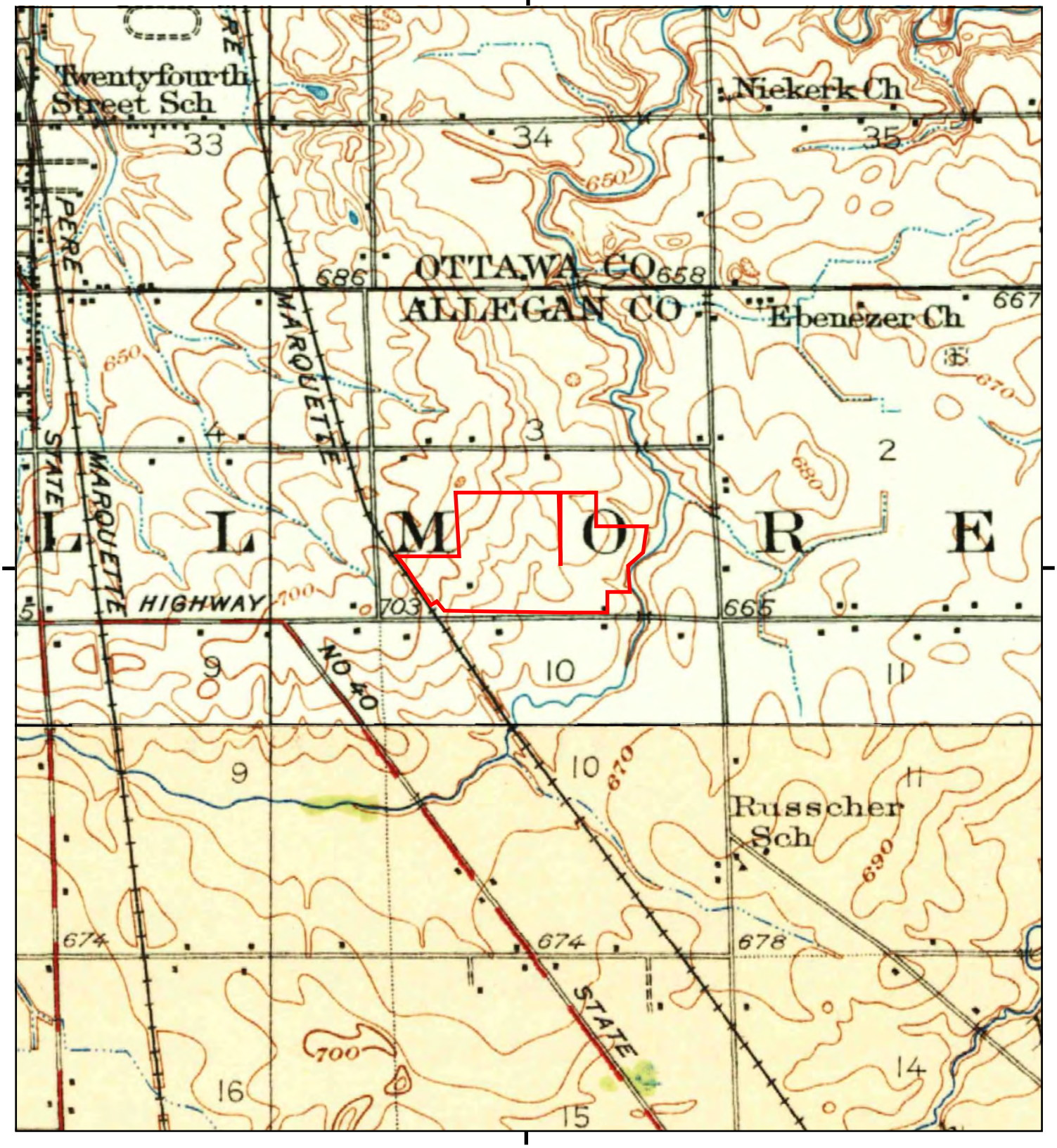
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Holland East, 1972, 7.5-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N



This report includes information from the following map sheet(s).

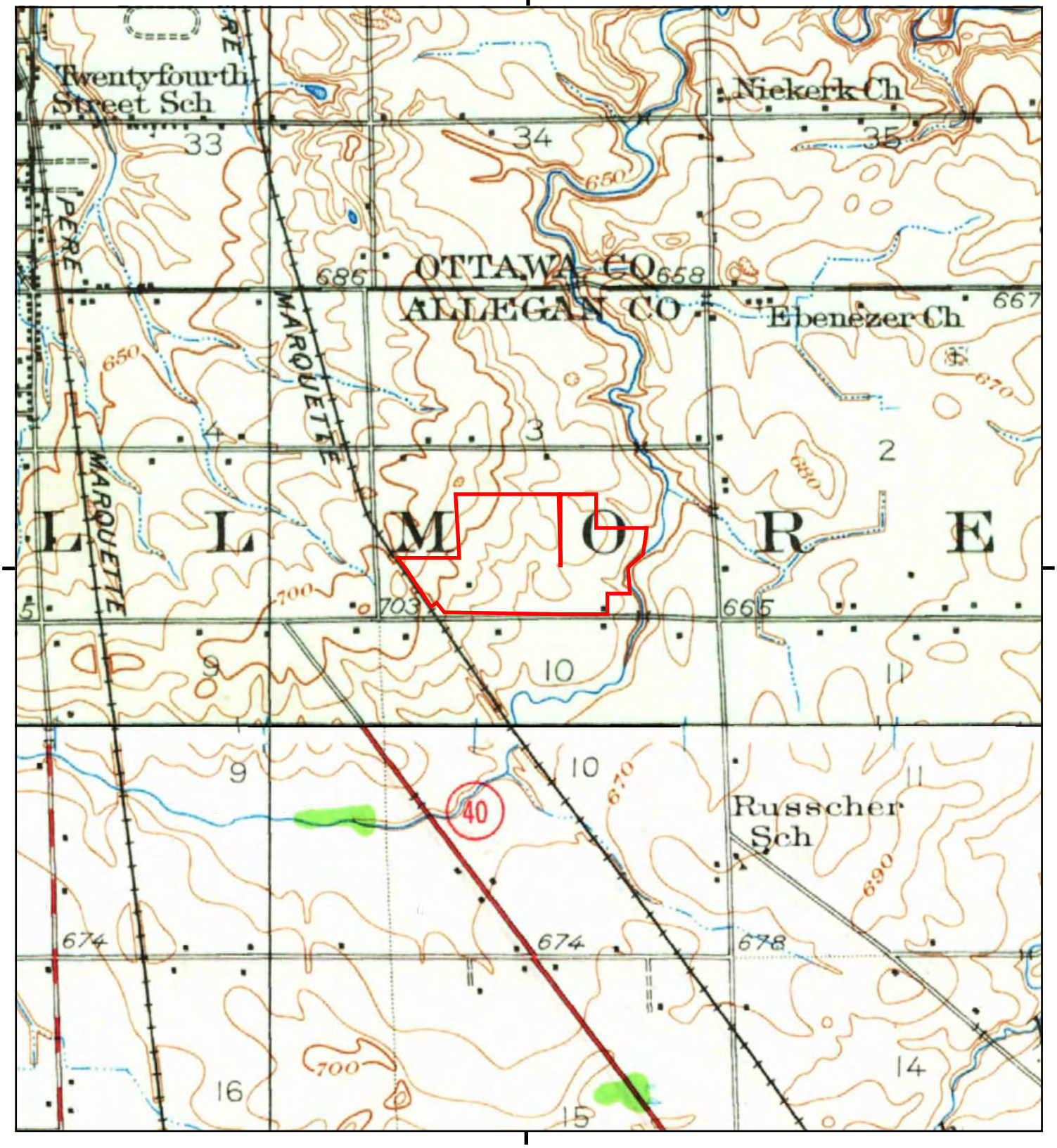
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Holland, 1932, 15-minute
S, Fennville, 1931, 15-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Holland, 1929, 15-minute
S, Fennville, 1928, 15-minute

SITE NAME: LG Energy Solutions Expansion
ADDRESS: 875 and 901 E 48th Street
Holland, MI 49423
CLIENT: Environmental Consulting Solutions, LLC

N

APPENDIX H

Sanborn Fire Insurance Maps

LG Energy Solutions Expansion
875 and 901 E 48th Street
Holland, MI 49423

Inquiry Number: 6857396.3
February 11, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

02/11/22

Site Name:

LG Energy Solutions Expansion
875 and 901 E 48th Street
Holland, MI 49423
EDR Inquiry # 6857396.3

Client Name:

Environmental Consulting Solutions, LLC
523 W. Sunnybrook Drive
Royal Oak, MI 48073
Contact: Julie Pratt

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Environmental Consulting Solutions, LLC were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 8939-47B6-90CC

PO # NA

Project A118-0001

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 8939-47B6-90CC

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX I

City Directory Listings

LG Energy Solutions Expansion
875 and 901 E 48th Street
Holland, MI 49423

Inquiry Number: 6857396.5
February 22, 2022

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1987	☑	☑	Bresser's Cross-Index Directory Company
1982	☑	☑	Bresser's Cross-Index Directory Company
1977	☑	☑	Bresser's Cross-Index Directory Company
1972	☑	☑	Bresser's Cross-Index Directory Company
1967	☐	☐	Bresser's Cross-Index Directory Company
1961	☐	☐	Bresser's Cross-Index Directory Company

FINDINGS

TARGET PROPERTY STREET

875 and 901 E 48th Street
Holland, MI 49423

Year	*CD Image*	*Source*	
E 48TH ST			
2017	pg A5	EDR Digital Archive	
2014	pg A12	EDR Digital Archive	
2010	pg A19	EDR Digital Archive	
2005	pg A28	EDR Digital Archive	
2000	pg A35	EDR Digital Archive	
1995	pg A41	EDR Digital Archive	
1992	pg A48	EDR Digital Archive	
1987	pg A51	Bresser's Cross-Index Directory Company	
1982	pg A54	Bresser's Cross-Index Directory Company	
1977	pg A57	Bresser's Cross-Index Directory Company	
1977	pg A58	Bresser's Cross-Index Directory Company	
1972	pg A60	Bresser's Cross-Index Directory Company	
1967	-	Bresser's Cross-Index Directory Company	Street not listed in Source
1961	-	Bresser's Cross-Index Directory Company	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
146TH AVE			
2017	pg. A2	EDR Digital Archive	
2014	pg. A7	EDR Digital Archive	
2010	pg. A14	EDR Digital Archive	
2005	pg. A22	EDR Digital Archive	
2000	pg. A31	EDR Digital Archive	
1995	pg. A37	EDR Digital Archive	
1992	pg. A44	EDR Digital Archive	
1987	pg. A49	Bresser's Cross-Index Directory Company	
1987	pg. A50	Bresser's Cross-Index Directory Company	
1982	pg. A52	Bresser's Cross-Index Directory Company	
1982	pg. A53	Bresser's Cross-Index Directory Company	
1977	pg. A55	Bresser's Cross-Index Directory Company	
1977	pg. A56	Bresser's Cross-Index Directory Company	
1972	pg. A59	Bresser's Cross-Index Directory Company	
1967	-	Bresser's Cross-Index Directory Company	Street not listed in Source
1961	-	Bresser's Cross-Index Directory Company	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2017

3155	BARNES, PAUL T
3173	FIGUEROA, EDILBERTO J
3232	STOWIE, CARLA M
3246	EDGERSMA, ERIC K
3255	CRESPO, BELINDA
3266	HAWKINS, SHANNON
3272	KUIPERS, NICK E
3281	KRUSE, GRANT
3284	WIERSEMA, NORMAN D
3306	OCONNOR, NICHOLAS R
3318	BAKER, JILLIAN S
3321	PERYSIAN, JUSTIN
3330	PALACIOS, JUAN F
3331	KELLY, BRIAN A
3333	WEDEL, AMANDA
3348	CURTISS, DUSTON T
3349	ELHART, MELVIN L
3360	ROSE, CRAIG S
3369	SLAGER, KIMBERLY A
3811	HULST SERVICE GARAGE
3931	FREEMAN KURT & LISA
4098	SELDOM REST HOG FARMS LLC
4922	POLARITY ELECTRIC INC
5058	BOB TOLSMA PLUMBING
5902	PLAGGEMARS, ROBERT D
5905	TIPTON, TERESA
5909	NELSON, DONALD D
5911	MILLS, PETER D
5915	HALCOMB, ASHLEY K
5918	LOHMAN, LARYN D
5919	REIGLER, DENNIS D
5923	GENZINK, MARV
5926	ECKERT, RICHARD L
5927	LLANOS, RUBEN
5929	NURRIE, JERRY L
5931	LEE, BOB
5933	SANCHEZ, JUANITA
5934	HAUSER, JACOB J
5935	STROWENJANS, BRANDON J
5936	COLLIER, SCOTT A
5938	HAVERCAMP, BETH A
5943	SWIETER, MILO C
5944	VANDERZWAAG, SCOTT W
5947	TIEMEYER, LEE E
5948	BARLOW, MIKE D
5959	VELVETSOFT INCORPORATED
5964	GRITTER, DONALD J
5967	WINDEMULLER, NORMA J
5968	MORSE, LORI L
5990	ADDISON, AUDREY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2017 (Cont'd)

5990	BEDROCK LEARNING
	HUBBARD, TODD
5998	PASSORELLI, ROBERT J
6010	BLAAUW, KENLYN R
6011	DURHAM, FLOYD M
6017	JAGER, MICHAEL L
6018	SZAKACS, TODD C
6021	ROBBINS, DANIEL L
6027	PUTNAM, DAN M
6031	TUCKER, LESLIE D
6034	DRAPER, BENJAMIN A
6037	TENBRINK, JEFFREY
6045	VANMALSEN, NATHAN A
6048	KOEMAN, KEITH A
6051	RIEMERSMA, DANIEL M
6052	BOSMA, JEFF L
6055	CATLIN, MICHAEL R
6061	VANLIERE, DALE A
6062	DREYER, RONALD J
6069	DEPREE, DANIEL P
6075	BENDER, BRENDA A
6080	ARENS, MAXINE R
6086	HEYSER, VINCENT R
6090	RAPSON, MARK T
6091	ODONNELL, MATTHEW L
6096	HULST, MARC H
6104	VOS, JEFFREY S
6115	HAVERDINK, CALVIN
6129	KEEFER, ROBERT F
6137	WRIGHT, DEREK
6157	ICMA RETIREMENT CORPORATION
	STRELING, CHRIS S
6165	BUSSCHER, JACQUELINE K
6175	BECKSVOORT, ROGER J
6181	HULST, CALVIN J
6185	JOHNSON, TODD J
6215	VANWIEREN, JACK E
6220	WINDON, NORMA F
6222	BRONDYKE, TODD A
6229	VANWIEREN, JACK E
6236	PHILLIPS, BENJAMIN A
6241	BOERMAN, GARRY L
6242	WALTERS, LENORE E
6253	BLAHARSKI, ROBERT B
6256	COLE, ROBERT
6259	SCHIPPA, DAN R
6262	LANGEJEANS, THOMAS K
6281	PETTERSON, REX W
6287	HATHAWAY, DAN
6300	TERHAAR, ROBERT A

146TH AVE 2017 (Cont'd)

6308 WESTRA, EUGENE D
6322 LUBBERS, CAL D
6331 COVINGTON, STEPHANIE K
6332 JAMES, TERRY A
6338 HOLMAN, PAMELA A
6340 SHEELEY, NANCY C
6342 SIMPSON, RICHARD S
6346 KNOLL, LANE A
6353 BUSSCHER, MELVIN D
6355 BUSSCHER, ROGER J
6360 FLETTER, BRUCE M
6365 BUSSCHER, HOWARD G
6368 WOLTMAN, RICHARD A
6371 MOKMA, MARGARET M
6381 HAMMOND, LINDA E
6394 HENDRIXSON, IRWIN D
6438 POSTMA, MARK A
6444 SCHROTENBOER, RAY J
6445 CAMPBELL, AARON J
6453 BORST, DIRK H
6456 LEEUW, HARRY M
6497 JACOBS, RODNEY N
6498 SCHIPPA, GARY L
6502 WILEY, RONALD L
6536 WISE, FRED E
6544 ENGLE, TODD L
6545 GENTRY, TERRY A
6560 STIELSTRA, EDWARD A
6565 RATCLIFF, THOMAS C
6590 LINDE, KENDRA N
6616 NOVAK, JOSEPH M
6619 ARNOLD, SHAWN D
6631 BOUWMAN, RUTH L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 48TH ST 2017

5	TARDIS, MYRNA
7	POWERS, RICKY T
	SEK, JANET
	SMITH, AMBER
17	JACKSON, RYAN M
	NETTROUR, ANGIE R
	SANDERS, ANGELA
19	COLE, MARILYN
	JENKINS, YAH H
	VASQUEZ, ROY
29	BROWN, GAIL L
	NIETO, MARIA E
31	MUNIZ, JUAN
	SIERRA, NANCY
	STACY, MARTY J
	VIVAR, MARISOL
41	NIXON, JAMAR
	TOWNSEND, ASSUNT M
43	BOERMAN, RUTH
51	ROOKS, AMANDA S
57	TIBBITS, TIMOTHY
59	LOWERY, SHANTAY M
61	ESPARZA, RUBEN
63	WEENUM, AARON
67	PATHUIS, STACIA
155	BEELEN, AMANDA S
	BERENDS, STEPHEN E
	BIOLETTE, MARKIE
	BISHOP, SANDRA K
	BOEVE, JOSEPH E
	BRENTS, THOMAS C
	BURROWS, WILLIAM E
	BUSS, PHILLIP D
	CANTU, YSMA Y
	COBB, MARY L
	COLLINS, CATHY M
	CREIGHTON, SUE
	DEJONG-CULL, HEATHER D
	DYKSTRA, MARILYN J
	GATELY, PETER T
	GERTH, BENJAMIN M
	GIVENS, KENNETH E
	GOLDING, MICHAEL D
	GOMEZ, ODILON
	HEIKEMA, SANDRA J
	HOEKMAN, DAVID C
	HOLMAN, STEVE J
	HORGAN, JAMES J
	HUTCHESON, SALLY M
	JANEHNIG, GORDON T

E 48TH ST 2017 (Cont'd)

