

**PHASE I  
ENVIRONMENTAL SITE ASSESSMENT  
for the  
Rock-Tenn Property  
located at**

**431 HELEN AVENUE  
CITY OF OTSEGO, ALLEGAN COUNTY, MI 49078**

**Prepared For:**

**Allegan County Brownfield Redevelopment Authority  
3255 122<sup>nd</sup> Avenue, Ste. 102  
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## 1.0 SUMMARY

Environmental Consulting & Technology (ECT) has conducted a Phase I Environmental Site Assessment (ESA) of the Rock-Tenn property located at 431 Helen Avenue, City of Otsego, Allegan County, Michigan 49078 (Subject Property).

The Subject Property contains approximately 50 acres of land that houses an industrial building (the main subject building), three outbuildings, asphalt-paved and gravel parking and driveway areas, cement pads, and grassy landscaped areas. The Kalamazoo River is located on the southern boundary of the Subject Property.

ECT interviewed Mr. Dave Rayman, Economic Development Director for the City of Otsego, as part of its Phase I ESA. Mr. Rayman stated that the Subject Property was initially developed as a paper mill in the early 1900s and that multiple additions to the main subject building were made routinely through the 1950s. Records maintained by the City of Otsego state that the main subject building contains approximately 180,000 square feet of interior floor space. The mill ceased operation in 2005. The Subject Property was purchased by Cogswell Property, LLC (Cogswell) in 2006. Cogswell dismantled portions of the buildings and stripped materials of value such as copper piping. Additionally Cogswell used the Subject Property to strip transformers. Cogswell abandoned the Subject Property and the Allegan County acquired the Subject Property through tax reversion.

ECT has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described in Section 11.0 of this report. This assessment has revealed evidence of the following current recognized environmental conditions (RECs) associated with the Subject Property.

- The presence of over 250 drums and totes within the main subject building and the outbuilding to the west of the main subject building of the Subject Property.
- The former presence of waste water lagoons basins on the western portion of the Subject Property.
- The potential presence of polychlorinated biphenyls (PCBs) due to former operations as a paper mill and by Cogswell for dismantling transformers.
- The presence of significant staining and oily sludges in pits throughout the main subject building.
- The presence of a diesel fuel aboveground storage tank (AST) in the fire suppression building located along the river bank.
- The presence of two closed Type III landfills on the northern portion of Subject Property.
- The presence of the Kalamazoo River Superfund site located along the southern boundary of the Subject Property.

This assessment has revealed no evidence of historical RECs or *de minimis* conditions associated with the Subject Property.

Because concentrations of PCBs, boron, magnesium, iron, copper, lead, and thallium exceed Michigan Part 201 direct contact, drinking water and/or GSI protection criteria, the Subject Property meets the definition of a facility. ECT recommends that a future purchaser complete a Baseline Environmental Assessment (BEA) under Part 201 of the Natural Resources and Environmental Protection Act (1994 PA 451, as amended).

## 2.0 INTRODUCTION

ECT has conducted a Phase I Environmental Site Assessment (ESA) of the Subject Property. The Subject Property is located along the south side of Helen Avenue and north of the Kalamazoo River in the City of Otsego, Allegan County, Michigan 49078. The Site Location Map is provided as **Figure 1**.

The Subject Property contains approximately 50 acres of land that houses an industrial building (the main subject building), three outbuildings, asphalt-paved and gravel parking and driveway areas, cement pads, and grassy landscaped areas. The Kalamazoo River is located on the southern boundary of the Subject Property. The Subject Property also includes two closed Type III landfill cells and two closed and capped former waste water lagoons.

The main subject building contains approximately 180,000 square feet of interior floor space.

### 2.1 Purpose

The Allegan County Brownfield Redevelopment Authority requested that ECT conduct a Phase I ESA of the Subject Property. The objective of the Phase I ESA is to identify recognized environmental conditions (RECs) in connection with the property, to the extent feasible pursuant to the processes prescribed in the ASTM E 1527-05 guidelines. The term “*REC*” as defined by ASTM is 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 the material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This Phase I ESA includes information gathered from federal, state, and local agencies; personal interviews with people familiar with the Subject Property and surrounding properties; and a site reconnaissance conducted by ECT representatives. The report is intended to meet the due diligence requirements of ASTM E-1527-05.

## 2.2 Detailed Scope of Services

The Phase I ESA conducted by ECT included, but was not limited to, the following services:

- A site reconnaissance of the Subject Property to look for evidence of the release(s) of hazardous materials and petroleum products and to assess the potential for onsite releases of hazardous materials and petroleum products;
- Drive-by observations of adjoining properties and the site vicinity;
- Interviews with people familiar with the Subject Property, as available;
- Review of regulatory agency file information;
- Review of historical documents, as available; and
- Preparation of a report presenting the Phase I ESA findings including a summary of conclusions and recommendations.

## 2.3 Significant Assumptions

The purpose of this Phase I ESA is to provide appropriate inquiry into the previous use of the Subject Property consistent with good commercial and customary practice in an effort to minimize liability. ECT assumes that the information provided by Mr. Dave Rayman (the Economic Development Director for the City of Otsego), the regulatory database electronic search report provider, and the regulatory agencies is true and reliable.

## 2.4 Limitations and Exceptions

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ECT and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, expressed or implied, is intended or given. To the extent that ECT relied upon any information prepared by other parties not under contract to ECT, ECT makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

The findings presented in this report apply solely to site conditions existing at the time when ECT's assessment was performed. It must be recognized, however, that an environmental site assessment is intended for the purpose of determining the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ECT's ability to interpret investigation results is related to the availability of the data and

the extent of the investigation activities. As such, 100 percent confidence in environmental site assessment conclusions cannot reasonably be achieved.

ECT, therefore, does not provide any guarantees, certifications, or warranties that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

## **2.5 Special Terms and Conditions**

The scope of work for this Phase I ESA did not include testing of electrical equipment for the potential presence of polychlorinated biphenyls (PCBs) or the assessment of natural hazards such as naturally occurring asbestos or methane gas, assessment of the potential presence of radionuclides, or assessment of non-chemical hazards such as the potential for damage from earthquakes or floods. This Phase I ESA also did not include an extensive assessment of the environmental compliance status of the Subject Property or of the businesses operating onsite, or a health-based risk assessment.

## **2.6 User Reliance**

This Phase I ESA was conducted for the use of, and reliance by Allegan County Brownfield Redevelopment Authority and Allegan County, Michigan and may be relied upon only by these parties. No use of the information contained in this report by others is permissible without receiving prior written authorization to do so from ECT. ECT is not responsible for independent conclusions, opinions, or recommendations made by others or otherwise based on the findings presented in this report.

## **3.0 SITE DESCRIPTION**

This section presents a general overview of the Subject Property, onsite improvements, and surrounding properties.

### **3.1 Location and Legal Description**

The Subject Property is located at 431 Helen Avenue, City of Otsego, Allegan County, Michigan 49078. Records maintained by the City of Otsego state that the Subject Property is comprised of three parcels of land (Parcel No. 03-54-015-006-00 - 44 acres; 03-54-800-001-00 - 2.7 acres; and 03-54-575-001-00 - 3.4 acres). A copy of the legal description for the subject parcel, as provided by the City of Otsego, is provided in **Appendix A**.