155	KAMPHUIS, ROGER D
	KETCHUM, WILLIAM F
	KOBS, ALYCE M
	KOEMAN, MARVIN S
	KOEMAN, THOMAS J
	LAMAR, COURTNEY N
	LIGHTFOOT, THOMAS M
	LOKERS, GENE
	MAHANEY, MATTHEW
	MILLER, DAVID L
	MONSALVE, GLORIA P
	MORRISON, MYRA J
	NAREY, JOSHUA A
	PARTRIDGE, TIMOTHY
	PIERS, ZHEN Y
	PLAGGEMARS, MICHAEL A
	PRICE, HERSCHEL
	ROBBINS, ALAN R
	SANTELLAN, RUDY L
	SCHAAP, WILLIAM A
	SCHOLTEN, PATRICIA J
	TA, AMY
	TIBBITTS, JAMES L
	VANDAM, DAN L
	VANDENBELDT, KENNETH J
	VANDERPLOEG, CAR
	VANDERWEG, JASON
	VELDHOF, SUSAN R
	VELDHUIS, NORMAN D
	ZACHARY, EDWARD W
0192	GLASS ENTERPRISE AUTO GLASS
	KYLER INDUSTRIES
	WINDOW CENTER
210	NIENHUIS, TIMOTHY S
258	KENRIE INC
284	RYDER TRUCK RENTAL
300	TRANSMATIC
345	E S T TESTING SOLUTIONS
	HUDSONVILLE ICE CREAM
410	NELSON STEEL PRODUCTS
442	THOMPSON, MATTHEW D
534	B L D PRODUCTS LTD
	SLOAN TRANSPORTATION PRODUCTS INC
635	LUMBERMANS INC
	SEASONAL TRANSPORT LLC
759	NUWOOD COMPONENTS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2014

3155	BARNES, PAUL T
3167	LEITCH, KENNETH D
3173	FIGUEROA, EDILBERTO J
3214	ROP, HEATHER
3232	KAMER, CATHY J
3246	EDGERSMA, ERIC K
3255	CRESPO, BENITA
3266	OCCUPANT UNKNOWN,
3272	KUIPERS, NICK E
3281	OCCUPANT UNKNOWN,
3284	OCCUPANT UNKNOWN,
3306	MENDOZA, J
3318	BAKER, JILLIAN S
3321	BLOEMERS, GREGG
3330	VANDENBOSCH, JOSHUA J
3331	CLENDENING, JERRY W
3333	WEDEL, AMANDA
3348	CURTISS, DUSTON T
3349	ELHART, MELVIN L
3360	ROSE, CRAIG S
3365	WASSINK, KENNETH J
3367	OCCUPANT UNKNOWN,
3369	WRIGHT, ANDREA R
3370	LOPEZ, ABRAHAM
3811	HULST SERVICE GARAGE
3840	DOZEMAN, CHESTER
3858	SCHREUR, GORDON
3875	KAMPS, JOHN M
3915	BELL, JACK L
3922	BURNS, THOMAS A
3925	GRYSEN, COLE D
3931	FREEMAN KURT & LISA
	FREEMAN, KURT A
	HOLLAND IMPORTS & SOUVENIRS
3939	HOEKSTRA, ROBERT J
4098	SELDOM REST HOG FARMS LLC
4130	VELDKAMP, BENJAMIN
4202	ELENBAAS, LYNN J
	FALES, BILL
4211	VANRHEE, BILLIE J
4251	MOL, KEN D
4632	FOLKERT, RODNEY A
4717	WALTERS, DALE C
4828	VOS, RONALD A
4835	MYAARD, JEFFREY A
4855	LUBBERS, SHIRLEY A
4860	SCHAAP, DALE S
4868	FOLKERT, JERRY L
4873	WINSTROM, VICTOR L
4881	KENT, DALE R

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2014 (Cont'd)

4895	BOWMAN, KATHI S
	PERRY, STACEY
4898	ZEERIP, JOHN C
4904	ZEERIP, JONATHAN
4905	KRAGT, STEVEN J
4914	DEJONGE, CHAD E
4920	KREUZE, KENNETH D
4922	POLARITY ELECTRIC INC
	SMITH, JEFF P
4942	BOSCH, SHIRLEY A
4943	BOSCH, BECKY L
	BOWKER, SHANNON M
	NUTTALL, H K
4974	BOEVE, ALMA M
4981	NABER, JACK
4989	KUIPER, HAROLD J
5006	SIEGERS, JEFF T
5044	GEURINK, JEFFREY S
5056	KLINGENBERG, THOMAS
5058	TOLSMA, BOB D
5083	DIEP, NELSON
5089	BROUWER, LOREN D
5112	RUSSCHER, DUANE A
5125	MOKMA, KEITH L
5136	RUSSCHER, PHILLIP J
5155	RUSSCHER, DOUGLAS M
5249	ZOERHOF, KURT L
5253	DUBBINK, RANDY L
5300	HERNANDEZ, MARIA M
5902	OCCUPANT UNKNOWN,
5905	BOMERS, KURT
5906	MORIN, DOLORES G
	OCCUPANT UNKNOWN,
5909	VLIEM, DAWN M
5911	MILLS, PETER D
5915	GILBERT, QUINN
5918	LOHMAN, LARYN D
5919	REIGLER, DENNIS D
5923	GENZINK, MARV
5926	ECKERT, RICHARD L
5929	NURRIE, JERRY L
5930	OCCUPANT UNKNOWN,
5931	SANCHEZ, ENEDINA
5933	GONZALEZ, LUCIO
5934	OCCUPANT UNKNOWN,
5935	STROWENJANS, BRANDON J
5936	BOELENS, NANCY L
5938	OCCUPANT UNKNOWN,
5940	NICHOLAS, DARRICK R
5943	SWIETER, MILO C

146TH AVE 2014 (Cont'd)

5944 VANDERZWAAG, SCOTT W
5947 TIEMEYER, LEE E
5948 BARLOW, MIKE D
5953 OCCUPANT UNKNOWN,
5958 SPIRA, DONALD F
5959 VELVET SOFT INCORPORATED
5964 GRITTER, DONALD J
5967 WINDEMULLER, NORMA J
5968 OCCUPANT UNKNOWN,
5975 KLOMPARENS, CHRISTOPHER M
5986 OCCUPANT UNKNOWN,
5990 BEDROCK LEARNING
HUBBARD, ANTHONY T
5991 HIBBARD, ROBERT T
5998 PASSORELLI, ROBERT J
PASSORELO, ROBERT
6010 BLAAUW, KENLYN R
6018 SZAKACS, TODD C
6031 TUCKER, LESLIE D
6034 GOMEZ, JOEL L
6037 TENBRINK, JEFFREY
6041 HULST, HOWARD G
6042 OCCUPANT UNKNOWN,
6045 VANMALSEN, NATHAN A
6048 KOEMAN, KEITH A
6051 RIEMERSMA, DANIEL M
6052 BOSMA, JEFF L
6055 CATLIN, MICHAEL R
6058 RHODA, WILLIAM B
6061 VANLIERE, DALE A
6062 DREYER, RONALD J
6069 DEPREE, DANIEL P
6075 BENDER, BRENDA A
6080 RODENHOUSE, ANDREW J
6081 SALINAS, FRANCISCO J
6086 HEYSER, VINCENT R
6090 RAPSON, MARK T
6091 ODONNELL, MATTHEW L
6096 HULST, MARC H
6104 VOS, JEFFREY S
6115 HAVERDINK, CALVIN
6129 KEEFER, ROBERT F
6137 OCCUPANT UNKNOWN,
6143 JOHNSON, JAMES M
6157 STRELING, CHRIS S
6159 OCCUPANT UNKNOWN,
6165 BUSSCHER, ALVIN W
6174 OCCUPANT UNKNOWN,
6175 BECKSVOORT, ROGER J
6181 HULST, CALVIN J

146TH AVE 2014 (Cont'd)

6183 KNOLL, JOHN L
6185 JOHNSON, TODD J
6215 VANWIEREN, JACK E
6220 SMITH, CRAIG S
6222 BRONDYKE, TODD A
6229 VANWIEREN, JACK E
6236 PHILLIPS, BENJAMIN A
6241 BOERMAN, GARRY D
6242 WALTERS, LENORE E
6253 BLAHARSKI, ROBERT B
6256 MIHM, BRIDGETTE Y
6259 SCHIPPA, DAN R
6262 LANGEJEANS, THOMAS K
6281 PETTERSON, REX W
6287 HATHAWAY, DAN
6300 TERHAAR, ROBERT A
6308 WESTRA, EUGENE D
6322 LUBBERS, CAL D
6331 POTTS, JOHN
6332 JAMES, TERRY A
6338 HOLM, PAMELA A
6340 SHEELEY, NANCY C
6342 SIMPSON, RICHARD S
6346 KNOLL, LANE A
6353 BUSSCHER, MELVIN D
6355 BUSSCHER, ROGER J
6360 FLETTER, BRUCE M
6363 CASWELL, DOUG A
6365 BUSSCHER, HOWARD G
6368 WOLTMAN, RICHARD A
6371 MOKMA, MARGARET M
6378 GARVELINK, LELAND F
6381 HAMMOND, LINDA E
6394 HENDRIXSON, IRWIN D
6423 NEMMERS, KAREN
6432 OCCUPANT UNKNOWN,
6433 OCCUPANT UNKNOWN,
6438 CASTILLO, MAX
6444 SCHROTENBOER, RAY J
6445 WARREN, WAYNE W
6453 OCCUPANT UNKNOWN,
6456 LEEUW, HARRY
6477 ZIMMERMAN, DALE J
6485 OCCUPANT UNKNOWN,
6488 OCCUPANT UNKNOWN,
6497 JACOBS, RODNEY N
6498 SCHIPPA, GARY L
6502 WILEY, RONALD L
6516 OCCUPANT UNKNOWN,
6519 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2014 (Cont'd)

6532 DROOGER, DENNIS P
6536 WISE, FRED E
6544 ENGLE, TODD L
6545 OCCUPANT UNKNOWN,
6560 STIELSTRA, EDWARD A
6565 RATCLIFF, THOMAS C
6568 DOROTHY, ZOERHOF
6590 OCCUPANT UNKNOWN,
6616 NOVAK, JOSEPH M
POLL, ROBERT M
6619 ARNOLD, SHAWN D
6631 BOUWMAN, RUTH L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 48TH ST 2014

5	EVERSON, COURTNEY
	TARDIS, ANGEL A
7	GARCIA, MARIA L
17	DECIANO, FAVIAN
	HARRIS, JOE J
	SANTIAGO, ROBERT
19	ALVARADO, NORMA
	COLE, MARILYN
	HANNA, JENKINS Y
	VASQUEZ, ROY
29	MILLENDER, ERIC D
	NIETO, MARIA E
31	TAYLOR, ETHAN J
41	GOMEZ, GUILLERMIN G
	ROBINSON, EDWARD L
	TOWNSEND, ASSUNT M
43	BOERMAN, RUTH
51	AMANDA, ROOKS
57	OCCUPANT UNKNOWN,
59	LOWERY, SHANTAY M
61	OCCUPANT UNKNOWN,
67	PATHUIS, STACIA
69	OCCUPANT UNKNOWN,
111	OCCUPANT UNKNOWN,
140	WALTERS, DELENA A
155	BEELEN, AMANDA S
	BIOLETTE, MARKIE
	BLAUW, DOUGLAS K
	BRENTS, THOMAS C
	BUSS, PHILLIP D
	CARLSON, SHERYLL
	COBB, MARY L
	CREIGHTON, SUE
	DEJONG-CULL, HEATHER D
	DURBON, LINDA
	DYKSTRA, MARILYN J
	GATELY, PETER T
	GOLDING, MICHAEL D
	GOMEZ, ODILON
	GREEN, SUSAN G
	HEIKEMA, SANDRA J
	HOEKMAN, DAVID C
	HUTCHESON, PAUL W
	JAEHNIG, GORDON
	KETCHUM, CONNIE L
	KETCHUM, PETER D
	KHAMVONGSA, MINA
	KOBS, ALYCE M
	LAMAR, COURTNEY N
	LIGHTFOOT, THOMAS M

E 48TH ST 2014 (Cont'd)

155	LOKERS, GENE
	MAHANEY, AMY D
	MAST, PENNY J
	MCMILLEN, JERRY J
	MEYER, ELLEN S
	MORRISON, TIM K
	MROCZEK, WALTER J
	PARTRIDGE, RICH J
	PIKE, PHILLIP L
	PLAGGEMARS, ESTHER R
	PRICE, HERSCHEL
	REED, MELINDA J
	ROGERS, REX F
	ROMIG, ROBERT J
	SABIA, JOHN
	SANTELLAN, RAUL L
	SCHAAP, WILLIAM A
	SCHOLTEN, PATRICIA J
	SMITH, JUSTIN E
	SOLANO, CARLOS
	TA, AMY
	TIBBITTS, JAMES L
	VANDAM, DAN L
	VANDENBELDT, KENNETH J
	VANDERPLOEG, CAR
	VELDHOF, SUSAN R
	VELDHUIS, NORMAN D
	WESTERHOF, DAVID J
	WILDSCHUT, REBECCA L
	WOLTERS, BRIAN L
	ZACHARY, EDWARD W
158	HOFMEYER IMPLEMENT
0192	GLASS ENTERPRISE AUTO GLASS
	KYLER INDUSTRIES
	WINDOW CENTER
210	NIENHUIS, TIMOTHY S
258	KENRIE INC
300	TRANS MATIC
345	E S T TESTING SOLUTIONS
	HUDSONVILLE ICE CREAM
410	NELSON STEEL PRODUCTS
442	THOMPSON, MATTHEW D
534	SLOAN TRANSPORTATION PRODUCTS INC
635	LUMBERMANS INC
759	NUWOOD COMPONENTS
914	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2010

3155 BARNES, PAUL T
3232 DANNENBERG, KYLE R
3241 ROP, HEATHER A
3246 ELGERSMA, ERIC K
3255 CRESPO, BENITA
3266 BROUWER, BRYAN K
3272 KUIPERS, NICK E
3281 VASQUEZ, PHILIP E
3284 WIERSEMA, NORMAN D
3289 CHAVEZ, GUILLERMIN
3306 NASH, ROBIN L
3318 BAKER, JILLIAN S
3321 STEKETEE, ANDRIES
3330 SCHAAB, MATTHEW J
3348 CURTISS, DUSTON T
3360 ROSE, CRAIG S
3365 WASSINK, KENNETH J
3367 SIMMONS, CHRISTOPHER M
3369 BERGHORST, NELSON G
3370 LOPEZ, ABRAHAM
3809 HULST SERVICE
REDDER, IRENE M
3810 DOZEMAN, JOHN
3830 JUROS, JON P
3840 DOZEMAN, CHESTER
3858 SCHREUR, GORDON
3875 COMPAGNER, L L
KAMPS, JOHN M
3915 BELL, JACK L
3922 BURNS, THOMAS A
3925 VANDYKE, JEFF L
3931 FREEMAN, KURT A
HOLLAND IMPORTS & SOUVENIRS
3939 HOEKSTRA, ROBERT J
3986 ARTHUR BROEKHUIS FARM
BROEKHUIS, TIMOTHY J
3995 BENDER, DAVID A
ISENGA, MYRA J
4054 KNAACK, JEREMY J
4098 BRINK, CHARLES A
SELDOM REST FARMS
4202 ELENBAAS, LYNN J
FALES, LAUREL
4211 MOL, CHRIS J
VANRHEE, BILLIE J
4251 KENNETH, MOL
MOL, KEN D
4617 WOLTERS, KENNETH G
4632 FOLKERT, RODNEY A
4668 SLOTMAN, MERLE D

146TH AVE 2010 (Cont'd)

4717 WALTERS, DALE C
4726 RAKKERS, CHRISTEN
4828 VOS, RONALD A
4835 MYAARD, JEFFREY A
4845 SALE, TIM M
4846 ZYLMAN, BRAD C
4855 LUBBERS, SHIRLEY A
4860 SCHAAP, DALE S
4881 KENT UPHOLSTERY
KENT, DALE R
4888 NIENHUIS, DAVID R
4892 ZEERIP, DAVID J
4895 BOWMAN, BRENT A
PERRY, STACEY
4898 ZEERIP, JOHN C
4899 BUSSCHER, CHRIS
4904 ZEERIP, JONATHAN
4905 KRAGT, STEVEN J
4914 DEJONGE, CHAD E
DEYOUNG, KAREN
4920 KREUZE, KENNETH D
4922 POLARITY ELECTRIC INC
SMITH, JEFF P
4942 BOSCH, SHIRLEY A
4943 BOSCH, JIM A
BOWKER, SHANNON M
NUTTALL, H K
PATE, STEVE W
SHAW, SHAWN L
4959 MCDONALD, CRISTOPHER L
4971 SCHUT, KEVIN G
4974 BOEVE, ALMA M
4981 LAMPEN, TOM G
4989 KUIPER, HAROLD J
5006 SIEGERS, JEFF T
5014 VANGELDER, TONY D
5019 ROSS, JUDITH K
5028 GEURINK, ALVIN J
5044 GEURINK, JEFFREY S
5047 HOFMAN, JEFFERY A
5058 BOB TOLSMA PLUMBING
TOLSMA, BOB D
5065 KLINGENBERG, GLENN H
5069 DALTON, FELICIA
KLINGENBERG, STEVE J
MORIN, ANDRESS
5080 SCHOLTEN, JAMES P
5083 DIEP, NELSON
5089 BROUWER, LOREN D
5090 DEKOSTER, JAMES A

146TH AVE 2010 (Cont'd)

5112 RUSSCHER, DUANE A
5125 MOKMA, KEITH L
5136 RUSSCHER, PHILLIP J
5155 RUSSCHER, DOUGLAS M
5249 ZOERHOF, KURT L
5252 GILLESPIE, DOUGLAS L
5253 LANGLAND, DENNIS J
5257 BRINK, ELDEN
5258 VANDENBELT, ROBERT A
5300 HERNANDEZ, TIBURCIO
5373 GOLD STANDARD MARINE
5902 PLAGGEMARS, ROBERT D
5909 VLIEM, DAWN M
5911 MILLS, PETER D
5913 COCHRAN, MICHAEL A
ORTIZ, BECKY L
5916 LANNING, PHYLLIS A
5918 LOHMAN, LARYN D
5919 REIGLER, DENNIS D
5923 GENZINK, MARV
5926 ECKERT, RICHARD L
5927 VANRHEE, BRIAN G
5929 NURRIE, ROSE M
5930 DENBRABER, JAMES R
5938 VANDERBERG, JAMES B
5940 ARISMENDEZ, A
NICHOLAS, DARRICK R
5943 SWIETER, MILO C
5944 VANDERZWAAG, SCOTT W
5947 TIEMEYER, LEE E
5948 BARLOW, MIKE D
5958 SPIRA, DONALD F
5959 VELVETSOFT INC
5964 GRITTER, DONALD J
5967 WINDEMULLER, CHARLES J
5968 ROOT, PATRICIA A
5975 KLOMPARENS, CHRISTOPHER M
5986 FULLER, JOHN C
5990 BEDROCK LEARNING
HUBBARD, ANTHONY T
5991 GRADUS, KNOLL
5998 PASSORELLI, ROBERT J
6010 BLAAUW, KENLYN R
HOLLAND AMERICAN LEGION BAND
6011 DURHAM, MIKE C
6018 SZAKACS, TODD
6021 ROBBINS, DAVID A
6027 DAVIS, DONALD C
6031 TUCKER, LESLIE D
6037 GENZINK, GLADYS J

146TH AVE 2010 (Cont'd)

6041 HULST, HOWARD G
6042 ZALIS, JOHN A
6045 VANMALSEN, NATHAN A
6048 KOEMAN, KEITH A
6052 BOSMA, JEFF L
6055 CATLIN, MICHAEL R
6058 RHODA, WILLIAM B
6061 VANLIERE, DALE A
6062 DREYER, RONALD J
6069 DEPREE, DANIEL P
6075 BENDER, BRENDA A
6080 RODENHOUSE, ANDREW J
6081 SALINAS, FRANCISCO J
6086 HEYSER, STEVEN V
6090 RAPSON, MARK T
6091 ODONNELL, MATTHEW L
6096 HULST, MARC H
6104 VOS, JEFFREY S
6129 KEEFER, ROBERT F
6143 JOHNSON, JAMES M
6157 DOKTER, DONALD R
6165 BUSSCHER, ALVIN W
6175 BECKSVOORT, ROGER J
6181 HULST, CALVIN J
6183 KNOLL, JOHN L
6185 JOHNSON, TODD J
6215 VANWIEREN, HOLLY J
6220 SMITH, CRAIG S
6222 BOSCH, TAMMY L
BRONDYKE, TODD A
6229 VANHUIS, HELEN
6236 PHILLIPS, BENJAMIN A
6241 BOERMAN, GARRY D
6242 WALTERS, LONI E
6253 BLAHARSKI, ROBERT B
6256 PARDON, JUDITH
6259 SCHIPPA, DAN R
6262 LANGEJEANS, THOMAS K
6281 BONDSFIELD, PAUL E
6287 KUNKEL, JOHN
6300 GROTENHUIS, WALLACE J
6308 WESTRA, EUGENE D
6322 LUBBERS, CAL D
6331 TENBRINK, DERICK
6332 JAMES, TERRY A
6338 HOLM, PAMELA A
6340 SHEELEY, NANCY C
6342 LAMAR, ROSS J
6346 KNOLL, LANE A
6353 BUSSCHER, MELVIN D

146TH AVE 2010 (Cont'd)

6355 BUSSCHER, ROGER J
6360 FLETTER, BRUCE M
6363 CASWELL, DOUG A
6365 BUSSCHER, HOWARD G
6368 WOLTMAN, RICHARD A
6371 MOKMA, MARGARET
6374 FLETTER, BRUCE M
6394 HENDRIXSON, IRWIN D
6432 CAMPBELL, JANICE L
ZOERHOF, KURT
6438 VANNUIL, JEREMY J
6444 SCHROTENBOER, RAY J
6445 WARREN, WAYNE W
6453 GORDON, KATHLEEN L
6456 LEEUW, HARRY
6477 ZIMMERMAN, DALE J
6485 NUMMIKOSKI, GARY W
6488 PENNA, WILLARD L
6497 JACOBS, RODNEY N
6498 SCHIPPA, GARY L
6516 DROOGER, DAVID G
6532 DROOGER, DENNIS P
6544 ENGLE DESIGN STUDIOS
ENGLE, TODD L
6545 GENTRY, TERRY A
6560 STIELSTRA, EDWARD A
6565 RATCLIFF, THOMAS C
6590 LINDE, KENDRA N
6616 NOVAK, JOSEPH M
POLL, ROBERT M
6631 BOUWMAN, RUTH L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 48TH ST 2010

5	EVERSON, COURTNEY
	MCKENZIE, JEFFREY
	WILSON, CIARA
	WILSON, MYRNA J
7	BARRETT, ERIN N
	BICHLER, LAURA L
17	TORRES, MIGUEL
19	COLE, MARILYN
	VASQUEZ, ROY
29	MILLENDER, ERIC
	MILLSS, JAY
	SANCHEZ, GUSTAVO
	TENEYUQUE, LAURA M
	WESTFIELD, ISAAC S
37	SCHROTENBOER, OLIVER
41	LANE, JOHN J
	LUMPKIN, ARCHIE
	RIVAS, LETICIA
	TOWNSEND, ASSUNT M
43	CHAMBERLAIN, DAVID
	GALLAGHER, JONATHAN
	KUSHNER, ANGELA
	LESLIE, KARISSA
	SECORD, ROSEMARY
	SOBOTA, MOLLY
51	BOHN, DUKE
57	PHAFOUKVONG, JUSTIN
63	GRIES, J
69	BERMUDEZ, SARA E
88	JOHNSON CONTROLS INC
155	AALDERINK, THEODORE W
	ARENDS, LARRY J
	BARRETT, C
	BEELEN, AMANDA S
	BIRKHOLZ, CAROL S
	BOSMA, TERRY A
	BRENTS, THOMAS C
	BUSS, PHILLIP D
	COBB, MARY L
	COLLINS, ALAN
	DE, VRIES J
	DROOGER, EDIE M
	DYKSTRA, MARILYN J
	EDMONDS, WILLARD J
	ELLENBERGER, REGINA R
	FOLKERT, MYRON J
	GATELY, REGINA G
	GOMEZ, ODILON
	HEIKEMA, SANDRA J
	HILBINK, SCOTT D

E 48TH ST 2010 (Cont'd)

155	HOEKMAN, DAVID C
	JAEHNIG, GORDON T
	JOLDERSMA, BONNIE L
	KETCHUM, RICHARD D
	KHAMVONGSA, MINA
	KOBS, ALYCE M
	KOEMAN, MARVIN S
	LAMAR, COURTNEY
	LOKERS, JEAN E
	MCMILLEN, JERRY J
	MEYER, NATHAN
	MORRISON, TIM K
	NABER, JANICE E
	PARTRIDGE, RICH J
	PIKE, PHILLIP L
	PRAAMSMA, THOMAS L
	PRINS, SUSAN H
	REED, CARL R
	RIEMERSMA, JIMMY L
	ROGERS, REX F
	SANTELLAN, RAUL L
	SAYLOR, JAMES T
	SCHAAP, BEVERLY H
	SCHOLTEN, PATRICIA J
	SLIKKERS, RICK L
	SUE GREEN FUNDRAISING INC
	TA, AMY
	THOMAS, BESSIE A
	TIBBITTS, SHIRLEY J
	VANDAM, DAN L
	VANDENBELDT, NELSON
	VANDERPLOEG, STEVE C
	VELDHOF, SUSAN R
	VELDHUIS, GINNY
	VERHOEVEN, HAZEL A
	WESTERHOF, DAVID J
	ZACHARY, ARLENE M
158	HOFMEYER IMPLEMENT
	HOFMEYER, HUBERT
0192	GLASS ENTERPRISE AUTO GLASS
	WINDOW CENTER
210	NIENHUIS, TIMOTHY S
258	MIDWEST LIQUIDATORS LLC
284	RYDER
300	TRANSMATIC
345	HUDSONVILLE ICE CREAM
	R & B LABORATORY
410	NELSON STEEL PRODUCTS INC
442	THOMPSON, J
534	BLD PRODUCTS LTD

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✓	-	EDR Digital Archive

E 48TH ST 2010 (Cont'd)

534 SLOAN TRANSPORTATION PRODUCTS
635 SEASONAL SPACE
914 HERNANDEZ, TIBURCIO

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2005

3155	BARNES, PAUL T
3167	BLEVINS, KENT E
3173	OCCUPANT UNKNOWN,
3232	DANNENBERG, DAVE R
3246	OCCUPANT UNKNOWN,
3266	OCCUPANT UNKNOWN,
3272	KUIPERS, NICK E
3281	BREDEWEG, MARGARET A
3284	WIERSEMA, NORMAN D
3306	SERRANO, MICHAEL P
3318	CLENDENING, KATHRYN L
3321	STEKETEE, ANDRIES
3330	SCHAAB, JENNIFER
3331	DELAROSA, ARACELI
3333	OCCUPANT UNKNOWN,
3348	COOPERSMITH, AARON J
3349	OCCUPANT UNKNOWN,
3360	ROSE, CRAIG S
3365	WASSINK, KENNETH
3367	SIMMONS, ROY L
3369	SIMMONS, SYLVIA A
3370	DURON, JEREMY J
3809	HULST SERVICE
	HULST, BARB
3810	OCCUPANT UNKNOWN,
3811	HULST SERVICE GARAGE
3830	OCCUPANT UNKNOWN,
3840	DOZEMAN, CHESTER
3858	OCCUPANT UNKNOWN,
	SCHREUR, GORDON
3875	COMPAGNER, L L
	KAMPS, JOHN
3915	BELL, JACK L
	OCCUPANT UNKNOWN,
3922	BURNS, THOMAS A
	OCCUPANT UNKNOWN,
3925	OCCUPANT UNKNOWN,
	VANDYKE, JEFF L
3931	FREEMAN, KURT A
	HOLLAND IMPORTS & SOUVENIRS
	OCCUPANT UNKNOWN,
3939	HOEKSTRA, ROBERT J
	OCCUPANT UNKNOWN,
3986	BROEKHUIS, ART
3995	ISENGA, MYRA
	MYKRAFTS
	OCCUPANT UNKNOWN,
4098	BRINK, CHARLES A
	SELDOM REST FARMS
	SELDOM REST HOG FARM LLC

146TH AVE 2005 (Cont'd)

4098 SELDOM REST TOO LLC
4130 HAYES, BOB L
4139 BROEKHULS, TIM
OCCUPANT UNKNOWN,
4202 ELENBAAS, LYNN J
4211 OCCUPANT UNKNOWN,
4251 MOL, KEN D
4632 FOLKERT, RODNEY A
4668 SLOTMAN MERLE
SLOTMAN, MERLE D
4701 PETERS, BURTIN J
4717 WALTERS, DALE
4726 VANVUREN, CALVIN J
4828 VOS, RONALD A
4835 MYAARD, JEFFREY A
4845 SALE, TIM M
4846 MARY ZYLMAN DECORATING
ZYLMAN, BRAD C
4855 LUBBERS, SHIRLEY A
4860 SCHAAP, DALE S
4881 KENNEDY, DALE
KENT UPHOLSTERY SERVICE
OCCUPANT UNKNOWN,
4888 NIENHUIS, DAVID R
OCCUPANT UNKNOWN,
4892 ZEERIP, DAVID J
4895 BOWMAN, BRENT A
OCCUPANT UNKNOWN,
4898 OCCUPANT UNKNOWN,
ZEERIP, JOHN C
4904 ALDERINK, ARTHUR J
OCCUPANT UNKNOWN,
4905 KRAGT, STEVEN J
OCCUPANT UNKNOWN,
4914 DEJONGE, CHAD
OCCUPANT UNKNOWN,
4919 OVERISEL ELECTRIC LLC
4920 KREUZE, KENNETH D
4922 POLARITY ELECTRIC INC
SMITH, JEFF P
4942 BOSCH, NATHAN J
OCCUPANT UNKNOWN,
4943 BOWKER, SHANNON
CHRISTIANSEN, JAMES A
4959 KRUITHOFF, RANDALL A
OCCUPANT UNKNOWN,
4971 PHASAVO, TENG
4974 BOEVE, ALMA M
OCCUPANT UNKNOWN,
4981 NABER, JACK

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2005 (Cont'd)

4981 OCCUPANT UNKNOWN,
4989 KUIPER, TODD J
5006 OCCUPANT UNKNOWN,
SIEGERS, JEFF T
5014 OCCUPANT UNKNOWN,
VANGELDER, JENNIFER S
5019 OCCUPANT UNKNOWN,
ROSS, JUDITH K
5028 GEURINK, ALVIN J
5044 GEURINK, LAURA M
5047 MULDER, MARVIN A
5056 KLINGENBERG, GLENN H
5058 BOB TOLSMA PLUMBING
OCCUPANT UNKNOWN,
5062 COUGHLIN, MATT A
OCCUPANT UNKNOWN,
5065 KLINKS REPAIR
OCCUPANT UNKNOWN,
5069 KLINGENBERG, STEVE
5073 KLINGENBERG, JIM
5080 DOUBLE J ENTERPRISES LLC
OCCUPANT UNKNOWN,
SCHOLTEN, JAMES P
5083 DIEP, NELSON
5089 BROUWER, LOREN D
MISSION DESIGN & ATMTN LLC
MISSION DESIGN & AUTOMATION LL
5090 DEKOSTER, JAMES
OCCUPANT UNKNOWN,
5112 COUNTRY GROVE FARMS
OCCUPANT UNKNOWN,
PREMIUM PORK & GRAIN LLC
RUSSCHER, DUANE
5113 OCCUPANT UNKNOWN,
RUSSCHER, MARVIN E
5125 MOKMA, KEITH L
5136 PREFERRED HOG FARMS
RUSSCHER, PHILLIP C
5155 OCCUPANT UNKNOWN,
RUSSCHER, DOUGLAS
5249 SCHAAP, PAUL A
5252 KONCZAL, LYNN
OCCUPANT UNKNOWN,
5253 LANGLAND, DENNIS J
5257 RABBERS, JAMES
5258 OCCUPANT UNKNOWN,
VANDENBELT, ROBERT A
5300 HERNANDEZ, TIBURCIO
OCCUPANT UNKNOWN,
5902 PLAGGEMARS, ROBERT D

146TH AVE 2005 (Cont'd)

5905 CHURCH, WESLEYAN
5906 OCCUPANT UNKNOWN,
5909 VLIEM, DAWN M
5911 AALDERINK, STEPHEN D
5913 COCHRAN, MICHAEL A
5915 OCCUPANT UNKNOWN,
5916 MULLER, MATT J
5918 LOHMAN, LARYN D
5919 REIGLER, DENNIS D
5923 GENZINK, MARV
OCCUPANT UNKNOWN,
5926 OCCUPANT UNKNOWN,
5927 CHATTERSON, MARLYS
5929 NURRIE, ROSE M
5930 DENBRABER, JAMES R
5933 OCCUPANT UNKNOWN,
5934 SANTORA, LORETTA K
5938 LARSEN CONSTRUCTION CO
LARSEN CONSTRUCTION CO LLC
LARSEN, JOSEF
5940 ARISMENDEZ, A
OCCUPANT UNKNOWN,
5944 VANDERZWAAG, SCOTT W
5947 OCCUPANT UNKNOWN,
5948 BARLOW, MICHAEL D
5953 BUURSMA, ANDREW J
5958 HEALTH AND IN HOMECARE SERVICES
SPIRA, DONALD F
5959 ESSENBURG, RONALD G
OCCUPANT UNKNOWN,
VELVET SOFT INC
5964 GRITTER, DONALD J
5967 WINDEMULLER, CHARLES J
5968 OCCUPANT UNKNOWN,
5975 OCCUPANT UNKNOWN,
5986 FULLER, VICKY L
5990 ENGELSMAN, ROB
5991 KNOLL, GRADUS G
5998 ROBERT, P
ROCKWELL WELSH TERRIERS
WEB PRODUCTIONS
6010 BLAAUW, KENLYN R
6011 DURHAM, MIKE C
6017 VENLET, TED
6021 ROBBINS, DAVID A
6027 PUTNAM, DAN M
6031 TUCKER, LESLIE D
6034 MENKEN, EVELYN D
6037 GENZINK, JAMES
6041 HULST, HOWARD

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2005 (Cont'd)

6042 ZALIS, JOHN A
6045 STADT, MARVIN H
6048 KOEMAN, KEITH A
6051 HAMILTON, DENA L
6052 BOSMA, JEFF
6055 CATLIN, MICHAEL R
6058 OCCUPANT UNKNOWN,
6061 VANLIERE, DALE A
6062 DREYER, RONALD J
6069 DEPREE, DANIEL P
OCCUPANT UNKNOWN,
6075 BENDER, A
6080 RODENHOUSE, ANDREW J
6081 BARNEY, LUANNE
6086 GENZINK, REBECCA M
6091 OCCUPANT UNKNOWN,
ODONNELL, MATTHEW L
6096 HULST, MARC L
6104 VOS, JEFF C
6115 HAVERDINK, CALVIN
6129 KEEFER, ROBERT F
6137 OCCUPANT UNKNOWN,
6143 JOHNSON, JAMES M
6157 DOKTER, DONALD R
6159 GIDDINGS, DANIEL G
6165 BUSSCHER, ALVIN W
6175 BECKSVOORT, ROGER J
6181 HULST, CALVIN J
TOTAL PRODUCT MANAGEMENT LTD
6183 KNOLL, JOHN L
6185 MOORE, GEORGE A
6215 VAN, HOLLY J
6222 BRONDYKE, TODD A
6229 VANHUIS, HELEN
6236 PHILLIPS, BENJAMIN A
6241 BOERMAN, GARRY D
6242 WALTERS, LONI
6253 BLAHARSKI, ROBERT B
6256 MIHM DIVERSIFIED
MIHM, AMBER D
POST, TAMMI T
6259 SCHIPPA, DAN
6262 LANGEJEANS, THOMAS K
6281 BONDSFIELD, PAUL J
OCCUPANT UNKNOWN,
6287 BILLINGS, BRIAN S
OCCUPANT UNKNOWN,
6300 GROTENHUIS, WALLACE J
OCCUPANT UNKNOWN,
6308 WESTRA, EUGENE D

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2005 (Cont'd)

6322 LUBBERS, CALVIN D
6331 OCCUPANT UNKNOWN,
6332 JAMES, TERRY A
6338 MIEDEMA, DAVE M
OCCUPANT UNKNOWN,
6340 SHEELEY, NANCY C
6342 LAMAR, ROSS J
6346 KNOLL, DANIEL J
6353 OCCUPANT UNKNOWN,
6355 BUSSCHER, ROGER
6363 CASWELL, DOUG A
6365 BUSSCHER, HOWARD G
6368 OCCUPANT UNKNOWN,
WOLTMAN, RICHARD A
6371 JOHN, ROBERT L
6374 ANTLES, KAREN L
FLETTER, BRUCE M
6378 GARVELINK, LELAND L
6381 ACKERBERG, MICHAEL A
OCCUPANT UNKNOWN,
6394 HENDRIXSON, IRWIN D
6433 MCDONALD, DAVID C
6444 SCHROTENBOER, RAY J
6445 WARREN, WAYNE W
6453 OCCUPANT UNKNOWN,
6456 LEEUW, MARY B
6477 OCCUPANT UNKNOWN,
ZIMMERMAN, DALE J
6485 NUMMIKOSKI, GARY W
6488 PENNA, WILLARD L
6497 JACOBS, RODNEY N
6498 SCHIPPA, GARY L
6502 OCCUPANT UNKNOWN,
6516 DROOGER, DAVID G
6519 OCCUPANT UNKNOWN,
6532 DROOGER, DENNIS P
6536 WISE, FRED E
6544 ENGLE DESIGN STUDIOS
ENGLE, TODD L
6545 GENTRY, TERRY A
6560 STIELSTRA, EDWARD A
6565 CROCOLL, CLIFFORD E
MARKETING PERSPECTIVES INC
NPI INC
6568 OCCUPANT UNKNOWN,
6590 FRALEY, GREGORY A
OCCUPANT UNKNOWN,
6616 POLL, ROBERT M
6619 ARNOLD, SHAWN D
6631 BOUWMAN, RUTH L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 48TH ST 2005