### **3.2 Site and Vicinity General Characteristics**

A Site Location Map and a Site and Surrounding Properties Map are presented as **Figures 1** and **2**, respectively. The northern boundary of the Subject Property is Helen Avenue. Undeveloped land and residential properties are located north of the Subject Property. The Kalamazoo River is located

immediately south of the Subject Property and residential properties are located south of the Subject Property across the river. The eastern adjoining property is undeveloped land followed by commercial property. The western adjoining property is undeveloped land.

### **3.3 Current Use of the Property**

At the time of ECT's site reconnaissance, the subject buildings were vacated and no operations were being conducted at the Subject Property. The Subject Property had reverted to County ownership through tax foreclosure.

### **3.4 Descriptions of Structures, Roads, and Other Improvements on the Site**

#### **3.4.1 General Description of Structures**

The Subject Property contains approximately 50 acres of land that houses an industrial building (the main subject building), two outbuildings, asphalt-paved and gravel parking and driveway areas, cement pads, and grassy landscaped areas.

The Subject Property was initially developed in early 1900s with multiple additions through the 1950s. The resulting main subject building is an assemblage of over 15 individual structures that have become one large building. Records maintained by the City of Otsego state that the sum total of the interior floor space of the main subject building is approximately 180,000 square feet.

The northeastern portion of the main subject building contains office areas. Interior finishings in the office areas include vinyl floor tiles, paint, and carpet; drywall, plaster, and paneled walls, fluorescent lighting, and drywall and plaster ceilings.

The remainder of the main subject building contains manufacturing and plant operations areas. Interior finishings in the manufacturing and plant operations areas include concrete and wood floors, concrete-block walls, and metal open-deck ceilings.

The eastern portion of the main subject building contains the former powerhouse, former manufacturing areas for paper production, and storage areas. The central portion of the main subject building contains the former main paper production area and is the area with the most significant staining and oily sludge both on the main level and the basement level. The most western portion of the main subject building appears to be warehouse space. The southern portions of the building are multiple stories that housed storage and other paper production equipment and the ground level houses the former wastewater treatment plant.

One large outbuilding sits west of the main subject building and was used for warehousing. Two small outbuildings are located northwest of the main subject building and southwest of the main subject building on the banks of the Kalamazoo River. These buildings housed propane cylinders and fire suppression pumps and diesel backup pumps, respectively. The outbuildings are of block construction with concrete floors.

### **3.4.2 Roads**

Access to the Subject Property is from Helen Avenue to the east and north.

### **3.4.3 Potable Water Supply**

Potable water is supplied by the City of Otsego. The plant also had four production wells located along the Kalamazoo River for process water.

### **3.4.4 Sewage Disposal System**

Domestic sewerage formerly generated at the Subject Property was discharged to the municipal sanitary sewerage operated by the City of Otsego. Process wastewater formerly generated at the Subject Property was treated on-site in a waste water treatment plant prior to being discharged to the wastewater treatment lagoons.

## **3.5 Current Uses of the Adjoining Properties**

The northern boundary of the Subject Property is north of Helen Avenue and is surrounded by vacant and agricultural land. The eastern portion of the Subject Property has its boundary at Helen Avenue and the adjoining properties to the north are residential. The western property is vacant or agricultural land. The property to the east is industrial and residential property. The southern boundary is the Kalamazoo River and beyond is residential property.

## **4.0 USER-PROVIDED INFORMATION**

This section identifies information provided by the users, Allegan County Brownfield Redevelopment Authority and the City of Otsego, to ECT. The site contact was Mr. Dave Rayman (Economic Development Director for the City of Otsego).

### **4.1 Title Records**

No title records were provided to ECT. According to the Allegan County Assessor, the Subject Property was acquired through tax foreclosure in 2011. Records maintained by the City of Otsego indicate that the Subject Property was previously owned by Cogswell Property, LLC, who acquired the Subject Property from Rock-Tenn Company, Mill Division in September 2006. Rock-Tenn had acquired the property from Mead Paperboard Products in January 1988.

### **4.2 Environmental Liens or Activity and Use Limitations**

Mr. Rayman was asked the following questions as part of the assessment:

- Are you aware of any environmental cleanup liens against the Subject Property that are filed or recorded under federal, tribal, state or local law?

- Are you aware of any activity or land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the Subject Property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Mr. Rayman answered no to the first question and indicated that he thought there was a use restriction in regard to the former lagoons.

In addition, ECT sent an information request to the MDEQ inquiring if environmental liens had been placed on the Subject Property as part of its Phase I ESA. The MDEQ responded that no environmental liens had been placed on the Subject Property

### 4.3 Specialized Knowledge

Mr. Rayman was asked the following questions as part of the assessment:

- Do you have any specialized knowledge or experience related to the Subject Property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the Subject Property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?
- 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, as user,
  - a) Do you know the past uses of the Subject Property?
  - b) Do you know of specific chemicals that are present or once were present at the Subject Property?
  - c) Do you know of spills or other chemical releases that have taken place at the Subject Property?
  - d) Do you know of any environmental cleanups that have taken place at the Subject Property?

Information regarding the historical use of the Subject Property and the former presence of chemicals, spills and/or environmental cleanups at the Subject Property is provided in Section 6.2.2 and other appropriate sections in this report.

Mr. Rayman was also asked the following questions as part of the assessment.

- Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Subject Property?
- Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Subject Property?
- Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

Mr. Rayman answered no to the above questions.

#### **4.4 Commonly Known or Reasonably Ascertainable Information**

Mr. Rayman was asked the following question as part of the assessment:

- Based on your knowledge and experience related to the Subject Property, are there any obvious indicators that point to the presence or likely presence of contamination at the Subject Property?

Mr. Rayman indicated that there was some suspicion that Cogswell had been scrapping transformers at the property. Additionally, Cogswell had stripped the facility of piping and other metals and that it appeared a significant amount of asbestos had been disturbed and was loose in the powerhouse portion of the site.

#### **4.5 Valuation Reduction for Environmental Issues**

Mr. Rayman was asked whether the fair market value of the Subject Property. No purchasing price reduction for environmental issues was reported.

#### **4.6 Owner, Property Manager, and Occupant Information**

Mr. Rayman was the site contact identified to ECT.

#### **4.7 Reasons for Performing Phase I**

The reasons for performing the Phase I ESA is to assess the presence/absence of RECs subsequent to the acquisition of the Subject Property by Allegan County through tax foreclosure; to determine if a threat to public health and/or safety existed at the Subject Property, and to help position the Subject Property for resale.

#### **4.8 Other**

No other information was provided.

### **5.0 RECORDS REVIEW**

The following section presents the results of a review of readily ascertainable federal and state regulatory agency files obtained through an electronic search of the records and a historical records review, including aerial photographs, topographic maps, street directories, and Sanborn fire insurance maps pertaining to the Subject Property, adjoining properties, and proximate properties.

## 5.1 Standard Environmental Record Sources

Regulatory agency database information was obtained from Environmental Data Resources, Inc. (EDR), which maps and lists properties in federal and state environmental databases with existing conditions or status that may have the potential to affect the Subject Property. The EDR-Radius Map report is provided as **Appendix B**.

### 5.1.1 Federal Environmental Record Sources

The following federal databases were reviewed in accordance with the ASTM E 1527-05 requirements:

#### 5.1.1.1 National Priorities List (NPL; 1.0 mile)

The National Priorities List (NPL) is a subset of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and identifies over 1,200 sites for priority cleanup under the Superfund program. An NPL site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the U.S. Department of Health and Human Services and the U.S. Environmental Protection Agency (EPA). Source: U.S. EPA.

The Subject Property is not listed in the NPL database. No listed NPL properties are located within 1.0 mile of the Subject Property.