5	MEDRANO, MARIBEL
	PITCHER, DEBORAH
	YOUNG, DAHLIA
7	MOORE, JENNIFER L
	WILLIAMSON, RICHARD E
17	MARTINEZ, JAMES A
	MUNOZ, LORENZO
	POLLAND, LANNY
19	GLASS, JOEL A
	RITTER, JAIME
29	ANAYA, JEREMIAS
	DYROWE, APRIL L
	GOODIN, DAVID B
	TENEYUQUE, LAURA M
31	DEWITT, JACK L
	GOODWINE, TAMARA
	MILLER, DANA
	OLIVER, CHRISTOPHER J
	PAYES, FRED
	TOMERLIN, SHAWN W
41	GARCIA, CRYSTAL
	GAUTHIER, EVA M
	GONZALEZ, SHERYL L
	SCHUURMAN, DANIEL
43	BAKKER, WAYNE A
	THOMPSON, LACY
51	HICKS, CARLA
57	CASTANEDA, YESENIA E
59	BATISTA, NICHOLAS M
61	ADKINS, WANDA
63	HOOPER, ROSLYN C
67	FINCH, JAMES A
69	OCCUPANT UNKNOWN,
88	JOHNSON CONTROLS INTERIORS
111	OCCUPANT UNKNOWN,
155	ARENDS, KAREN J
	BIRKHOLZ, CAROL S
	BOSMA, WILLIAM J
	BRENTS, THOMAS C
	BUSS, PHILLIP D
	COBB, MARY L
	COLLINS, ALAN
	DAMSGAARD, PETER A
	DE, VRIES J
	DROOGER, EDIE M
	DYKSTRA, DOROTHY
	EDMONDS, WILLARD J
	FOLKERT, MYRON J
	GALLO, MARIA G
	GARCIA, JUAN

E 48TH ST 2005 (Cont'd)

155	GREEN, LEO E
	HARRISON, MARJORIE E
	HEIKEMA, SANDRA J
	HILBINK, SCOTT D
	HOEKMAN, DAVID C
	HUGHES, HUBERT E
	JOLDERSMA, BONNIE L
	KETCHUM, RICHARD D
	KIEKINTVELD, ELAINE M
	KOBS, ALYCE M
	KOEMAN, MARVIN S
	LAACKMANN, LON J
	MAHANEY, AMY D
	MANNING, PAUL A
	MORRISON, TIM K
	PERKINS, CHARLES E
	PETERS, HAROLD J
	PIKE, PHILLIP L
	PLASTER, BETTY J
	PRINS, SUSAN H
	QUAKKELAAR, DAVID J
	SANDOVAL, GERALD
	SANTELLAN, RUDY
	SCHAAP, WILLIAM J
	SCHOLTEN, PAT J
	SENTERS, DELORES E
	SLIKKERS, RICK
	SLOTMAN, PAUL B
	SREBNACK, JAMES M
	TIBBITTS, SHIRLEY J
	VANDAM, JOHN G
	VANDERPLOEG, STEVE C
	VANORDER, RAY L
	VELDHOF, SUSAN R
	VELDHUIS, NORMAN D
	VENEMA, GORDAN C
	VERHOEVEN, HAZEL A
	ZACHARY, ARLENE M
0192	EAGLE OF SOUTHERN MICHIGAN
	GLASS ENTERPRISE AUTO GLASS INC
	GLASS ENTERPRISE INC
	KYLER INDUSTRIES INC
	TJ BRATT ENTERPRISE LLC
210	VANDUSSEN, DERICK L
228	LUBBERS, JULIUS
300	TRANS MATIC MFG CO INC
345	E S T TESTING SOLUTIONS INC
	HUDSONVILLE ICE CREAM CO INC
442	THOMPSON, J
534	B L D PRODUCTS

E 48TH ST 2005 (Cont'd)

534 NOVO PRODUCTS
QUALITOR
SLOAN TRANSPORTATION PRODUCTS
635 BAXTER LOGISTICS
BLI BROKERAGE INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2000

3232	DANNENBERG, DAVE
3260	PRINS, LARRY
3266	AGAL, E A
3284	WIERSEMA, NORMAN
3318	ADAMS, BRUCE P
3321	JACKSON, ROBERT
3330	SCHAAB, MATTHEW J
3331	VANDENBOSCH, MARY
3348	BICHELMEYER, SUZAN K
3360	ROSE, LEOLA
3365	SLAGER, JANET L
3369	SIMMONS, SYLVIA
3370	CAMPBELL, MELISSA
3809	HULST, HAROLD
3810	DOZEMAN, BOB
3811	HULST SERVICE GARAGE
3830	VANDERKOOY, DUANE
3840	DOZEMAN, CHESTER
3858	SCHREUR, GORDON
3875	COMPAGNER, L
3915	BELL, JACK
3922	BURNS, THOMAS A
3925	JVD TRUCKING
	VANDYKE, JEFF
3931	FREEMAN, KURT
	HOLLAND IMPORTS & SOUVENIRS
3939	HOEKSTRA, ROBERT
3986	BROEKHUIS, ART
3995	ISENGA, MYRA
	MYKRAFTS
4054	HOEKSTRA, JOHN
4098	BRINK, CHARLES
	SELDOM REST FARMS
4139	BROEKHULS, TIM
4202	ELENBAAS, LYNN
4211	KLYNSTRA, JOHN
4251	MOL, KEN A
4616	WOLTERS, KENNETH
4632	FOLKERT, RODNEY
4668	SLOTMAN, MERLE
4701	PETERS, BURTIN
4717	WALTERS, DALE
4726	VANVUREN, BARBARA E
4820	KOOYERS, CHRIS
4828	VOS, RONALD A
4835	MYAARD, JEFFREY F
4845	SALE, TIM
4846	ZYLMAN, BRAD
4853	SNYDER, MARK
4855	LUBBERS, S

146TH AVE 2000 (Cont'd)

4860 SCHAAP, DALE S
4868 FOLKERT, JERRY L
4881 KENT DALE
KENT, DALE
4888 NIENHUIS, DAVID R
4892 ZEERIP, DAVID J
4895 BOWMAN, KATHI
ELHART, MICHEAL R
4898 ZEERIP, JOHN C
4904 ALDERINK, JAY
4905 KRAGT, STEVEN J
4914 DEJONGE, JERRY A
4920 KREUZE, KENNETH D
4922 POLARITY ELECTRIC INCORPORATED OFFICE
SMITH, JEFF
4943 BOEVE, RYAN
BOWKER, SHANNON
VANORDER, EVAN
4974 BOEVE, DONALD
4981 NABER, JACK A
4989 KUIPER, HAROLD
5006 VANDEN, PETER
WINGS OF MERCY
5013 DIEP, NELSON
5014 NYLAND, EDWARD
5019 ROSS, JUDY K
5028 GEURINK, ALVIN J
5044 GEURINK, SHERWIN
5047 MULDER, MARVIN A
5056 KLINGENBERG, GLENN H
5062 BOB TOLSMA PLUMBING
TOLSMA, ROBERT A
5065 KLINKS REPAIR
5073 KLINGENBERG, JIM
5080 SCHOLTEN, JAMES
5089 BROUWER, LOREN
5090 SCHAAP, MELVIN
5112 RUSSCHER, DUANE A
5113 RUSSCHER, MARVIN A
5125 MOKMA, KEITH
5136 RUSSCHER, PHILIP
5155 RUSSCHER, DOUGLAS A
5249 SCHAAP, PAUL A
5253 DUBBINK, RANDY
LANGLAND, DENNY
5257 RABBERS, JAMES
5258 VANDENBELT, ROBERT A
5300 HERNANDEZ, MARIA M
6031 TUCKER, LESLIE D
6034 MENKEN, HERMAN

146TH AVE 2000 (Cont'd)

6037 GENZINK, JAMES
6041 HULST, HOWARD
6045 STADT, MARVIN
6051 MOLNER, ALBERT A
6052 BOSMA, JEFF
6055 MOERLAND, PAUL
6061 VANLIERE, DALE
6062 DREYER, RONALD
6069 VANKAMPEN, LEON
6075 BONZELAAR, ROBERT
6080 ARENS, JERRY
6081 PRIME EXTERIORS
6086 GENZINK, CHRIS
6091 ODONNELL, MATTHEW
6096 HULST, MARC
6104 VOS, JEFF A
6129 KEEFER, ROBERT
6157 DOKTER, DONALD
6159 WINNINGHAM, CARMEN
6165 BUSSCHER, ALVIN
6175 BECKSVOORT, ROGER
6181 HULST, CALVIN J
6183 KNOLL, JOHN
6185 MOORE, GEORGE A
6215 VANWIEREN, JACK
6220 SMITH, CRAIG S
6222 YARDE, AMY M
6229 VANHUIS, LUTHER
6236 PHILLIPS, B A
6241 BOERMAN, GILBERT
6242 WALTERS, LONI
6253 BLAHARSKI, ROBERT
6259 SCHIPPA, DAN
6262 LANGEJANS, THOMAS K
6287 WOLTHUIS, BRIAN
6300 GROTENHUIS, WALLACE
6308 WESTRA, EUGENE
6322 LUBBERS, TERRI
6331 THOMAS, JASON A
6332 JAMES, TERRY
6338 SCHROETER, HOLLY A
6340 LAMAR, ROSS A
6353 BUSSCHER MELVIN D CPA
6355 BUSSCHER, ROGER
6363 CASWELL, DOUG
6365 BUSSCHER, HOWARD G
6368 GARVELINK, LELAND
WOLTMAN, RICHARD
6371 JOHN, ROBERT L
6374 ANTLES, JACK

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 2000 (Cont'd)

6381	ACKERBERG, MICHAEL
6394	HENDRIXSON, IRWIN D
6444	SCHROTENBOER, RAY
6445	KRUITHOF, E J
6456	LEEUW, HARRY
6485	NUMMIKOSKI, GARY
6488	PENNA, BILL
6497	TER, KATIE
6498	SCHIPPA, GARY A
6516	DROOGER, DAVID G
6519	DUFFIN, MARTHA A
6532	DROOGER, DENNIS P
6545	GENTRY, TERRY
6565	CROCOLL, CLIFF
6568	ZOERHOF, ERNEST J
6616	POLL, ROBERT
6619	LAMAR, MATTHEW
6631	BOUWMAN, ROG

Target Street	Cross Street	Source
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E 48TH ST 2000

7	HILBINK, MOLLIE
	PRINS, LISA
17	PHANTHAVONG, PHIM
19	BALL, R
	GLASS, JOEL
	NIENHUIS, RICHARD E
	WILSON, MICHELE
31	AYALA, RAMIRO
	ESCH, JULIE E
41	BENAVIDEZ, RODRIGO
	KRUIS, JIM
	WOODS, DENNIS
43	BEYRLE, JOSHUA
	BRAFORD, PATRICK
	CASTILLO, MICHAEL
	DOZIER, P A
111	DYKSTRA, RICHARD
140	HOFMEYER, HUBERT
155	BAARMAN, DORI J
	BEYER, E
	BIRKHOLZ, CAROL
	BOSMA, WILLIAM J
	BREMER, R N
	BRIGHT, KATHY
	BUSS, PHILLIP D
	BUUS C OLIVERREV
	BUUS, C O
	COBB, MARY
	COLLINS, V M
	DALEIDEN, KATHY
	DAMSGAARD, PETER
	DROST, MINNIE
	DUQUETTE, MARLENE
	DYKSTRA, D
	FOLKERT, MYRON
	GARCIA, JUAN
	GARCIA, RUFINA
	HEIKEMA, SANDRA
	HILBINK, SCOTT
	HUGHES, HUBERT E
	KIEKINTVELD, ELAINE
	KOEMAN, MARVIN
	KUIPERS, CHESTER
	LAACKMANN, LON
	LOKERS, JEAN
	LONG, B
	MORRISON, TIM K
	OVERWAY, DEBRA
	PERKINS, CHARLES E
	PIKE, PHILLIP

E 48TH ST 2000 (Cont'd)

155	PLASTER, BETTY
	PRINCE, RICHARD
	PRINS, H
	RIGTERINK, BELVA H
	SCHAAP, WILLIAM
	SCHOLTEN, P
	SLIKKERS, RICK
	SLOTMAN, PAUL
	TENBRINK, MARVIN
	TUCKER, A
	TUTTLE, VICKY
	VANDAM, JOHN G
	VANDENBELDT, NELSON
	VANDERPLOEG, STEVE
	VANORDER, J
	VANORDER, RAY
	VER, H
	VERHOEVEN, HAZEL A
	VOLKERS, V
	WEBER, SHARYL L
	WOLTERS, ROBERT O
	WOUDWYK, ROCKY J
	ZACHARY, EDDIE
0192	EAGLE OF SOUTHERN MICHIGAN
	GLASS ENTERPRISE INCORPORATED
210	RHINE, GREG
228	LUBBERS, JULIUS
258	NUVAR MANUFACTURING COMPANY
284	HJERTQUIST, LINDA L
	RYDER TRUCK RENTAL AND LEASING
	RYDER TRUCK RENTAL ONE WAY INCORPORATED
300	TRANS MATIC
	TRANS MATIC MANUFACTURING
338	L S MOLD
345	MICROMATIC TEXTRON
	TEXTRON AUTOMOTIVE
410	NELSON STEEL PRODUCTS INCORPORATED
442	THOMPSON, DAVID A
534	B L D PRODUCTS LIMITED
	SLOAN TRANSPORTATION PRODUCTS
	SUPERIOR PUSH ROD INCORPORATED
635	LIFESAVERS COMPANY
	LOCAL 822 R W D S U
	PLANTERS LIFESAVERS COMPANY

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146TH AVE 1995

3173	RUS, STEVEN
	SALAZAR, MANUEL Q
3232	DANNENBERG, DAVE
3246	OCCUPANT UNKNOWNN
3260	OCCUPANT UNKNOWNN
3266	WALSH, LORNA D
3284	WIERSEMA, NORMAN
3306	OCCUPANT UNKNOWNN
3321	PARKS, PEGGY
3330	KORTMAN, MINDY
3331	VANDENBOSCH, DUANE
3333	VANDYKE, ROXANNE
3348	WOLDRING, JOHN
3349	ELHART, MELVIN L
3360	ROSE, LEOLA
3365	SIMMONS, ROY
3367	WALTON, C
3369	SIMMONS, SYLVIA
3809	HULST, HAROLD B
3810	DOZEMAN, BOB
3830	OCCUPANT UNKNOWNN
3840	DOZEMAN, CHESTER
3858	SCHREUR, GORDON
3875	COMPAGNER, L
3915	BELL, JACK
3922	ARENDSEN, STEVE
3925	OCCUPANT UNKNOWNN
3931	FREEMAN, KURT
3939	HOEKSTRA, ROBERT
3986	BROEKHUIS, ART
3995	ISENGA, GORDON
4054	HOEKSTRA, JOHN
4098	BRINK, CHARLES
4130	PRICE, DAVID
4202	ELENBAAS, LYNN
4211	KLYNSTRA, JOHN
4251	MOL, KEN
4617	WOLTERS, KENNETH
4632	FOLKERT, RODNEY
4668	SLOTMAN, MERLE
4717	WALTERS, DALE
4835	SCHREUR, GERARD
4853	SNYDER, MARK
4855	OCCUPANT UNKNOWNN
4860	SCHAAP, DALE S
4881	OCCUPANT UNKNOWNN
4888	NIENHUIS, DAVID R
4892	ZEERIP, DAVID
4895	KROLL, KEITH A
4898	ZEERIP, JOHN C

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 1995 (Cont'd)

4904	ALDERINK, JAY
4905	KRAGT, STEVEN J
4920	KREUZE, KENNETH D
4942	J & S OUTDOOR SVC
4943	EDMONDS, DAVID A
4959	KRUITHOFF, RANDALL A
4974	BOEVE, DONALD
4981	OCCUPANT UNKNOWNN
4989	KUIPER, HAROLD
5006	WINGS OF MERCY
5014	NYLAND, EDWARD
5019	ROSS, JUDITH K
5028	GEURINK, ALVIN J
5044	GEURINK, SHERWIN
5047	MULDER, MARVIN
5062	TOLSMA, ROBERT
5065	KLINGENBERG, GLENN H
5069	KLINGENBERG, STEVE
5080	SCHAAP FARMS
	SCHAAP, WAYNE
5083	OCCUPANT UNKNOWNN
5089	BROUWER, LOREN
5090	SCHAAP, MELVIN
5112	RUSSCHER, MARVIN
5113	RUSSCHER, MARVIN
5125	MOKMA, KEITH
5136	RUSSCHER, PHILIP
5155	RUSSCHER, DOUGLAS
5249	SCHAAP, PAUL
5253	DUBBINK, RANDY
	LANGLAND, DENNY
5257	RABBERS, JAMES SR
5258	VANDENBELT, ROBERT A
5326	ADAY, TINA A
	BOEVE, DAVE
	VANDERKOLK, JAMES W
5351	GROTENHUIS, CHESTER
6031	TUCKER, LESLIE D
6034	MENKEN, HERMAN
6037	GENZINK, JAMES
6041	HULST, HOWARD
6042	ZALIS, JOHN
6045	STADT, MARVIN
6048	KOEMAN, PAMELA
6051	MOLNER, ALBERT A
6052	BOSMA, JEFF
6055	MOERLAND, PAUL
6058	HENTSCHEL, DOUGLAS
6061	VANLIERE, DALE
6069	VANKAMPEN, LEON

146TH AVE 1995 (Cont'd)

6080 ARENS, JERRY
6081 BALDWIN, LARRY R
6086 OONK, DWAYNE E
6091 ODONNELL, MATTHEW
6096 KLAMT, STEVEN
6104 DEVREE, RICHARD
6115 HAVERDINK, CALVIN
6129 DARNELL, COLLEEN
6137 DEKKER, DAVID
6157 DOKTER, DONALD
6159 BROWN, RODNEY L
6165 BUSSCHER, ALVIN
6174 BECKSFORD, WILLIAM
6175 BECKSVOORT, ROGER
6181 HULST, CALVIN J
6183 KNOLL, JOHN
6185 RHODA, ROBERT
6215 VANWIEREN, JACK
6222 SCHROTENBOER, MICHAEL R
6229 VANHUIS, LUTHER
6241 BOERMAN, GILBERT
6242 WALTERS, LONI
6253 BLAHARSKI, ROBERT
6259 SCHIPPA, DAN
6262 LANGEJANS, THOMAS K
6281 MYERS, C
POST, MARLOWE
6287 KUMKEL, ADAM
6300 GROTENHUIS, WALLACE
6308 WESTRA, EUGENE
6322 LUBBERS, C
6332 JAMES, TERRY
6338 SCHIPPERS, LAVERNE J
6340 SCHERER, PAUL
6353 BUSSCHER, MELVIN D
6355 BUSSCHER, ROGER
6363 VANOSS, DANIEL
6365 BUSSCHER, HOWARD G
6368 WOLTMAN, RICHARD
6371 JOHN, ROBERT L
6374 ANTLES, JACK
6378 GARVELINK, LELAND
6381 ACKERBERG, MICHAEL
HAMMOND, LINDA E
6394 HENDRIXSON, IRWIN D
6444 SCHROTENBOER, RAY
6445 PIERSMA, BRADLEY
6456 LEEUW, HARRY
6485 JACOBS, HARRY G
6488 PENNA, BILL

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146TH AVE 1995 (Cont'd)

6497	JACOBS, RODNEY
6498	SCHIPPA, GARY
6502	WILEY, RONALD
6516	DROOGER, DAVID G
6519	OCCUPANT UNKNOWNN
6532	DROOGER, DENNIS P
6544	OCCUPANT UNKNOWNN
6545	GENTRY, TERRY
6553	ANTHONY, GERALD
6565	CROCOLL, CLIFF
6586	ZOERHOF, ERNEST J
6590	RUIZ, B
6616	POLL, ROBERT
6619	LAMAR, MATTHEW
6631	BOUWMAN, ROG

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E 48TH ST 1995

5	LOWER, TAMILIN
	VISSER, CAROLYN
7	FUGLSETH, ROBERT
	GEOFFROY, RENEE
	PUTNAM, AMY
17	BURTON, JOSEPH R
	GAMEZ, JESSE
	SOSA, B
19	GARLOCK, CHARLES
	GUDITH, LINDA
	HOPKINS, KELLI
	KNIKELBINE, LISA
	MILLER, RACHEL
	NINO, ESTHER
29	ANDREWS, STEVEN
	BOSCH, TIMOTHY M
	SNYDER, TANIA
	TIMMER, MARC
31	ALMANZA, ELEAZAR
	BRAGG, JANET
	MARTINEZ, CARMELA
41	AJAKS BUILDING MAINTENANCE
	ANDERSON, BRANDI
	GAMBY, DOUG
	GRAY, ERIC
	KRUIS, JAMES
	PILARSKI, KRISTEN
	TOWNSEND, ERIK
43	MACHEN, M
	SLAGER, CINDY
51	KOLEAN, WILLIAM
58	OCCUPANT UNKNOWNN
111	DYKSTRA, RICHARD
140	HOFMEYER, HUBERT
155	BEYER, PAUL
	BLOOD, K
	BOSMA, WILLIAM J
	BUSS, PHILLIP D JR
	BUUS, C O
	CARPENTER, SCOTT
	CLARK, BRUCE
	COLLINS, V M
	DEWITT, BEN
	DROST, MINIE
	DYKSTRA, D
	EDEWAARD, STEVE
	FOLKERT, MYRON
	GARCIA, JUAN
	GARDNER, W E
	HARRISON, M

E 48TH ST 1995 (Cont'd)

155	HILBINK, SCOTT
	HILL, R
	KIEKINTVELD, JAMES H
	KLINE, STEVEN P
	KOEMAN, MARVIN
	LAACKMANN, LON
	LOKERS, JEAN
	LONG, CECIL
	MOKMA, S
	MOSIER, ALLEN
	MULDER, HAROLD
	MYLER, APRIL A
	NEWMAN, LEWIS
	OCONNOR, E A
	OVERWAY, KARLA
	OWENS, TRUMAN
	PIKE, PHILLIP
	PONSTEIN, LAMBERT J
	PRINCE, RICHARD
	PRINS, H
	RIGTERINK, B H
	SCHAAP, WILLIAM JR
	SCHOLTEN, P
	SLIKKERS, RICK
	SMALLDON, ROBERT
	SMITH, DOUG J
	STAAT, RICHARD A
	TENBRINK, MARVIN
	TODD, DONALD
	TUCKER, A
	VANDENBELDT, NELSON
	VERHOEVEN, JOHN
	VOLKERS, VIOLA
	WOLTERS, ROBERT O
	YFF, HENRY
0192	EAGLE OF SO MICH
	EAGLE OF SOUTHERN MICHIGAN
	GLASS ENTERPRISE INC
210	BRUSH, ARNOLD
	ULTRA TRANSPORTATION SVC
228	LUBBERS, JULIUS
258	NUVAR MNFCTRNG CO
	POLYNESIAN POOLS
284	RYDER TRUCK RENTAL INC
300	TRANS MATIC MFG CO
338	L S MOLDS
345	MICROMATIC TEXTRON
410	NELSON STEEL PRODUCTS INC
442	THOMPSON, DAVID A
452	FORTS CANDIES

Target Street	Cross Street	Source
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E 48TH ST 1995 (Cont'd)

534	BLD PRODUCTS LTD
	SLOAN TRNSPRTN PRD
	SUPERIOR PUSH ROD
635	PLANTERS LIFE SAVERS CO
640	BOEVE, WALLACE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 1992

3232	DANNENBERG, DAVE
3266	WALSH, LORNA D
3267	SIMMONS, ROY
3284	WIERSEMA, NORMAN
3318	KOLE, DENNIS R
3330	KORTMAN, BRIAN R
3331	VANDENBOSCH, DUANE
3333	VANDYKE, ROXANNE
3349	ELHART, MELVIN L
3360	ROSE, LEOLA
3369	SIMMONS, SYLVIA
3809	HULST, HAROLD B
3810	DOZEMAN, BOB
3830	VANDERKOOY, DOUG
3840	DOZEMAN, CHESTER
3858	SCHREUR, GORDON
3875	COMPAGNER, RONALD
3915	BELL, JACK
3922	ARENDSEN, STEVE
3931	FREEMAN, KURT
3939	HOEKSTRA, ROBERT
3986	BROEKHUIS, ART
3995	GORDON ISENGA
	ISENGA, GORDON
	MYKRAFTS
4054	HOEKSTRA, JOHN
4098	BRINK, ANDREW
4130	COMPAGNER, JOHN
4202	ELENBAAS, LYNN
4211	KLYNSTRA, JOHN
4251	MOL, KENNETH
4617	WOLTERS, KENNETH
4632	FOLKERT, RODNEY
4668	SLOTMAN, MERLE
4701	PETERS, BURTIN
4717	WALTERS, DALE
4828	VOS, RONALD A
4835	SCHREUR, GERARD
4855	LUBBERS, S
4860	SCHAAP, DALE S
4868	FOLKERT, JERRY L
4888	NIENHUIS, DAVID R
4892	ZEERIP, DAVID
4895	NYHOF, O
4898	ZEERIP, JOHN C
4904	ALDERINK, JAY
4905	TUBERGEN, MELVIN
4914	DEJONGE, JERRY A
4920	KREUZE, KENNETH D
4942	BOSCH, NATHAN J

146TH AVE 1992 (Cont'd)

4943	BOEVE, EDWARD
4959	KRUITHOFF, RANDALL A
4974	BOEVE, DONALD
4981	LAMPEN, TOM
4989	KUIPER, HAROLD
5006	VANDENBOSCH, PETER J
5014	NYLAND, EDWARD
5019	ROSS, J K
5028	GEURINK, ALVIN J
5044	GEURINK, SHERWIN
5047	MULDER, MARVIN
5062	TOLSMA, ROBERT
5065	KLINGENBERG, GLENN H
5069	KLINGENBERG, STEVE
5080	SCHAAP, WAYNE
5089	KLINGENBERG, JAMES A
5090	SCHAAP, MELVIN
5112	RUSSCHER, MARVIN
5113	RUSSCHER, DUANE
5125	MOKMA, LEWIS T
5136	RUSSCHER, PHILIP
5155	RUSSCHER, DOUGLAS
5249	SCHAAP, PAUL
5253	DUBBINK, RANDY
5257	RABBERS, JAMES SR
5258	VANDENBELT, ROBERT A
5326	VANDERKOLK, JAMES W
5345	GROTENHUIS, BERT
5351	GROTENHUIS, CHESTER
6031	TUCKER, LESLIE D
6034	MENKEN, HERMAN
6037	GENZINK, JAMES
6041	HULST, HOWARD
6042	ZALIS, JOHN
6045	STADT, MARVIN
6051	MOLNER, ALBERT A
6052	BOSMA, JEFF
6055	LANGEJANS, JUNIOR L
6058	HAVERDINK, C
6061	VANLIERE, DALE
6069	VANKAMPEN, LEON
6080	ARENS, JERRY
6081	SLAGER, JULIUS
6086	OONK, DWAYNE E
6091	ODONNELL, MATTHEW
6096	KLAMT, STEVEN
6104	DEVREE, RICHARD
6115	HAVERDINK, CALVIN
6137	DEKKER, DAVID
6157	DOKTER, DONALD

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 1992 (Cont'd)

6165 BUSSCHER, ALVIN
6174 BECKSFORD, WILLIAM
6175 BECKSVOORT, ROGER
6181 HULST, CALVIN J
6183 KNOLL, JOHN
6185 RHODA, ROBERT
6215 VANWIEREN, JACK
6222 SCHROTENBOER, MICHAEL R
6229 VANHUIS, LUTHER
6241 BOERMAN, GILBERT
6242 WALTERS, LONI
6253 BLAHARSKI, ROBERT
6256 MIHM, JOHN
6259 SCHIPPA, DAN
6262 LANGEJANS, THOMAS K
6281 POST, MARLOWE
6287 KUNKEL, JOHN
TATLOCK, DAVID
6300 GROTENHUIS, WALLACE
6308 WESTRA, EUGENE
6322 VANDERBIE, WILLARD
6332 WOLTMAN, TERRY
6338 SCHIPPERS, LAVERNE J
6340 VANDERBIE, A
6353 BUSSCHER, MELVIN D
6355 BUSSCHER, ROGER
6363 VANOSS, DANIEL
6365 BUSSCHER, HOWARD G
6368 WOLTMAN, RICHARD
6371 JOHN, ROBERT L
6374 ANTLES, JACK
JOHNSON, BRYAN
6381 ACKERBERG, MICHAEL
HAMMOND, LINDA E
6394 HENDRIXSON, IRWIN D
6485 JACOBS, HARRY G
6488 PENNA, BILL
6497 JACOBS, RODNEY
6498 SCHIPPA, GARY
6502 CORCORAN, MICHAEL W
6516 DROOGER, DAVID G
6532 DROOGER, DENNIS P
6536 DROOGER, PAUL
6545 GENTRY, TERRY
6553 ANTHONY, GERALD
6565 CROCOLL, C
6586 ZOERHOF, ERNEST J
6590 OSELAND, DAVID
6596 THE DUDDERY
THE SAND CASTLE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

146TH AVE 1992 (Cont'd)

6616 HELBING, EDWARD J
6619 LAMAR, MATTHEW
6631 BOUWMAN, ROGER

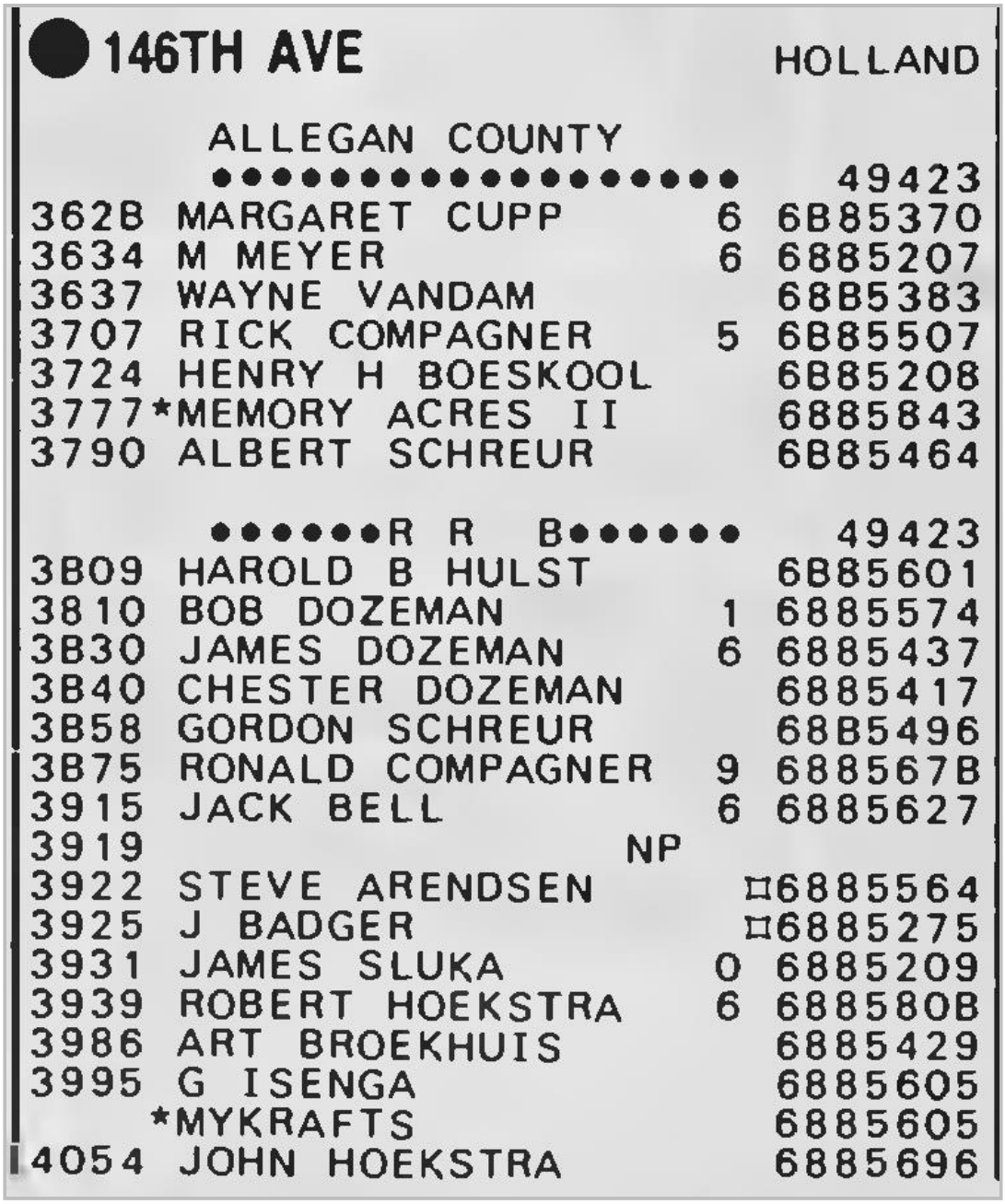
Target Street	Cross Street	Source
✓	-	EDR Digital Archive

E 48TH ST 1992

31	BORDEN, M
	ROBERTS, LISA
41	ORTIZ, MARTIN
43	MATTHEWS, BETH
51	KOLEAN, WILLIAM
52	WILLIAMSON, RICHARD
74	NEEDHAM, DENNIS
111	DYKSTRA, RICHARD
140	HOFMEYER, HUBERT
155	DEVRIES, J
	EMING, RICHARD W
172	MONSON, K D
0192	EAGLE OF SO MICH
	EAGLE OF SOUTHERN
	GLASS ENTERPRISE
	PULLEN, BETH
210	CHRISTENSEN, MICHAEL B
228	LUBBERS, JULIUS
258	NUVAR MNFCTRNG CO
	PLYNESIAN POOLS
284	ATLAS DRIVE TRCK
	ATLAS TRUCK RENT
	RYDER TRUCK RNTL
292	VELA, YOLANDA B
293	BROWN, ALAN
300	TRANS-MATIC
313	MILBOCKER, P
338	LS MOLDS
345	MICROMATIC TEXTRON
410	NELSON STEEL PRODT
442	THOMPSON, DAVID A
452	FORTS CANDIES
534	BLD PRODUCTS LTD
	SPINETT INC
	SUPERIOR PUSH ROD
635	PLANTERS LIFESAVER
682	BOEVE, ANDREW H

Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1987



146TH AVE HOLLAND

ALLEGAN COUNTY

●●●●●●●●●●●●●●●●●● 49423

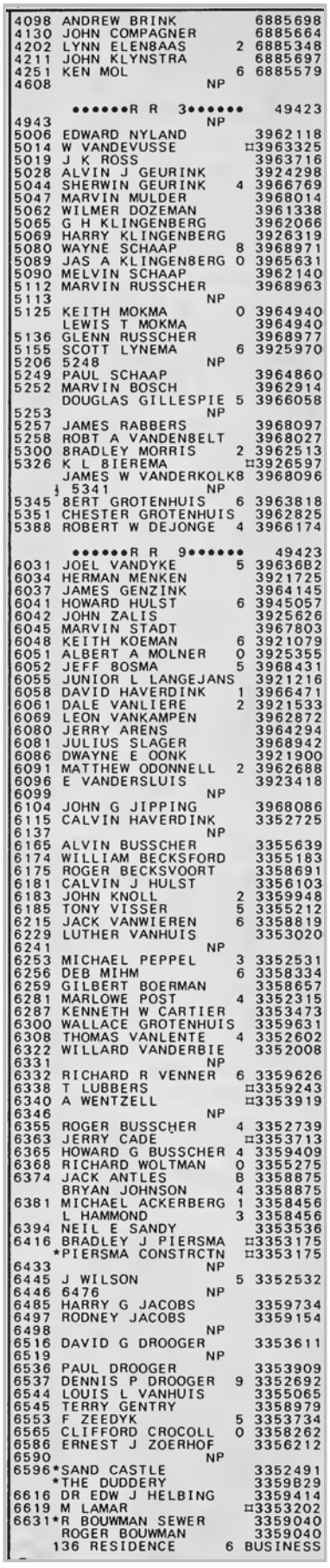
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3634	M MEYER	6	6885207
3637	WAYNE VANDAM		68B5383
3707	RICK COMPAGNER	5	6885507
3724	HENRY H BOESKOOL		6885208
3777	*MEMORY ACRES II		6885843
3790	ALBERT SCHREUR		6885464