#### 5.1.1.2 Delisted NPL Site List (NPL; 1.0 mile)

The Delisted NPL Site List includes properties that have been delisted from the NPL.

The Subject Property is not listed in the Delisted NPL Site database. No delisted NPL properties are located within 1.0 mile of the Subject Property.

#### 5.1.1.3 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS; 0.50 mile)

The CERCLIS database contains data on potentially hazardous waste sites that have been reported to EPA by states, municipalities, private companies, and private persons pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLIS list includes sites that are either proposed for the NPL or in the screening and assessment phase for possible inclusion on the NPL. Source: U.S. EPA/National Technical Information Service (NTIS).

The Subject Property is not listed in the CERCLIS database. No CERCLIS properties are located within 0.50 mile of the Subject Property.

#### **5.1.1.4 CERCLIS-No Further Remedial Action Planned (CERCLIS-NFRAP; 0.50 mile)**

The CERCLIS-NFRAP database contains data on sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration. Source: U.S. EPA/National Technical Information Service (NTIS).

The Subject Property is not listed in the CERCLIS-FRAP database. One CERCLIS-NFRAP listed property is located within 0.50 mile of the Subject Property. **Menasha Corporation**, located approximately 0.40 miles east of the Subject Property. Groundwater flow is toward the river and not toward the Subject Property. Based on this information and because this property is located relatively far from the Subject Property, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.1.5 Corrective Action Report (CORRACTS; 1.0 mile)**

The CORRACTS database identifies hazardous waste handlers with Resource Conservation and Recovery Act (RCRA) corrective action activity. Source: U.S. EPA.

The Subject Property is not listed in the CORRACTS database. No CORRACTS listed properties are located within 1.0 mile of the Subject Property.

#### **5.1.1.6 Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal (TSD) Facilities (0.50 mile)**

The RCRA TSD Facilities database includes selected information on properties that generate, transport, store, treat and/or dispose of hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA).

The Subject Property is not listed in the RCRA TSD database. No listed RCRA TSD properties are located within 0.50 mile of the Subject Property.

#### **5.1.1.7 RCRA Generators Lists (Site and Adjoining Properties)**

Resource Conservation and Recovery Information System (RCRIS) large-quantity generators (LQG) are those properties that generate at least 1,000 kilograms per month (kg/month) of non-acutely hazardous waste or meet other applicable RCRA requirements. RCRIS small-quantity generators (SQG) generate between 100 and 1,000 kg/month of non-acutely hazardous waste or meet other applicable RCRA requirements. RCRIS conditionally exempt SQG (CESQG) generate less than 100 kg/month of non-acutely hazardous waste or meet other applicable RCRA requirements. RCRIS-Non-Generators are registered hazardous waste generators that do not presently generate hazardous waste.

The Subject Property is listed in the RCRIS Non-generator database. According to the EDR-Radius Map report, no RCRA violations were cited to the Subject Property.

No RCRIS LQG, SQG, or CESQG properties are located within 0.25 mile of the Subject Property. One RCRIS Non Generator property is located within 0.25 mile of the Subject Property.

**JB Painting**, located approximately 0.0135 miles east of the Subject Property at 248 North Street. According to the EDR-Radius Map report, no RCRA violations were cited to this property. Groundwater flow is toward the river and not toward the Subject Property. Based on this information, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.1.8 Federal Institutional Control/Engineering Control Registries (Site only)**

Federal institutional control and engineering control registries were requested in the database search. The Subject Property is not identified on either registry.

#### **5.1.1.9 Emergency Response Notification System (ERNS; Site Only)**

ERNS is a national database that records and stores information on reported releases of oil and hazardous substances. The database contains information on spill reports made to federal authorities including the U.S. EPA, U.S. Coast Guard, National Response Center, and Department of Transportation.

The Subject Property is not listed on the ERNS database.

### **5.1.2 State Environmental Record Sources**

The following state databases were reviewed in accordance with the ASTM E 1527-05 requirements:

#### **5.1.2.1 State-Equivalent CERCLIS Hazardous Waste Sites (SHWS/State Sites; 1.0 mile)**

The State Hazardous Waste Site database lists potential or confirmed hazardous substance release properties.

The Subject Property is not listed in the SHWS database. Two properties are listed on the SHWS database within 1.0 mile of the Subject Property.

**Paperboard Div MFG Plant (Menasha site)**, located approximately 0.4 miles east of the Subject Property. Interim Response activities are in progress. Groundwater flow is toward the river and not toward the Subject Property. Based on this information, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

**Former Texaco NAPH-SAL**, located approximately 0.43 miles south of the Subject Property across the Kalamazoo River, at 623 W. Allegan Street. Because this property is located relatively far from the Subject Property and the Kalamazoo River separates this property from the Subject Property, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.2.2 State-Equivalent SWF/LF, State Landfill (SWIS; 0.50 mile)**

This database is an inventory of solid waste disposal sites or landfills. These may be active or inactive sites or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.

The Subject Property is listed in the Historic Landfill and solid waste sites databases. Mead Paper Products operated two Type III landfills on the northern portion of the Subject Property north of Helen Avenue. These landfills are closed and no further action is being undertaken or is required. No landfill or solid waste sites are listed within 0.50 mile of the Subject Property.

#### **5.1.2.3 State Leaking Underground Storage Tank Database (LUST; 0.50 mile)**

The LUST database is a list of reported leaking UST incidents.

The Subject Property is not listed in the LUST database. Three LUST sites are listed within 0.50 mile of the Subject Property.

**United #6250**, located approximately 0.49 miles southwest of the Subject Property across the Kalamazoo River, at 703 W. Allegan St.. The EDR-Radius Map report stated that the MDEQ granted the release at this property closure status. Based on this information and because this property is located relatively far from the Subject Property, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

**Clark Otsego** located approximately 0.49 miles southeast of the Subject Property across the Kalamazoo River, at 134 E Allegan St.. The EDR-Radius Map report stated that the MDEQ did not grant the release at this property closure status. However, because this property is located relatively far from the Subject Property and the Kalamazoo River separates this property from the Subject Property, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

**City of Otsego Service Garage**, located approximately 0.43 miles east of the Subject Property across the Kalamazoo River, at 210 N Farmer St.. The EDR-Radius Map report stated that the MDEQ granted the release at this property closure status. Based on this information and because this property is located relatively far from the Subject Property, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.2.4 State Registered Underground Storage Tank (UST; Site and Adjoining Properties)**

This database contains listings for current UST sites.

The Subject Property is not listed in the UST database. One UST site is listed within 0.25 mile of the Subject Property.

Otsego Schools Auto is located at 250 Helen Ave approximately 0.246 miles east of the Subject Property. Groundwater flow is toward the river and not toward the Subject Property. Based on this information, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.2.5 State Registered Aboveground Storage Tank (AST; Site and Adjoining Properties)**

This database contains listings for current aboveground storage tank (AST) sites.

The Subject Property is not listed in the AST database. No AST sites are listed within 0.25 mile of the Subject Property.

#### **5.1.2.6 State Institutional Control/Engineering Control Registries (Site Only)**

This database contains registry entries for institutional and engineering controls.

The Subject Property is not listed in this database. No properties are listed in this database within 0.50 mile of the Subject Property.

#### **5.1.2.7 State Voluntary Cleanup Sites (0.50 mile)**

This database contains listings for current voluntary cleanup sites.

The Subject Property is not listed in this database. No properties are listed in this database within 0.50 mile of the Subject Property.

#### **5.1.2.8 State and Tribal Brownfield Sites (0.50 mile)**

This database contains listings for current Brownfield sites.

The Subject Property is not listed in this database. No properties are listed in this database within 0.50 mile of the Subject Property.

#### **5.1.2.9 State Baseline Environmental Site Assessment Site (0.50 mile)**

In Michigan, a property in which contamination is detected at concentrations that exceed applicable residential criteria is defined as a “facility.” Potential buyers of facilities can file baseline environmental assessments (BEAs) for the said facilities to document known subsurface conditions at these properties at the time of purchase and limit future cleanup liabilities. This database contains listings for properties for which BEAs have been filed with the MDEQ.

The Subject Property is listed in the BEA database. One BEA was prepared for the Subject Property’s address in 2006. Pertinent information included in this BEAs and their associated Phase I and II ESA reports is summarized in Section 6.2.2 of this report.

Three properties are listed in this database within 0.50 mile of the Subject Property.

Menasha Packaging Co located at 320 N. Farmer St. approximately 0.4 miles east of the Subject Property; formerly Texaco, NAP located at 623 W. Allegan, approximately 0.43 miles southwest of the Subject Property; and Former Waterworks located at 210 N. Farmer St. located approximately 0.43 miles east of the Subject Property. Groundwater flow is toward the river and not toward the Subject Property. Based on this information, ECT believes that the potential for subsurface conditions at this property to pose a direct environmental risk to the subsurface conditions of the Subject Property is minimal.

#### **5.1.2.10 Drycleaner Sites (0.25 mile)**

This database contains listings for drycleaner sites.

The Subject Property is not listed in this database. No properties are listed in this database within 0.25 mile of the Subject Property.

## **5.2 Additional Environmental Record Sources**

The orphan summary list in the EDR-Radius Map report identifies properties that cannot be mapped due to poor or inadequate address information. Three properties were listed on the orphan summary list. These properties are either located outside the ASTM-recommended search distance from the Subject Property or relatively far from the Subject Property. Therefore, ECT believes that the potential for subsurface conditions at these properties to pose a risk to subsurface conditions at the Subject Property is minimal. Information obtained from the MDEQ through a FOIA is included in **Appendix J**.

## **5.3 Physical Setting Source(s)**

The U.S. Geological Survey (USGS) 7.5-minute topographic map of the Otsego, Michigan quadrangle dated 1973 was reviewed. The surrounding area has a regional slope predominantly toward the Kalamazoo River.

## **5.4 Historical Use Information on the Property**

To evaluate historical use of the property, ECT reviewed readily available topographic maps, aerial photographs, street directories, and fire insurance maps.

### **5.4.1 Topographic Maps**

ECT ordered available historical topographic maps of the Subject Property and its vicinity from EDR. The USGS 15-minute series quadrangle maps obtained from EDR of Otsego, Michigan are dated 1918 and 1967. The USGS 7.5-minute series quadrangle map obtained from EDR of Otsego, Michigan is dated 1973.

The Subject Property was depicted as containing a large structure on the 1918 topographic map. The Subject Property appears identical to the 1973 topographic map on the 1967 topographic map. Copies of the available historic topographic maps are provided as **Appendix C**.

#### **5.4.2 Aerial Photographs**

ECT obtained historical aerial photographs of the Subject Property and its vicinity from EDR. The historical aerial photographs are dated 1938, 1950, 1955, 1960, 1967, 1974, 1981, 1992, 1999, 2005, and 2006. A review of historical aerial photographs documents changes that have occurred in land uses and features located at the Subject Property and on adjoining properties. Copies of the historical aerial photographs are provided in **Appendix D**. The location of the Subject Property is identified on each aerial photograph. Descriptions of the Subject Property, as shown on the aforementioned aerial photographs, are provided in the following paragraphs.

1938 (Scale 1"=500')

The Subject Property was developed and appeared to be similar to the current configuration with the exception of the western portion of the building. The western portion of the building is not present and the large outbuilding warehouse to the west is not present. The western portion of the property is undeveloped.

1950 (Scale 1"=500')

The western portion of the main plant is visible on this aerial as is the outbuilding warehouse to the west of the main plant building.

1955 (Scale 1"=500')

ECT did not observe significant changes between the 1950 and 1955 aerial photographs of the Subject Property with one exception. The western portion of the Subject Property appears to have a lagoon.

1960 (Scale 1"=500')

ECT did not observe significant changes between the 1955 and 1960 aerial photographs of the remainder of the Subject Property with the exception that there appear to be two lagoons on the western portion of the Subject Property. Landfilling appears to be taking place on the far northern portion of the property that is no longer part of this parcel.

1967 (Scale 1"=500')

ECT did not observe other significant changes between the 1960 and 1967 aerial photographs of the Subject Property with the exception that the entire western portion of the Subject Property appears to be lagoons. The landfilling on the northern portion of the Subject Property appears to be taking place.

1974 (Scale 1"=600')

ECT did not observe other significant changes between the 1967 and 1974 aerial photographs of the Subject Property.

1981 (Scale 1"=600')

ECT did not observe significant changes between the 1974 and 1981 aerial photographs of the Subject Property. The lagoons on the western portion of the Subject Property appear to be more defined.

1992 (Scale Unknown)

ECT did not observe significant changes between the 1981 and 1992 aerial photographs of the Subject Property.

1999 (Scale 1"=500')

ECT did not observe significant changes between the 1992 and 1999 aerial photographs of the Subject Property with the exception that landfilling appears to have ended on the northern portion of the Subject Property.

2005 (Scale 1"=500')

ECT did not observe other significant changes between the 1999 and 2005 aerial photographs of the Subject Property with the exception that the lagoons are no longer present and the area appears to be flat and covered with plant material.

2006 (Scale 1"=500')

ECT did not observe significant changes between the 2005 and 2006 aerial photographs of the Subject Property.

### **5.4.3 Street Directories**

ECT ordered a city directory abstract for the Subject Property and its vicinity from EDR. EDR reviewed available city directories for the years spanning 1973 through 2008 at approximately five-year intervals. A copy of the city directory abstract is provided as **Appendix E**.

The ownership is listed as indicated in the title section of this Phase I ESA.

### **5.4.4 Fire Insurance Maps**

ECT ordered available Sanborn Fire Insurance Maps for the Subject Property and its vicinity from EDR. EDR provided Sanborn Fire Insurance Maps for the years 1911, 1918, 1928, 1936 and 1950. The fire insurance maps show the subject building in approximately the current configuration and with changes along the same timelines as noted in the aerials. No evidence of large chemical storage

is noted with the main fuel for the powerhouse being coal delivered by rail. A copy of the Certified Sanborn Map Report is provided in **Appendix F**.

## **5.5 Historical Use Information on Adjoining Properties**

To evaluate the historical use of the adjoining properties, ECT reviewed readily available topographic maps, aerial photographs, street directories, and fire insurance maps.

### **5.5.1 Topographic Maps**

ECT ordered available historical topographic maps of the Subject Property and its vicinity from EDR. The USGS 15-minute series quadrangle maps obtained from EDR of Otsego, Michigan are dated 1918 and 1967. The USGS 7.5-minute series quadrangle map obtained from EDR of Otsego, Michigan is dated 1973.

The main roads and surrounding property used do not appear to have significantly changed since the 1918 topographic map. Copies of the available historic topographic maps are provided as **Appendix C**.