●●●●●●R R B●●●●●● 49423

3B09	HAROLD B HULST		6885601
3810	BOB DOZEMAN	1	6885574
3B30	JAMES DOZEMAN	6	6885437
3B40	CHESTER DOZEMAN		6885417
3B58	GORDON SCHREUR		68B5496
3B75	RONALD COMPAGNER	9	688567B
3915	JACK BELL	6	6885627
3919		NP	
3922	STEVE ARENDSEN		⌑6885564
3925	J BADGER		⌑6885275
3931	JAMES SLUKA	0	6885209
3939	ROBERT HOEKSTRA	6	688580B
3986	ART BROEKHUIS		6885429
3995	G ISENGA		6885605
	*MYKRAFTS		6885605
4054	JOHN HOEKSTRA		6885696

Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1987



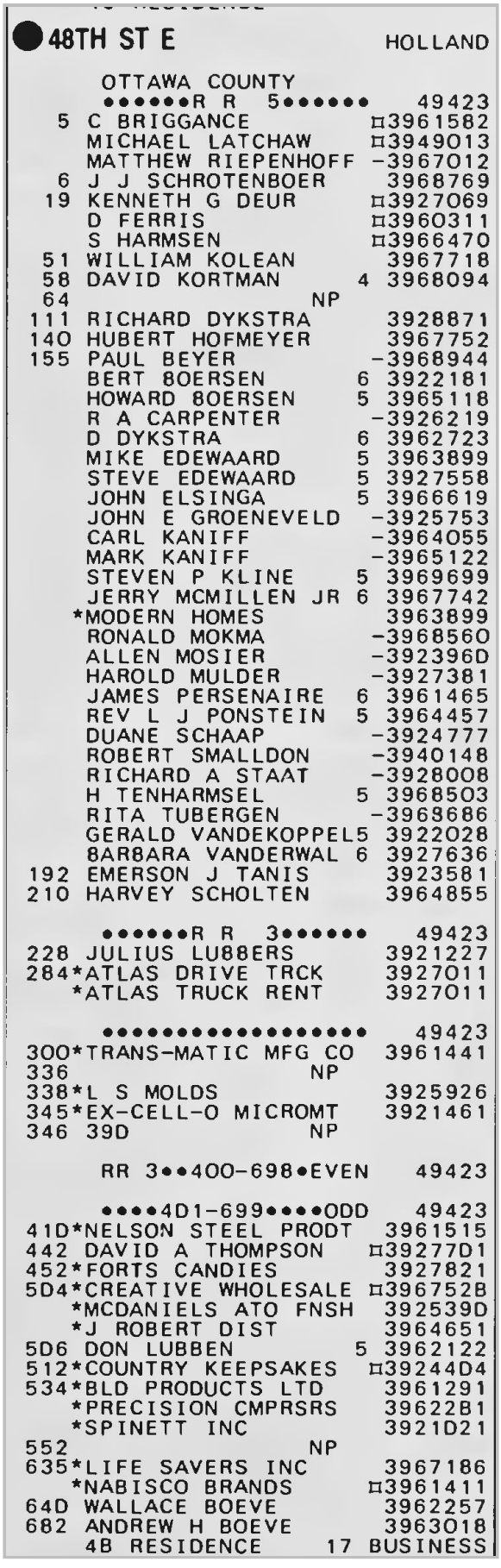
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4130 JOHN COMPAGNER            6885664
4202 LYNN ELEN8AAS          2  6885348
4211 JOHN KLYNSTRA             6885697
4251 KEN MOL                6  6885579
4608                      NP

      ••••••R R  3•••••••      49423
4943                      NP
5006 EDWARD NYLAND             3962118
5014 W VANDEVUSSE             ¤3963325
5019 J K ROSS                  3963716
5028 ALVIN J GEURINK           3924298
5044 SHERWIN GEURINK        4  3966769
5047 MARVIN MULDER             3968014
5062 WILMER DOZEMAN            3961338
5065 G H KLINGENBERG           3962066
5069 HARRY KLINGENBERG         3926319
5080 WAYNE SCHAAP           8  3968971
5089 JAS A KLINGEN8ERG      0  3965631
5090 MELVIN SCHAAP             3962140
5112 MARVIN RUSSCHER           3968963
5113                      NP
5125 KEITH MOKMA            0  3964940
     LEWIS T MOKMA             3964940
5136 GLENN RUSSCHER            3968977
5155 SCOTT LYNEMA           6  3925970
5206 5248                 NP
5249 PAUL SCHAAP               3964860
5252 MARVIN BOSCH              3962914
     DOUGLAS GILLESPIE      5  3966058
5253                      NP
5257 JAMES RABBERS             3968097
5258 ROBT A VANDEN8ELT         3968027
5300 8RADLEY MORRIS         2  3962513
5326 K L 8IEREMA              ¤3926597
     JAMES W VANDERKOLK8       3968096
    ½ 5341                 NP
5345 8ERT GROTENHUIS        6  3963818
5351 CHESTER GROTENHUIS        3962825
5388 ROBERT W DEJONGE       4  3966174

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6031 JOEL VANDYKE           5  3963682
6034 HERMAN MENKEN             3921725
6037 JAMES GENZINK             3964145
6041 HOWARD HULST           6  3945057
6042 JOHN ZALIS                3925626
6045 MARVIN STADT              3967803
6048 KEITH KOEMAN           6  3921079
6051 ALBERT A MOLNER        0  3925355
6052 JEFF BOSMA             5  3968431
6055 JUNIOR L LANGEJANS        3921216
6058 DAVID HAVERDINK        1  3966471
6061 DALE VANLIERE          2  3921533
6069 LEON VANKAMPEN            3962872
6080 JERRY ARENS               3964294
6081 JULIUS SLAGER             3968942
6086 DWAYNE E OONK             3921900
6091 MATTHEW ODONNELL       2  3962688
6096 E VANDERSLUIS             3923418
6099                      NP
6104 JOHN G JIPPING            3968086
6115 CALVIN HAVERDINK          3352725
6137                      NP
6165 ALVIN BUSSCHER            3355639
6174 WILLIAM BECKSFORD         3355183
6175 ROGER BECKSVOORT          3358691
6181 CALVIN J HULST            3356103
6183 JOHN KNOLL             2  3359948
6185 TONY VISSER            5  3355212
6215 JACK VANWIEREN         6  3358819
6229 LUTHER VANHUIS            3353020
6241                      NP
6253 MICHAEL PEPPEL         3  3352531
6256 DEB MIHM               6  3358334
6259 GILBERT BOERMAN           3358657
6281 MARLOWE POST           4  3352315
6287 KENNETH W CARTIER         3353473
6300 WALLACE GROTENHUIS        3359631
6308 THOMAS VANLENTE        4  3352602
6322 WILLARD VANDERBIE         3352008
6331                      NP
6332 RICHARD R VENNER       6  3359626
6338 T LUBBERS                ¤3359243
6340 A WENTZELL               ¤3353919
6346                      NP
6355 ROGER BUSSCHER         4  3352739
6363 JERRY CADE               ¤3353713
6365 HOWARD G BUSSCHER      4  3359409
6368 RICHARD WOLTMAN        0  3355275
6374 JACK ANTLES            8  3358875
     BRYAN JOHNSON          4  3358875
6381 MICHAEL ACKERBERG      1  3358456
     L HAMMOND              3  3358456
6394 NEIL E SANDY              3353536
6416 BRADLEY J PIERSMA        ¤3353175
    *PIERSMA CONSTRCTN        ¤3353175
6433                      NP
6445 J WILSON               5  3352532
6446 6476                 NP
6485 HARRY G JACOBS            3359734
6497 RODNEY JACOBS             3359154
6498                      NP
6516 DAVID G DROOGER           3353611
6519                      NP
6536 PAUL DROOGER              3353909
6537 DENNIS P DROOGER       9  3352692
6544 LOUIS L VANHUIS           3355065
6545 TERRY GENTRY              3358979
6553 F ZEEDYK               5  3353734
6565 CLIFFORD CROCOLL       0  3358262
6586 ERNEST J ZOERHOF          3356212
6590                      NP
6596*SAND CASTLE               3352491
    *THE DUDDERY               3359829
6616 DR EDW J HELBING          3359414
6619 M LAMAR                  ¤3353202
6631*R BOUWMAN SEWER           3359040
     ROGER BOUWMAN             3359040
    136 RESIDENCE           6 BUSINESS
```

Target Street	Cross Street	Source
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E 48TH ST 1987



48TH ST E HOLLAND

OTTAWA COUNTY
••••••R R 5•••••• 49423
5 C BRIGGANCE ¤3961582
MICHAEL LATCHAW ¤3949013
MATTHEW RIEPENHOFF -3967012
6 J J SCHROTENBOER 3968769
19 KENNETH G DEUR ¤3927069
D FERRIS ¤3960311
S HARMSEN ¤3966470
51 WILLIAM KOLEAN 3967718
58 DAVID KORTMAN 4 3968094
64 NP
111 RICHARD DYKSTRA 3928871
140 HUBERT HOFMEYER 3967752
155 PAUL BEYER -3968944
BERT BOERSEN 6 3922181
HOWARD BOERSEN 5 3965118
R A CARPENTER -3926219
D DYKSTRA 6 3962723
MIKE EDEWAARD 5 3963899
STEVE EDEWAARD 5 3927558
JOHN ELSINGA 5 3966619
JOHN E GROENEVELD -3925753
CARL KANIFF -3964055
MARK KANIFF -3965122
STEVEN P KLINE 5 3969699
JERRY MCMILLEN JR 6 3967742
*MODERN HOMES 3963899
RONALD MOKMA -3968560
ALLEN MOSIER -392396D
HAROLD MULDER -3927381
JAMES PERSENAIRE 6 3961465
REV L J PONSTEIN 5 3964457
DUANE SCHAAP -3924777
ROBERT SMALLDON -3940148
RICHARD A STAAT -3928008
H TENHARMSEL 5 3968503
RITA TUBERGEN -3968686
GERALD VANDEKOPPEL 5 3922028
BARBARA VANDERWAL 6 3927636
192 EMERSON J TANIS 3923581
210 HARVEY SCHOLTEN 3964855

••••••R R 3•••••• 49423
228 JULIUS LUBBERS 3921227
284*ATLAS DRIVE TRCK 3927011
*ATLAS TRUCK RENT 3927011

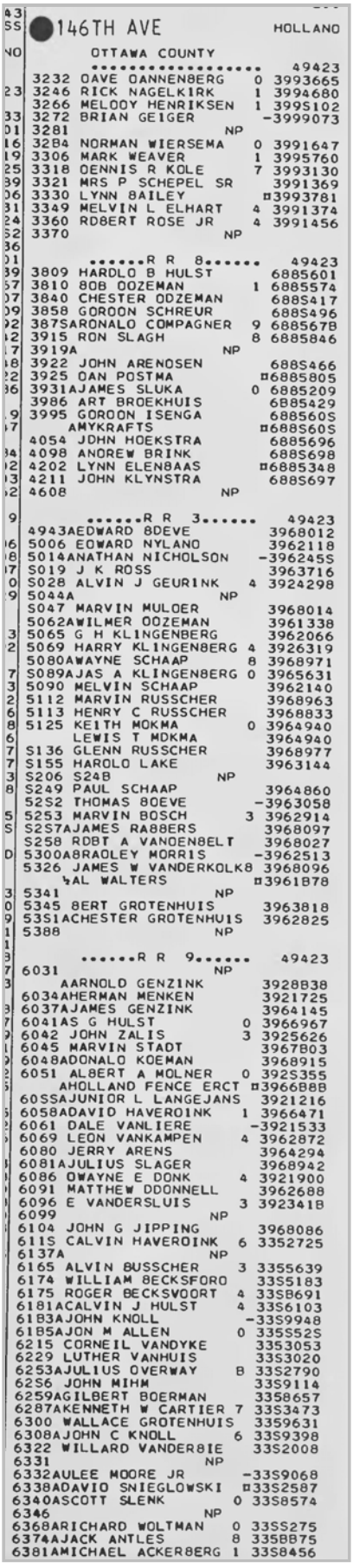
•••••••••••••••••• 49423
300*TRANS-MATIC MFG CO 3961441
336 NP
338*L S MOLDS 3925926
345*EX-CELL-O MICROMT 3921461
346 39D NP

RR 3••400-698•EVEN 49423

••••4D1-699••••ODD 49423
41D*NELSON STEEL PRODT 3961515
442 DAVID A THOMPSON ¤39277D1
452*FORTS CANDIES 3927821
5D4*CREATIVE WHOLESALE ¤3967528
*MCDANIELS ATO FNSH 392539D
*J ROBERT DIST 3964651
5D6 DON LUBBEN 5 3962122
512*COUNTRY KEEPSAKES ¤39244D4
534*BLD PRODUCTS LTD 3961291
*PRECISION CMPRSRS 39622B1
*SPINETT INC 3921D21
552 NP
635*LIFE SAVERS INC 3967186
*NABISCO BRANDS ¤3961411
64D WALLACE BOEVE 3962257
682 ANDREW H BOEVE 3963018
48 RESIDENCE 17 BUSINESS

Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1982



146TH AVE HOLLAND

OTTAWA COUNTY

•••••••••••••••••• 49423

3232 DAVE DANNENBERG 0 3993665
3246 RICK NAGELKIRK 1 3994680
3266 MELODY HENRIKSEN 1 3995102
3272 BRIAN GEIGER -3999073
3281 NP
3284 NORMAN WIERSEMA 0 3991647
3306 MARK WEAVER 1 3995760
3318 DENNIS R KOLE 7 3993130
3321 MRS P SCHEPEL SR 3991369
3330 LYNN BAILEY ¤3993781
3349 MELVIN L ELHART 4 3991374
3360 ROBERT ROSE JR 4 3991456
3370 NP

••••••R R 8•••••• 49423

3809 HAROLD B HULST 6885601
3810 BOB DOZEMAN 1 6885574
3840 CHESTER DZEMAN 688S417
3858 GORDON SCHREUR 688S496
387SARONALD COMPAGNER 9 688567B
3915 RON SLAGH 8 6885846
3919A NP
3922 JOHN ARENDSEN 688S466
3925 DAN POSTMA ¤6885805
3931AJAMES SLUKA 0 6885209
3986 ART BROEKHUIS 6885429
3995 GORDON ISENGA 688560S
AMYKRAFTS ¤688S60S
4054 JOHN HOEKSTRA 6885696
4098 ANDREW BRINK 688S698
4202 LYNN ELENBAAS ¤6885348
4211 JOHN KLYNSTRA 688S697
4608 NP

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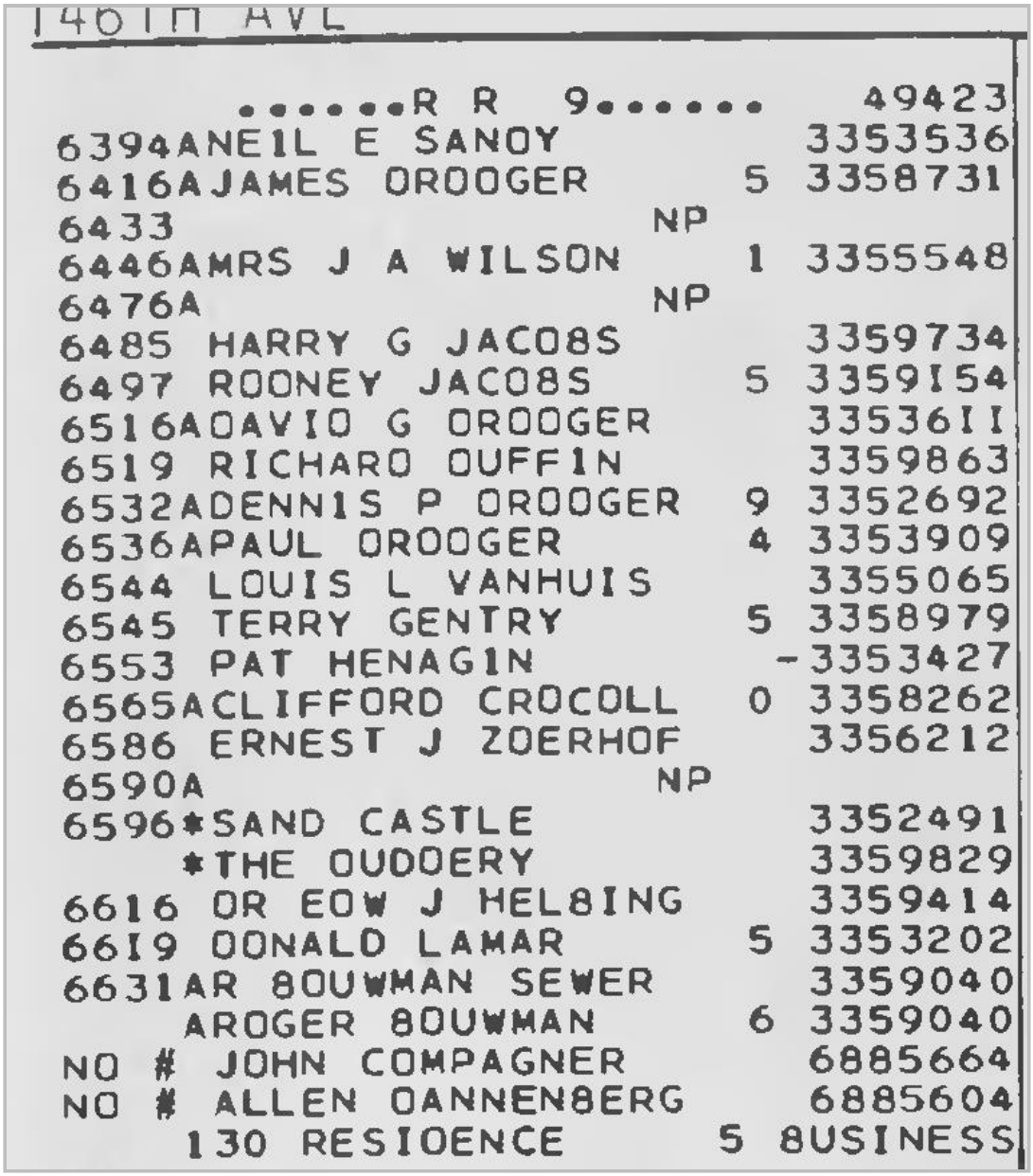
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S047 MARVIN MULDER 3968014
5062AWILMER DOZEMAN 3961338
5065 G H KLINGENBERG 3962066
5069 HARRY KLINGENBERG 4 3926319
5080AWAYNE SCHAAP 8 3968971
S089AJAS A KLINGENBERG 0 3965631
5090 MELVIN SCHAAP 3962140
5112 MARVIN RUSSCHER 3968963
5113 HENRY C RUSSCHER 3968833
5125 KEITH MOKMA 0 3964940
LEWIS T MDKMA 3964940
S136 GLENN RUSSCHER 3968977
S155 HAROLD LAKE 3963144
S206 S24B NP
S249 PAUL SCHAAP 3964860
52S2 THOMAS BOEVE -3963058
5253 MARVIN BOSCH 3 3962914
S2S7AJAMES RABBERS 3968097
S258 ROBT A VANDENBELT 3968027
5300ABRADLEY MORRIS -3962513
5326 JAMES W VANDERKOLK8 3968096
½AL WALTERS ¤3961B78
5341 NP
5345 BERT GROTENHUIS 3963818
53S1ACHESTER GROTENHUIS 3962825
5388 NP

••••••R R 9•••••• 49423

6031 NP
AARNOLD GENZINK 3928B38
6034AHERMAN MENKEN 3921725
6037AJAMES GENZINK 3964145
6041AS G HULST 0 3966967
6042 JOHN ZALIS 3 3925626
6045 MARVIN STADT 3967B03
6048ADONALD KOEMAN 3968915
6051 ALBERT A MOLNER 0 392S355
AHOLLAND FENCE ERCT ¤3966B8B
60SSAJUNIOR L LANGEJANS 3921216
6058ADAVID HAVEROINK 1 3966471
6061 DALE VANLIERE -3921533
6069 LEON VANKAMPEN 4 3962872
6080 JERRY ARENS 3964294
6081AJULIUS SLAGER 3968942
6086 DWAYNE E DONK 4 3921900
6091 MATTHEW DDONNELL 3962688
6096 E VANDERSLUIS 3 3923418
6099 NP
6104 JOHN G JIPPING 3968086
611S CALVIN HAVEROINK 6 3352725
6137A NP
6165 ALVIN BUSSCHER 3 3355639
6174 WILLIAM BECKSFORD 33S5183
6175 ROGER BECKSVOORT 4 33SB691
6181ACALVIN J HULST 4 33S6103
6183AJOHN KNOLL -33S9948
6185AJON M ALLEN 0 335S52S
6215 CORNEIL VANDYKE 3353053
6229 LUTHER VANHUIS 33S3020
6253AJULIUS OVERWAY 8 33S2790
62S6 JOHN MIHM 33S9114
6259AGILBERT BOERMAN 3358657
6287AKENNETH W CARTIER 7 33S3473
6300 WALLACE GROTENHUIS 3359631
6308AJOHN C KNOLL 6 33S9398
6322 WILLARD VANDERBIE 33S2008
6331 NP
6332AULEE MOORE JR -33S9068
6338ADAVID SNIEGLOWSKI ¤33S2587
6340ASCOTT SLENK 0 33S8574
6346 NP
6368ARICHARD WOLTMAN 0 33SS275
6374AJACK ANTLES 8 335BB75
6381AMICHAEL ACKERBERG 1 33S8456

Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1982

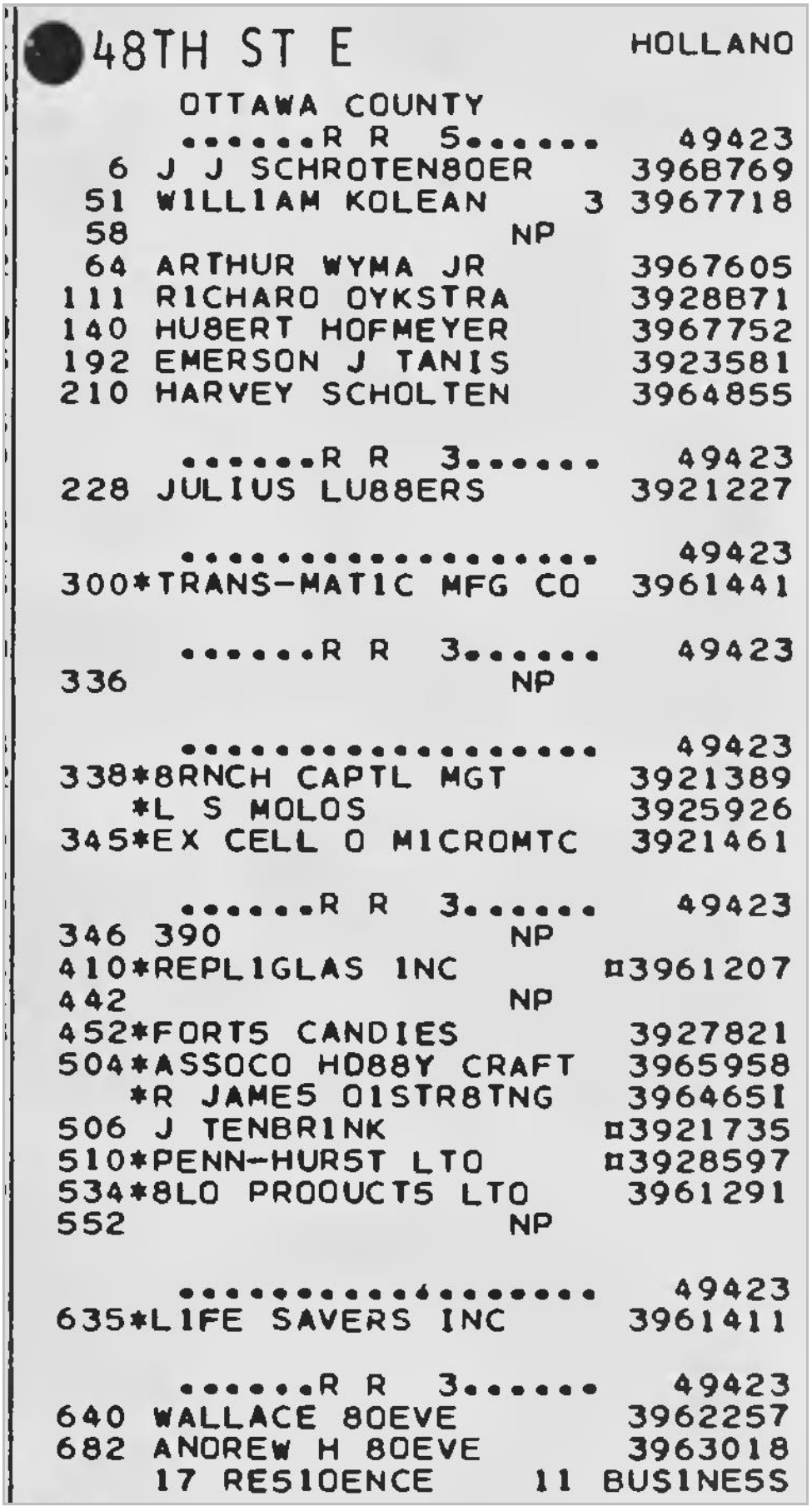


146TH AVE

	••••••R R 9••••••		49423
6394A	NE1L E SANOY		3353536
6416A	JAMES OROOGER	5	3358731
6433		NP	
6446A	MRS J A WILSON	1	3355548
6476A		NP	
6485	HARRY G JACO8S		3359734
6497	ROONEY JACO8S	5	3359154
6516A	OAVIO G OROOGER		33536II
6519	RICHARO OUFF1N		3359863
6532A	OENN1S P OROOGER	9	3352692
6536A	PAUL OROOGER	4	3353909
6544	LOUIS L VANHUIS		3355065
6545	TERRY GENTRY	5	3358979
6553	PAT HENAG1N	-3353427	
6565A	CLIFFORO CROCOLL	0	3358262
6586	ERNEST J ZOERHOF		3356212
6590A		NP	
6596	*SAND CASTLE		3352491
	*THE OUOOERY		3359829
6616	OR EOW J HEL8ING		3359414
6619	OONALO LAMAR	5	3353202
6631A	R 8OUWMAN SEWER		3359040
	AROGER 8OUWMAN	6	3359040
NO #	JOHN COMPAGNER		6885664
NO #	ALLEN OANNEN8ERG		6885604
	130 RESIOENCE	5	8USINESS

Target Street	Cross Street	Source
✓	-	Bresser's Cross-Index Directory

E 48TH ST 1982