### **5.5.2 Aerial Photographs**

ECT obtained historical aerial photographs of the Subject Property and its vicinity from EDR. The historical aerial photographs are dated 1938, 1950, 1955, 1960, 1967, 1974, 1981, 1992, 1999, 2005, and 2006. A review of historical aerial photographs document changes that have occurred in land uses and features located at the Subject Property and on adjoining properties. Copies of the historical aerial photographs are provided in **Appendix D**. The location of the Subject Property is identified on each aerial photograph. Descriptions of the Subject Property, as shown on the aforementioned aerial photographs, are provided in the following paragraphs.

No significant changes were noted in the surrounding properties with the exception that in the 1981 aerial, the building on the adjoining property to the southeast was no longer present and in the 1992 aerial the adjoining property to the northeast was also no longer present.

### **5.5.3 Street Directories**

ECT ordered a city directory abstract for the Subject Property and its vicinity from EDR. EDR reviewed available city directories for the years spanning 1973 through 2008 at approximately five-year intervals. A copy of the city directory abstract is provided as **Appendix E**.

EDR researched the addresses along Helen Avenue. The majority of the researched addresses were identified as retail food markets, schools, a lumber company, and a fire sprinkler company.

#### **5.5.4 Fire Insurance Maps**

ECT ordered available Sanborn Fire Insurance Maps for the Subject Property and its vicinity from EDR. EDR provided Sanborn Fire Insurance Maps for the years 1911, 1918, 1928, 1936 and 1950. The fire insurance maps do not indicate significant chemical storage in the adjoining properties **Appendix F**.

### **6.0 SITE RECONNAISSANCE**

On November 3, 2011, Mr. Dirk Mammen and Mr. Trevor Woollatt of ECT performed a site reconnaissance of the Subject Property to observe general site conditions and indications of the possible release(s) of chemicals to the subsurface. A walkover site inspection was conducted to identify visible evidence of RECs. Mr. Rayman accompanied Mr. Mammen and Mr. Woollatt during the site reconnaissance. Photographs taken during ECT's site inspection are included in **Appendix G**.

Mr. Woollatt prepared this Phase I ESA report documenting ECT's observations and documentation review. Mr. Mammen provided the final technical review of this report. Qualifications for Mr. Mammen and Mr. Woollatt are included in **Appendix H**.

#### **6.1 Methodology and Limiting Conditions**

ECT was provided full access to the property.

#### **6.2 General Site Setting**

##### **6.2.1 Current Use(s) of the Property**

At the time of ECT's site reconnaissance the buildings were vacant. The Subject Property was secured with chain-linked fences and gates; however, some breaks were noted. The buildings were not secured and many doors were open and windows broken. Evidence of vandalism and some squatters was evident.

The office area was furnished and there were multiple filing cabinets of papers emptied and paper trash in the offices. In the basement of the office area approximately 45 55-gallon drums were found neatly placed in one room. The drums were mostly labeled paint, however some had been opened and liners could be seen under the rims indicating that the contents were likely not original.

The manufacturing area was mainly empty with the exception of some small debris and old personal items left by the previous owner. Multiple areas of staining were observed and oily sludge was noted in some former machine pits. Holes in the floor where paper rolling machines had been were open to the basement some 20 feet below the floor level. The basement floor appeared oily and wet in some locations.

## 6.2.2 Past Use(s) of the Property

ECT reviewed the following documents as part of this Phase I ESA. Copies of available previous environmental reports are included as **Appendix I**:

- Oneida Total Integrated Enterprises, *Site Assessment Report*, January 18, 2012.
- Global Environmental Engineers, *BEA*, September 20, 2006.
- Global Environmental Engineers, *Section 7a CA*, September 20, 2006.
- Global Environmental Engineers, *Phase I ESA*, July 20, 2006.
- Conestoga-Rovers & Associates, *Phase II PCB Evaluation*, January, 1995.

Oneida Total Integrated Enterprises (OTIE) was the consultant retained by US EPA Emergency Response to assess the contents of the drums. During their site work, OTIE collected three shallow soil samples near the areas where MDEQ reported seeing transformers being dismantled by Cogswell at the northeast corner of the office area. OTIE identified one PCB Aroclor at concentration lower than EPA action levels. OTIE did not attempt to identify the extent of PCB impact or determine if higher concentrations are present.

Historical aerial photography and Sanborn maps indicate that the Subject Property was developed as a paper mill as early as 1911. Global documented the following:

- Low levels of PCBs had been identified previously in the Type III Landfill areas on the northern portion of the Subject Property as well as in the lagoons.
- The Landfills and Lagoons were closed.
- Global sampled an oily sludge in the plant building and did not detect PCBs but did detect some metals (copper and lead).
- Global indicated that given the historic use other chemical contaminants may be present at the Subject Property.
- Global analyzed 4 soil samples around the Closed Landfill cells and identified low level PCBs in one sample. Two samples were collected in the plant and were non-detect for PCBs.

Global identified the following RECs associated with the Subject Property in its 2006 Phase I ESA:

- The former wastewater lagoons on the western portion of the Subject Property.
- Documentation of low-level PCB contamination throughout the site.
- Residual chemicals in the manufacturing building. Chemical materials include flammables, inks, caustics, and corrosive materials associated with the former manufacturing operations.
- Residual oils and sludges visible in a press pit in the former manufacturing building.

- The site includes two Type III landfill cells on the northern portion of the property.

Conestoga-Rovers & Associates was retained by Rock-Tenn to assess the PCB contamination in regard to the Kalamazoo River Superfund site. Their analysis and evaluation of the concentrations and distribution of the PCBs in the Landfill cells and the Lagoons indicated that the site was not a contributor to the PCB contamination within the river. The EPA concurred and neither Rock-Tenn nor the Subject Property were identified as Potentially Responsible Parties (PRPs) in the Superfund action.

With the exception of work associated with BEA and the PCB Evaluation, no further work has been conducted at the Subject Property. Information pertaining to work is provided in Section 6.2.4 of this report.

### **6.2.3 Current Uses of Adjoining Properties**

The northern boundary of the Subject Property is Helen Avenue, with a portion of the property extending across Helen Avenue to the north. The properties north of Helen Avenue are residential at east end of the Subject Property and vacant along the remaining boundary.

### **6.2.4 Past Uses of Adjoining Properties**

Based on a review of historical aerial photographs and the Sanborn maps, the western property has been undeveloped and/or agricultural land from as early as 1911 through the present. The northern parcels have been residential in use. The southern boundary is the Kalamazoo River and properties across the Kalamazoo River have contained residential and commercial properties.

The eastern adjoining properties were historically developed with paper product related industry. Wolverine Paper manufactured waxed paper and adjoins to the southeast was owned by Mac Sin Bar Paper, the original Subject Property owner. The northeast adjoining property was owned by Allegan Paper Mills which produced coated paper.

### **6.2.5 Current or Past Uses in the Surrounding Area**

Based on a review of historical aerial photographs, the surrounding area appeared to be largely residential, commercial, industrial, and agricultural land from as early as 1938 through the present.

### **6.2.6 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions**

According to the map of *Quaternary Geology of Southern Michigan*, prepared by the University of Michigan's Department of Geological Science (dated 1982), the Subject Property is situated on "end moraines of coarse-textured till." End moraines with coarse-textured till is typically gray, grayish brown or reddish brown, non-sorted glacial debris. Its matrix is dominantly sandy clay loam, sandy loam, or loamy sandy texture, and locally resembles outwash except for sporadic occurrence on non-sorted clayey or silty lenses and lack of stratification. End moraines with coarse-textured till contains variable amounts of cobbles and boulders and occurs in narrow belts of hummocky relief marking

former still stands of ice-sheet margin. It also includes small areas of ground moraines and outwash. Its thickness tends to be somewhat greater than adjacent ground moraine areas.

The EDR-Radius Map report stated that the Subject Property is underlain by bedrock of the Paleozoic Era, Mississippian System, and Osegean and Kinderhookian Series. The dominant soil composition in the general vicinity of the Subject Property are Urban land.

## **6.3 Exterior Observations**

The following items were looked for, or identification was attempted, as indicated in the ASTM standard.

### **6.3.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses**

The presence of hazardous substances or petroleum products in connection with the Subject Property was investigated. Some staining was observed on the asphalt outside the office building on the northeast portion of the Subject Property.

### **6.3.2 Storage Tanks**

ECT looked for ASTs, USTs, and evidence of USTs (e.g., vent pipes, fill pipes, or access ways indicating USTs) during the site reconnaissance. Evidence of a potential AST removal was evident east of the office portion of the building.

### **6.3.3 Odors**

The Subject Property was checked for strong, pungent, or noxious odors and their sources during the site reconnaissance. No readily noticeable strong, pungent, or noxious odors were encountered on the exterior portions of the Subject Property at the time of the site reconnaissance.

### **6.3.4 Pools of Liquid**

ECT looked for standing surface water and pools or sumps containing liquids likely to contain hazardous substances or petroleum products during the site reconnaissance.

Two large clarifier tanks associated with the former wastewater treatment plant are present on the south side of the building, these tanks appear to contain water, likely from rain.

No other standing surface water, pools, or sumps likely to contain hazardous substances or petroleum products were observed on the exterior portions of the Subject Property at the time of the site reconnaissance.

### **6.3.5 Drums**

ECT looked for storage drums during the site reconnaissance. Two 55-gallon drums were observed on between the powerhouse and the office portions of the building on the east side of the main plant.

### **6.3.6 Hazardous Substances and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses)**

ECT looked for hazardous substances and petroleum products containers during the site reconnaissance. No hazardous substances or petroleum products were observed on the exterior portions of the Subject Property at the time of the site reconnaissance.

### **6.3.7 Unidentified Substance Containers**

ECT looked for open or damaged containers containing unidentified substances suspected of being hazardous substances or petroleum products during the site reconnaissance. Three 55-gallon drums near the powerhouse were observed on the Subject Property at the time of the site reconnaissance.

### **6.3.8 PCBs**

ECT looked for electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs during the site reconnaissance. As indicated in the ASTM standard, fluorescent light ballasts (which may or may not be present onsite) were not evaluated.

ECT did not identify the transformers noted in the Global Phase I ESA.

No other electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs was observed onsite at the time of the site reconnaissance.

### **6.3.9 Pits, Ponds, or Lagoons**

ECT looked for pits, ponds, or lagoons on the Subject Property and on adjoining properties (to the extent they were visually and/or physically observable from the Subject Property) during the site reconnaissance.

No pits, ponds, or lagoons were observed at the Subject Property or its adjoining properties at the time of the site reconnaissance.

### **6.3.10 Stained Soil or Pavement**

ECT looked for areas of stained soil or pavement during the site reconnaissance. Stained soil and pavement were observed on the northeast exterior portion of the Subject Property at the time of the site reconnaissance.

### **6.3.11 Stressed Vegetation**

ECT looked for areas of stressed vegetation (from other than insufficient watering) during the site reconnaissance. No areas of stressed vegetation were observed onsite at the time of the site reconnaissance.

### **6.3.12 Solid Waste**

ECT looked for areas that are apparently filled or graded by non-natural causes (or filled by fill of unknown origin) suggesting trash construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal during the site reconnaissance. Type III Landfills were previously identified in the northern portion of the Subject Property.

No other such areas were observed onsite at the time of the site reconnaissance

### **6.3.13 Wastewater**

ECT looked for wastewater or other liquids (including storm water) or any discharge into a drain, ditch, underground injection system, or stream on or adjoining to the Subject Property during the site reconnaissance.

Stormwater runoff from the Subject Property flows into the catch basins that discharge to the municipal stormwater sewer system or directly to the Kalamazoo River. A former wastewater treatment plant is present on the south side of the building.

No other wastewater or liquids were observed discharging into drains, ditches, underground injection systems, or streams on or adjoining the Subject Property.

### **6.3.14 Wells**

ECT looked for wells, including dry wells, irrigation wells, injection wells, monitoring wells, abandoned wells, or other wells during the site reconnaissance. Potable water is supplied by the City of Otsego. No potable water wells were observed at the Subject Property.

Due to vegetation ECT was not able to identify monitor wells known to exist around the lagoons.

Four supply wells are located along the Kalamazoo River that provided process water, ECT was not able to identify these wells.

No other wells were observed in the exterior portions of the Subject Property.

### **6.3.15 Septic Systems**

The City of Otsego has provided municipal sanitary sewerage services to the Subject Property since the 1930s.

Process water was treated on-site, and discharged to the Kalamazoo River through the lagoons. This system is no longer in operation and the lagoons have been closed.

## **6.4 Interior Observations**

The following items were looked for, or identification was attempted, as indicated in the ASTM standard.

### **6.4.1 Heating/Cooling**

There is no remaining heating or cooling system in the building.

### **6.4.2 Stains or Corrosion**

ECT looked for areas of stained or corroded floors, walls, or ceilings during the site reconnaissance. Significant staining was observed in the main plant area, in the basement of the main plant, and in portions of the warehouse area where a number of 55-gallon drums were identified. These drums were removed by Rock-Tenn under EPA oversight.

### **6.4.3 Drains and Sumps**

ECT looked for floor drains and sumps during the site reconnaissance. Drainage from the manufacturing area is unknown and may represent a source of concern.

### **6.4.4 Hazardous Substances and Petroleum Products in Connection with Identified Uses**

The presence of hazardous substances or petroleum products was investigated. Potentially hazardous substances used and stored at the Subject Property consist primarily of oily sludges in the main plant area. ECT observed over 250 55-gallon drums and several large totes containing unknown liquids throughout the facility, but mainly in two warehouse locations. These drums represent a significant potential source of contamination. Additionally, pallets of paint and paint pigment were noted at several locations.

ECT observed the containers of materials stored inside the subject buildings to be in fair condition; however, many of the drums were not sealed. ECT notified the County and recommended contacting the EPA Emergency Response Team. ECT met with the EPA and their consultant on two occasions to walk the facility and identify drum locations. The EPA contacted Rock-Tenn who agreed to remove the drums and dispose of the contents. This work was conducted by Terra Contracting under the supervision of the EPA.

### **6.4.5 Storage Tanks**

ECT looked for ASTs, USTs, and evidence of UST (e.g., vent pipes, fill pipes, or access ways indicating USTs) inside the subject buildings during the site reconnaissance. ECT identified one AST

within the fire suppression pump house located on the bank of the Kalamazoo River, southwest of the main subject building. It is not known if this AST contains residual liquids.

#### **6.4.6 Odors**

ECT checked for strong, pungent, or noxious odors and their sources during the site reconnaissance. No noticeable strong, pungent, or noxious odors were encountered inside the subject buildings at the time of the site reconnaissance.

#### **6.4.7 Pools of Liquid**

ECT looked for standing surface water and pools or sumps containing liquids likely to contain hazardous substances or petroleum products during the site reconnaissance. No standing surface water, pools, or sumps were observed inside the subject buildings at the time of the site reconnaissance.