```
48TH ST E                                HOLLAND
     OTTAWA COUNTY
     ......R R  5......                    49423
  6 J J SCHROTEN8OER                     3968769
 51 WILLIAM KOLEAN                   3  3967718
 58                          NP
 64 ARTHUR WYMA JR                      3967605
111 RICHARO OYKSTRA                     3928871
140 HU8ERT HOFMEYER                     3967752
192 EMERSON J TANIS                     3923581
210 HARVEY SCHOLTEN                     3964855

     ......R R  3......                    49423
228 JULIUS LU88ERS                      3921227

     ..................                    49423
300*TRANS-MATIC MFG CO                  3961441

     ......R R  3......                    49423
336                         NP

     ..................                    49423
338*8RNCH CAPTL MGT                     3921389
   *L S MOLOS                           3925926
345*EX CELL O MICROMTC                  3921461

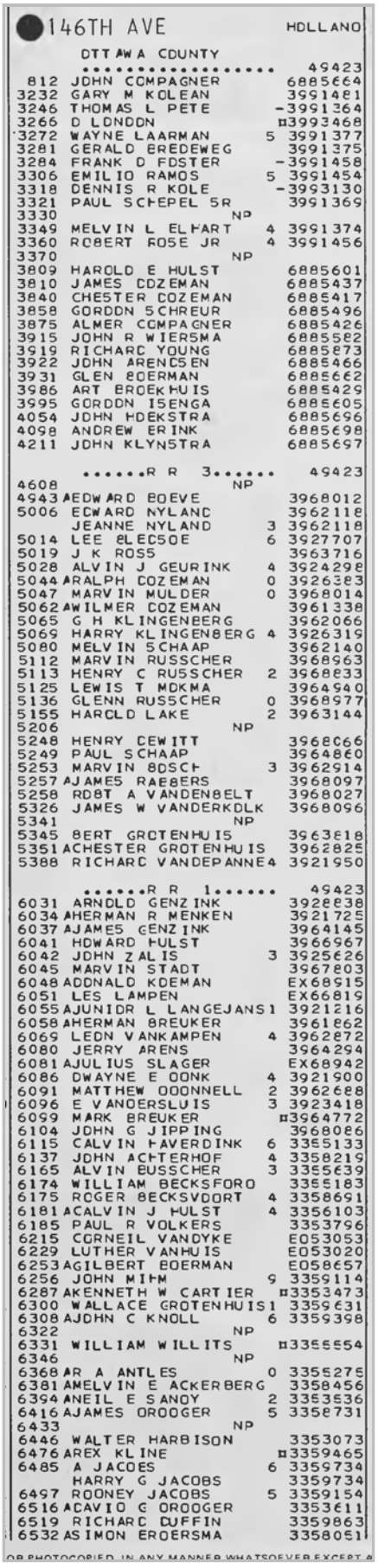
     ......R R  3......                    49423
346 390                     NP
410*REPLIGLAS INC                      ¤3961207
442                         NP
452*FORTS CANDIES                       3927821
504*ASSOCO HO88Y CRAFT                  3965958
   *R JAMES OISTR8TNG                   3964651
506 J TENBRINK                         ¤3921735
510*PENN-HURST LTO                     ¤3928597
534*8LO PROOUCTS LTO                    3961291
552                         NP

     ..........4.......                    49423
635*LIFE SAVERS INC                     3961411

     ......R R  3......                    49423
640 WALLACE 8OEVE                       3962257
682 ANOREW H 8OEVE                      3963018
     17 RESIOENCE                 11 BUSINESS
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Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1977



146TH AVE HOLLAND

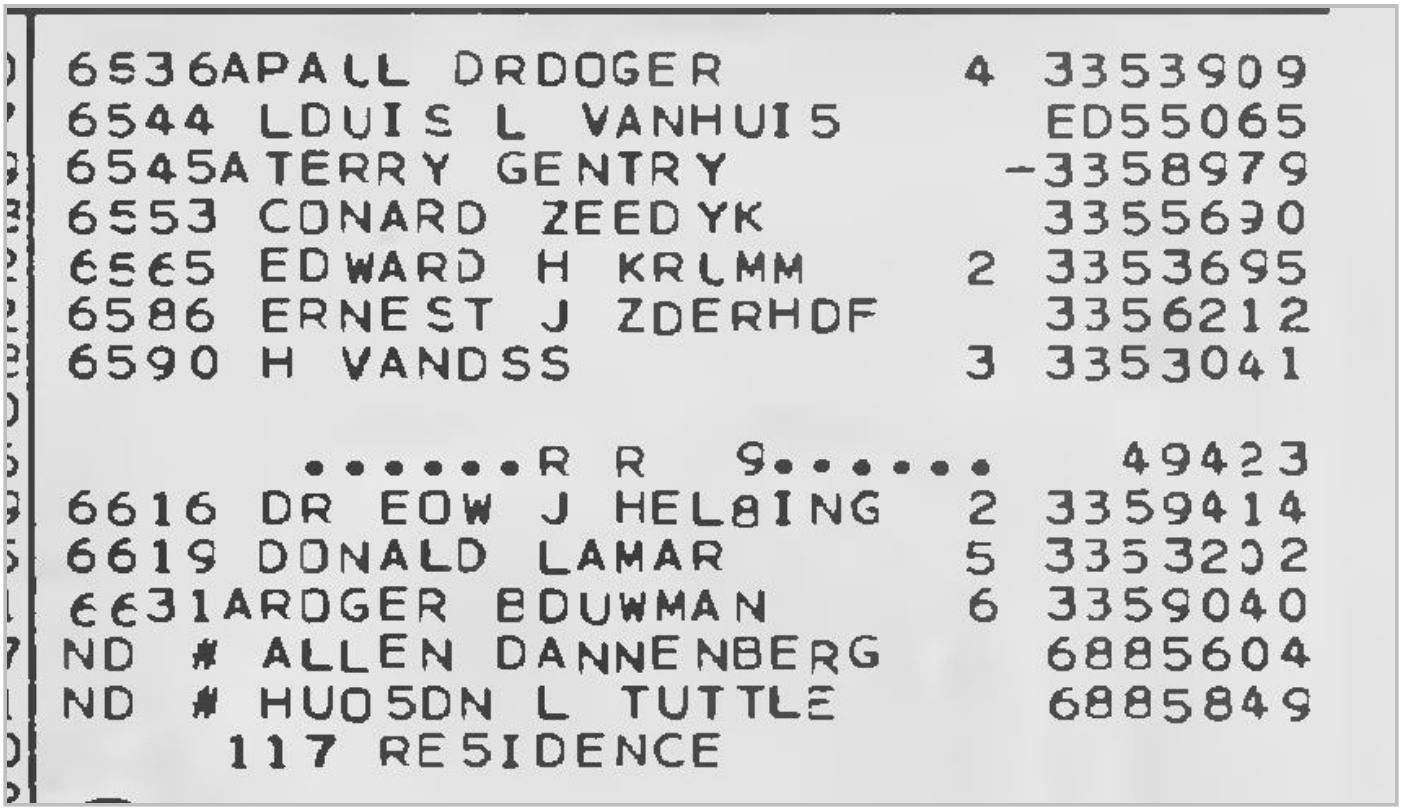
OTTAWA COUNTY

	.....		49423
812	JOHN COMPAGNER		6885664
3232	GARY M KOLEAN		3991481
3246	THOMAS L PETE		-3991364
3266	D LONDON		¤3993468
3272	WAYNE LAARMAN	5	3991377
3281	GERALD BREDEWEG		3991375
3284	FRANK D FOSTER		-3991458
3306	EMILIO RAMOS	5	3991454
3318	DENNIS R KOLE		-3993130
3321	PAUL SCHEPEL SR		3991369
3330		NP	
3349	MELVIN L ELHART	4	3991374
3360	ROBERT ROSE JR	4	3991456
3370		NP	
3809	HAROLD E HULST		6885601
3810	JAMES COZEMAN		6885437
3840	CHESTER COZEMAN		6885417
3858	GORDON SCHREUR		6885496
3875	ALMER COMPAGNER		6885426
3915	JOHN R WIERSMA		6885582
3919	RICHARD YOUNG		6885573
3922	JOHN ARENDSEN		6885466
3931	GLEN BOERMAN		6885662
3986	ART BROEKHUIS		6885429
3995	GORDON ISENGA		6885605
4054	JOHN HOEKSTRA		6885696
4098	ANDREW ERINK		6885698
4211	JOHN KLYNSTRA		6885697
	..... R R 3		49423
4608		NP	
4943	AEDWARD BOEVE		3968012
5006	EDWARD NYLAND		3962118
	JEANNE NYLAND	3	3962118
5014	LEE BLECSOE	6	3927707
5019	J K ROSS		3963716
5028	ALVIN J GEURINK	4	3924298
5044	ARALPH COZEMAN	0	3926383
5047	MARVIN MULDER	0	3968014
5062	AWILMER COZEMAN		3961338
5065	G H KLINGENBERG		3962066
5069	HARRY KLINGENBERG	4	3926319
5080	MELVIN SCHAAP		3962140
5112	MARVIN RUSSCHER		3968963
5113	HENRY C RUSSCHER	2	3968833
5125	LEWIS T MOKMA		3964940
5136	GLENN RUSSCHER	0	3968977
5155	HAROLD LAKE	2	3963144
5206		NP	
5248	HENRY DEWITT		3968066
5249	PAUL SCHAAP		3964860
5253	MARVIN BOSCH	3	3962914
5257	AJAMES RAEBERS		3968097
5258	ROBT A VANDENBELT		3968027
5326	JAMES W VANDERKOLK		3968096
5341		NP	
5345	BERT GROTENHUIS		3963618
5351	ACHESTER GROTENHUIS		3962825
5388	RICHARD VANDEPANNE	4	3921950
	..... R R 1		49423
6031	ARNOLD GENZINK		3928838
6034	AHERMAN R MENKEN		3921725
6037	AJAMES GENZINK		3964145
6041	HOWARD HULST		3966967
6042	JOHN ZALIS	3	3925626
6045	MARVIN STADT		3967803
6048	ADONALD KOEMAN		EX68915
6051	LES LAMPEN		EX66819
6055	AJUNIOR L LANGEJANS	1	3921216
6058	AHERMAN BREUKER		3961862
6069	LEON VANKAMPEN	4	3962872
6080	JERRY ARENS		3964294
6081	AJULIUS SLAGER		EX68942
6086	DWAYNE E OONK	4	3921900
6091	MATTHEW OOONNELL	2	3962688
6096	E VANDERSLUIS	3	3923418
6099	MARK BREUKER		¤3964772
6104	JOHN G JIPPING		3968086
6115	CALVIN HAVERDINK	6	3355133
6137	JOHN ACHTERHOF	4	3358219
6165	ALVIN BUSSCHER	3	3355639
6174	WILLIAM BECKSFORD		3355183
6175	ROGER BECKSVOORT	4	3358691
6181	ACALVIN J HULST	4	3356103
6185	PAUL R VOLKERS		3353796
6215	CORNEIL VANDYKE		EO53053
6229	LUTHER VANHUIS		EO53020
6253	AGILBERT BOERMAN		EO58657
6256	JOHN MIHM	9	3359114
6287	AKENNETH W CARTIER		¤3353473
6300	WALLACE GROTENHUIS	1	3359631
6308	AJOHN C KNOLL	6	3359398
6322		NP	
6331	WILLIAM WILLITS		¤3355554
6346		NP	
6368	AR A ANTLES	0	3355275
6381	AMELVIN E ACKERBERG		3358456
6394	ANEIL E SANDY	2	3353536
6416	AJAMES DROOGER	5	3358731
6433		NP	
6446	WALTER HARBISON		3353073
6476	AREX KLINE		¤3359465
6485	A JACOBS	6	3359734
	HARRY G JACOBS		3359734
6497	ROONEY JACOBS	5	3359154
6516	ACAVIO G DROOGER		3353611
6519	RICHARD DUFFIN		3359863
6532	ASIMON EROERSMA		3358051