#### **6.4.8 Drums**

ECT looked for storage drums during the site reconnaissance. Information regarding storage drums observed inside the subject buildings is provided in Section 6.4.4 of this report.

#### **6.4.9 Hazardous Substances and Petroleum Products Containers (Not Necessarily in Connection With Identified Uses)**

ECT looked for hazardous substances and petroleum products containers during the site reconnaissance. Information regarding hazardous substances and petroleum products containers observed inside the subject buildings is provided in Section 6.4.4 of this report.

#### **6.4.10 Unidentified Substance Containers**

ECT looked for open or damaged containers containing unidentified substances suspected of being hazardous substances or petroleum products during the site reconnaissance. Other than the drums and totes previously identified, no other such containers were observed inside the subject buildings at the time of the site reconnaissance.

#### **6.4.11 PCBs**

ECT looked for electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs was looked for during the site reconnaissance. As indicated in the ASTM standard, fluorescent light ballasts (which may or may not be present onsite) were not evaluated. No electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs were identified inside the subject buildings at the time of the site reconnaissance.

## 7.0 INTERVIEWS

### 7.1 Interviews with Site Contacts

Prior to completion of the Phase I environmental site assessment, ECT interviewed Mr. Dave Rayman (Economic Development Director for the City of Otsego). Mr. Rayman was asked if he knew whether any of the documents below exist and, if so, whether copies would be provided:

- Environmental site assessment reports
- Environmental audit reports
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, National Pollutant Discharge Elimination System permits, underground injection permits)
- Registrations for USTs and ASTs
- Registrations for underground injection systems
- Material safety data sheets
- Community right-to-know plan
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.
- Reports regarding hydrogeologic conditions on the property or surrounding area
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property
- Hazardous waste generator notices or reports
- Risk assessments
- Recorded Activity Use Limitations

ECT was not provided with any previously conducted reports. The remainder of the above-requested documentation was either not applicable or available.

Mr. Rayman was also asked to answer the following questions as part of the assessment:

- Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?
- Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property?
- Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

Mr. Rayman answered no to the above questions.

## 7.2 Interviews with Local Government Officials

No local or state government officials were contacted during this investigation. Information obtained through the historical review and review of the regulatory agency files provided sufficient information for the investigation.

## 8.0 FINDINGS

This section identifies known or suspect RECs, historical RECs, and *de minimis* conditions discovered during this Phase I ESA investigation.

### 8.1 Known or Suspect RECs

Based on ECT's observation and review of previously conducted environmental investigative reports, ECT identified the following current RECs during this Phase I ESA. Specific locations of these items can be found on **Figure 3**, Site Features Map.

- The presence of over 250 drums and totes within the main building and one outbuilding of the Subject Property.
- The former wastewater lagoons on the western portion of the Subject Property.
- The potential presence of PCBs due to former operations as a paper mill and by Cogswell Property, LLC for dismantling transformers.
- The presence of significant staining and oily sludges in pits throughout the main facility building.
- The presence of a diesel fuel AST in the fire suppression building located along the River bank.
- The presence of two closed Type III landfills on the northern portion of Subject Property.
- The presence of the Kalamazoo River Superfund site along the southern boundary of the Subject Property.
- This assessment has revealed no evidence of historical RECs or *de minimis* conditions associated with the Subject Property except the following.
- The presence of the Kalamazoo River Superfund site along the southern boundary of the Subject Property.
- The Kalamazoo River Superfund site is being managed and cleaned up by the responsible parties under the direction of the US EPA.

### 8.2 Historical RECs

No historical RECs were identified during this Phase I ESA.

### 8.3 De Minimis Conditions

No *de minimis* conditions were identified during this Phase I ESA.

### 9.0 OPINION

This section presents the environmental professional's opinion(s) of the impact on the property of conditions identified in the findings section.

This assessment has revealed evidence of the following current RECs associated with the Subject Property.

- The presence of over 250 drums and totes within the main building and one outbuilding of the Subject Property.
- The former wastewater lagoons on the western portion of the Subject Property.
- The potential presence of PCBs due to former operations as a paper mill and by Cogswell Property, LLC for dismantling transformers.
- The presence of significant staining and oily sludges in pits throughout the main facility building.
- The presence of a diesel fuel AST in the fire suppression building located along the River bank.
- The presence of two closed Type III landfills on the northern portion of Subject Property.
- The presence of the Kalamazoo River Superfund site along the southern boundary of the Subject Property.
- This assessment has revealed no evidence of historical RECs or *de minimis* conditions associated with the Subject Property except the following.
- The presence of the Kalamazoo River Superfund site along the southern boundary of the Subject Property.
- The Kalamazoo River Superfund site is being managed and cleaned up by the responsible parties under the direction of the US EPA.

This assessment has revealed no evidence of historical RECs or *de minimis* conditions associated with the Subject Property.

ECT recommends conducting soil and groundwater sampling to assess the current condition of the Subject Property in regard to the above listed RECs.

### 10.0 CONCLUSIONS

ECT has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527 of the Rock-Tenn property located at 431 Helen Avenue, City of Otsego, Allegan County,

Michigan 49078 (Subject Property). Any exceptions to, or deletions from, this practice are described in Section 11.0 of this report.

Because concentrations of polychlorinated biphenyls (PCBs), boron, magnesium, iron, copper, lead, and thallium exceed Michigan Part 201 direct contact, drinking water and/or GSI protection criteria, the Subject Property meets the definition of a facility. ECT recommends that a future purchaser complete a Baseline Environmental Assessment (BEA) under Part 201 of the Natural Resources and Environmental Protection Act (1994 PA 451, as amended).

## 11.0 DEVIATIONS/DATA GAPS

The following deviations from the ASTM practice were identified:

- The recently-enacted All Appropriate Inquiry standard and ASTM practice indicates that the Tribal equivalent of the CERCLIS, Solid Waste Facilities/Landfill (SWF/LF), Institutional Control/Engineering Controls, Voluntary Cleanup, and Brownfields databases be searched. It is the understanding of ECT that these databases are not available for the State of Michigan. The impact of this deviation is considered negligible with regard to identifying RECs.
- No personnel familiar with the operation of the paper mills or the activities conducted by Cogswell were available.

## 12.0 ADDITIONAL SERVICES

The following additional services were not provided as part of the scope for conducting this Phase I ESA:

|   |                        |
|---|------------------------|
| Asbestos-containing materials assessment; | Industrial hygiene;    |
| Radon assessment;                         | Health and safety;     |
| Lead-based paint;                         | Ecological resources;  |
| Lead in drinking water;                   | Endangered species;    |
| Wetlands;                                 | Indoor air quality;    |
| Regulated compliance;                     | Biological agents; and |
| Cultural and historic resources;          | Mold.                  |

## 13.0 REFERENCES

ASTM, 2005 American Society for Testing and Materials (ASTM), Standard E 1527, Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process, 2005.

Interview with Mr. Dave Rayman (Economic Development Director, City of Otsego).

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*Quaternary Geology of Southern Michigan*, Michigan Department of Natural Resources, Geological Survey Division, 1982.

Environmental Data Resources, Inc., (EDR), EDR-Radius Map Report: Inquiry No. 3199656.2s, November 8, 2011.

Oneida Total Integrated Enterprises, *Site Assessment Report*, January 18, 2012.

Global Environmental Engineers, *BEA*, September 20, 2006.

Global Environmental Engineers, *Section 7a CA*, September 20, 2006.