OR PHOTOCOPIED IN ANY MANNER WHATSOEVER EXCEPT A

Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

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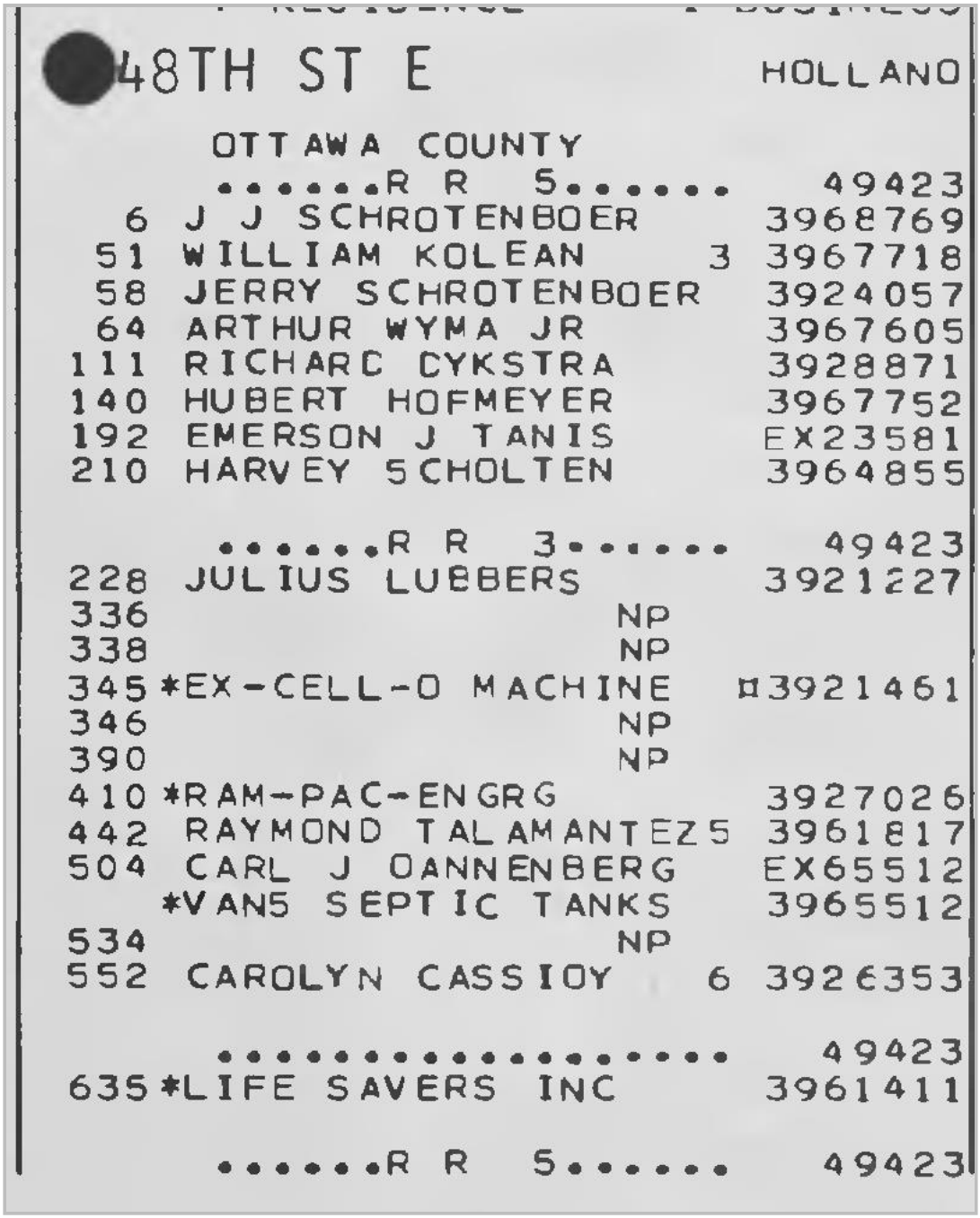


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6536APALL DRDOGER          4  3353909
6544 LDUIS L VANHUI5          ED55065
6545ATERRY GENTRY           -3358979
6553 CONARD ZEEDYK            3355690
6565 EDWARD H KRLMM        2  3353695
6586 ERNEST J ZDERHDF         3356212
6590 H VANDSS              3  3353041

      ......R R 9......       49423
6616 DR EOW J HEL8ING      2  3359414
6619 DONALD LAMAR          5  3353202
6631ARDGER BDUWMAN         6  3359040
ND  # ALLEN DANNENBERG        6885604
ND  # HUO5DN L TUTTLE         6885849
    117 RESIDENCE
```

Target Street	Cross Street	Source
✓	-	Bresser's Cross-Index Directory

E 48TH ST 1977



48TH ST E HOLLAND

OTTAWA COUNTY

	••••••R R 5••••••		49423
6	J J SCHROTENBOER		3968769
51	WILLIAM KOLEAN	3	3967718
58	JERRY SCHROTENBOER		3924057
64	ARTHUR WYMA JR		3967605
111	RICHARD DYKSTRA		3928871
140	HUBERT HOFMEYER		3967752
192	EMERSON J TANIS		EX23581
210	HARVEY SCHOLTEN		3964855
	••••••R R 3••••••		49423
228	JULIUS LUBBERS		3921227
336		NP	
338		NP	
345	*EX-CELL-O MACHINE		¤3921461
346		NP	
390		NP	
410	*RAM-PAC-ENGRG		3927026
442	RAYMOND TALAMANTEZ	5	3961817
504	CARL J OANNENBERG		EX65512
	*VANS SEPTIC TANKS		3965512
534		NP	
552	CAROLYN CASSIDY	6	3926353
	••••••••••••••••••		49423
635	*LIFE SAVERS INC		3961411
	••••••R R 5••••••		49423

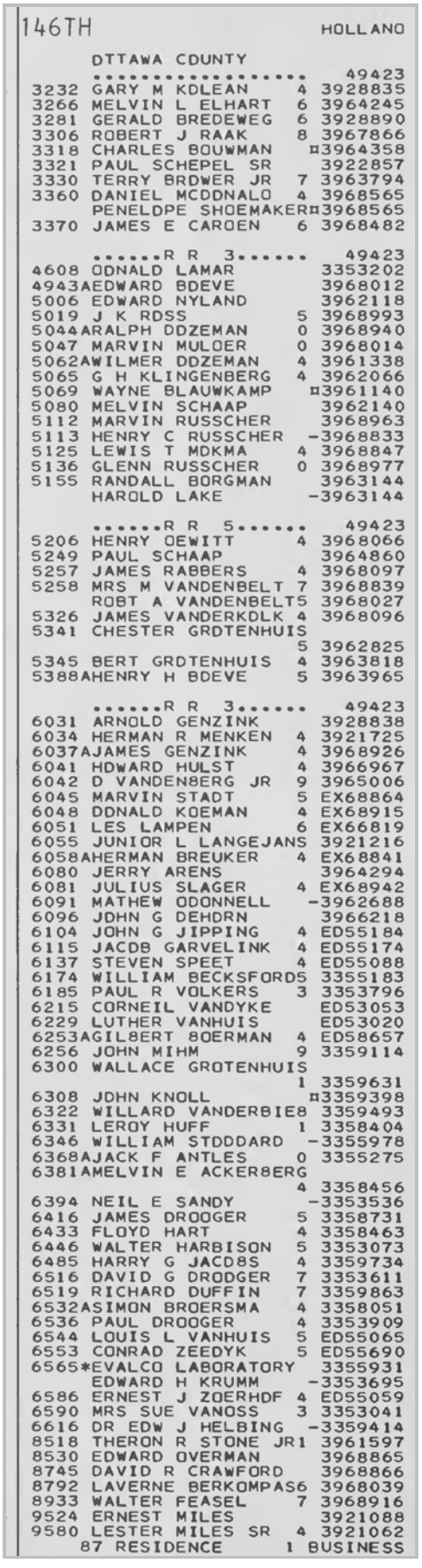
Target Street	Cross Street	Source
✓	-	Bresser's Cross-Index Directory

E 48TH ST 1977



Target Street	Cross Street	Source
-	✓	Bresser's Cross-Index Directory

146TH AVE 1972



146TH HOLLAND

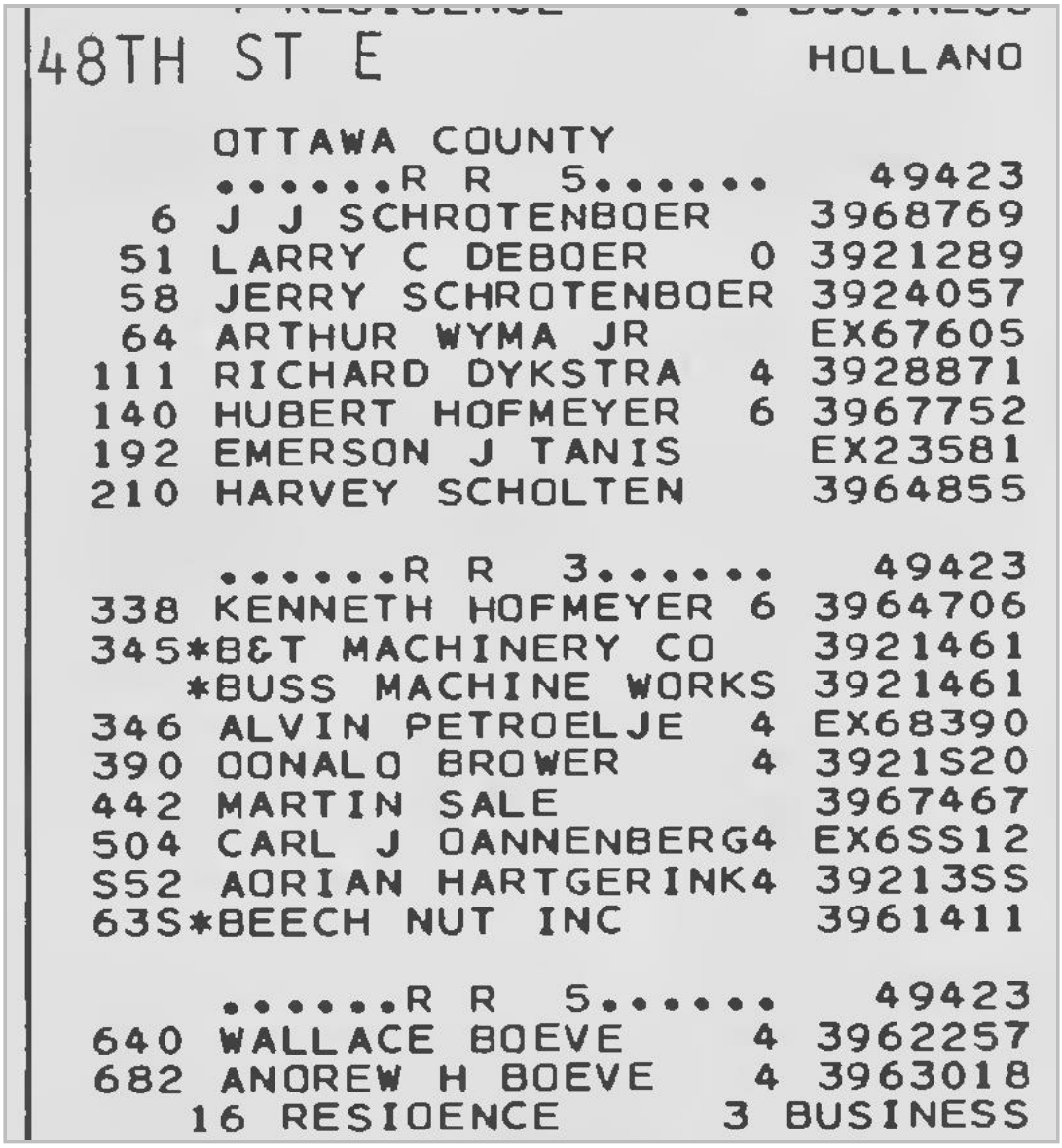
OTTAWA COUNTY

	.....		49423
3232	GARY M KOLEAN	4	3928835
3266	MELVIN L ELHART	6	3964245
3281	GERALD BREDEWEG	6	3928890
3306	ROBERT J RAAK	8	3967866
3318	CHARLES BOUWMAN		¤3964358
3321	PAUL SCHEPEL SR		3922857
3330	TERRY BROWER JR	7	3963794
3360	DANIEL MCDONALD	4	3968565
	PENELOPE SHOEMAKER		¤3968565
3370	JAMES E CAROEN	6	3968482
	.....R R 3.....		49423
4608	DONALD LAMAR		3353202
4943A	EDWARD BOEVE		3968012
5006	EDWARD NYLAND		3962118
5019	J K ROSS	5	3968993
5044A	RALPH DOZEMAN	0	3968940
5047	MARVIN MULDER	0	3968014
5062A	WILMER DOZEMAN	4	3961338
5065	G H KLINGENBERG	4	3962066
5069	WAYNE BLAUWKAMP		¤3961140
5080	MELVIN SCHAAP		3962140
5112	MARVIN RUSSCHER		3968963
5113	HENRY C RUSSCHER		-3968833
5125	LEWIS T MOKMA	4	3968847
5136	GLENN RUSSCHER	0	3968977
5155	RANDALL BORGMAN		3963144
	HAROLD LAKE		-3963144
	.....R R 5.....		49423
5206	HENRY OEWITT	4	3968066
5249	PAUL SCHAAP		3964860
5257	JAMES RABBERS	4	3968097
5258	MRS M VANDENBELT	7	3968839
	ROBT A VANDENBELT	5	3968027
5326	JAMES VANDERKOLK	4	3968096
5341	CHESTER GROTENHUIS	5	3962825
5345	BERT GROTENHUIS	4	3963818
5388A	HENRY H BOEVE	5	3963965
	.....R R 3.....		49423
6031	ARNOLD GENZINK		3928838
6034	HERMAN R MENKEN	4	3921725
6037A	JAMES GENZINK	4	3968926
6041	HOWARD HULST	4	3966967
6042	D VANDENBERG JR	9	3965006
6045	MARVIN STADT	5	EX68864
6048	DONALD KOEMAN	4	EX68915
6051	LES LAMPEN	6	EX66819
6055	JUNIOR L LANGEJANS		3921216
6058A	HERMAN BREUKER	4	EX68841
6080	JERRY ARENS		3964294
6081	JULIUS SLAGER	4	EX68942
6091	MATHEW ODONNELL		-3962688
6096	JOHN G DEHORN		3966218
6104	JOHN G JIPPING	4	ED55184
6115	JACOB GARVELINK	4	ED55174
6137	STEVEN SPEET	4	ED55088
6174	WILLIAM BECKSFORD	5	3355183
6185	PAUL R VOLKERS	3	3353796
6215	CORNEIL VANDYKE		ED53053
6229	LUTHER VANHUIS		ED53020
6253A	GILBERT BOERMAN	4	ED58657
6256	JOHN MIHM	9	3359114
6300	WALLACE GROTENHUIS	1	3359631
6308	JOHN KNOLL		¤3359398
6322	WILLARD VANDERBIE	8	3359493
6331	LEROY HUFF	1	3358404
6346	WILLIAM STODDARD		-3355978
6368A	JACK F ANTLES	0	3355275
6381A	MELVIN E ACKERBERG	4	3358456
6394	NEIL E SANDY		-3353536
6416	JAMES DROOGER	5	3358731
6433	FLOYD HART	4	3358463
6446	WALTER HARBISON	5	3353073
6485	HARRY G JACOBS	4	3359734
6516	DAVID G DRODGER	7	3353611
6519	RICHARD DUFFIN	7	3359863
6532A	SIMON BROERSMA	4	3358051
6536	PAUL DROOGER	4	3353909
6544	LOUIS L VANHUIS	5	ED55065
6553	CONRAD ZEEDYK	5	ED55690
6565*	EVALCO LABORATORY		3355931
	EDWARD H KRUMM		-3353695
6586	ERNEST J ZOERHOF	4	ED55059
6590	MRS SUE VANOSS	3	3353041
6616	DR EDW J HELBING		-3359414
8518	THERON R STONE JR	1	3961597
8530	EDWARD OVERMAN		3968865
8745	DAVID R CRAWFORD		3968866
8792	LAVERNE BERKOMPAS	6	3968039
8933	WALTER FEASEL	7	3968916
9524	ERNEST MILES		3921088
9580	LESTER MILES SR	4	3921062

87 RESIDENCE 1 BUSINESS

Target Street	Cross Street	Source
✓	-	Bresser's Cross-Index Directory

E 48TH ST 1972



48TH ST E HOLLAND

OTTAWA COUNTY

.....R R 5..... 49423

6 J J SCHROTENBOER 3968769
51 LARRY C DEBOER 0 3921289
58 JERRY SCHROTENBOER 3924057
64 ARTHUR WYMA JR EX67605
111 RICHARD DYKSTRA 4 3928871
140 HUBERT HOFMEYER 6 3967752
192 EMERSON J TANIS EX23581
210 HARVEY SCHOLTEN 3964855

.....R R 3..... 49423

338 KENNETH HOFMEYER 6 3964706
345*B&T MACHINERY CO 3921461
*BUSS MACHINE WORKS 3921461
346 ALVIN PETROELJE 4 EX68390
390 OONALO BROWER 4 3921S20
442 MARTIN SALE 3967467
504 CARL J OANNENBERG4 EX6SS12
S52 AORIAN HARTGERINK4 39213SS
63S*BEECH NUT INC 3961411

.....R R 5..... 49423

640 WALLACE BOEVE 4 3962257
682 ANOREW H BOEVE 4 3963018
16 RESIOENCE 3 BUSINESS