Global Environmental Engineers, *Phase I ESA*, July 20, 2006.

Conestoga-Rovers & Associates, *Phase II PCB Evaluation*, January 1995.

## 14.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

The environmental assessment described herein was conducted by the undersigned employees of ECT. ECT's investigation consisted solely of the activities described in the Introduction of this report, and in accordance with the Terms and Conditions of the Standard Consulting Services Agreement signed prior to initiation of the assessment, as applicable.

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 C.F.R. 312. I, have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Report Prepared By:



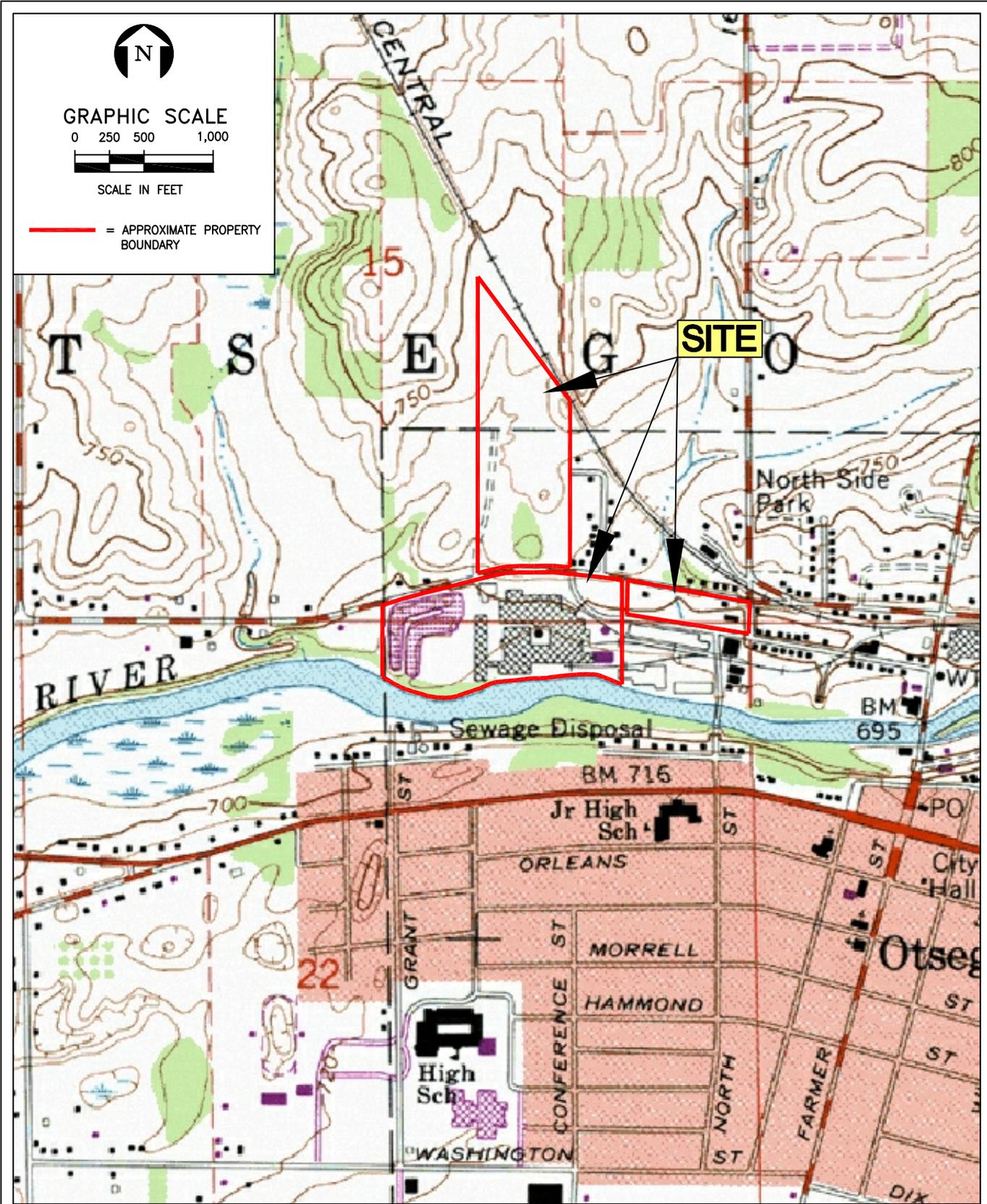
Trevor I. Woollatt  
Senior Geologist

Report Reviewed and Approved By:



Dirk Mammen  
Senior Scientist

## FIGURES



**FIGURE 1.  
SITE LOCATION MAP**

Source: Maptech, 2001

**ROCK-TENN SITE  
431 HELEN STREET  
OTSEGO, MICHIGAN**

**ECT**  
Environmental Consulting & Technology, Inc.  
2200 Commonwealth Blvd, Suite 300  
Ann Arbor, Michigan 48105  
Phone: 734-760-3004 Fax: 734-760-3184  
www.ectinc.com



**FIGURE 2.**  
**SITE AND SURROUNDING**  
**PROPERTIES MAP**

Source: GOOGLE EARTH, 2012.

**ROCK-TENN SITE**  
**431 HELEN STREET**  
**OTSEGO, MICHIGAN**

**ECT**

Environmental Consulting & Technology, Inc.  
 2200 Commonwealth Blvd, Suite 300  
 Ann Arbor, Michigan 48106  
 Phone: 734-769-3004 Fax: 734-769-3164  
 www.eotno.com



**FIGURE 3.  
SITE FEATURES MAP**

Source: GOOGLE EARTH, 2012.

**ROCK-TENN SITE  
431 HELEN STREET  
OTSEGO, MICHIGAN**

**ECT**  
Environmental Consulting & Technology, Inc.  
2200 Commonwealth Blvd., Suite 300  
Ann Arbor, Michigan 48106  
Phone: 734-769-3004 Fax: 734-769-3164  
www.eocth.com

## **APPENDIX A**

### **Legal Description**

|  |   |   |                    |             |                         |                |                |                 |                |               |
|--|---|---|--------------------|-------------|-------------------------|----------------|----------------|-----------------|----------------|---------------|
| Grantor  | Grantee   | Sale Price  | Sale Date          | Inst. Type  | Terms of Sale           | Liber & Page   | Verified By    | Prcnt. Trans.   |                |               |
| ROCK-TENN CO   | COGSWELL PROPERTY LLC   | 70,000  | 09/08/2006         | WD          | MULTI PARCELS           | 3036/0463      |                | 100.0           |                |               |
| Property Address   | Class: INDUSTRIAL   | Zoning: G-1   | Building Permit(s) | Date        | Number                  | Status         |                |                 |                |               |
| 431 HELEN  | School: OTSEGO  | ALTERATIONS   | 02/19/2007         | COMMPART    | RECHK FOR               |                |                |                 |                |               |
| Owner's Name/Address   | MAP #:  | Land Value Estimates for Land Table INDUS. INDUSTRIAL |                    |             |                         |                |                |                 |                |               |
| COGSWELL PROPERTY LLC<br>& DAVIS MICHAEL JR<br>26520 GRAND RIVER AVE #111<br>REDFORD MI 48240  | 2011 Est TCV 743,354 TCV/TFA: 2.47  |   |                    |             |                         |                |                |                 |                |               |
| Taxpayer's Name/Address  | Public Improvements   | * Factors *   |                    |             |                         |                |                |                 |                |               |
| COGSWELL PROPERTY LLC<br>& DAVIS MICHAEL JR<br>26520 GRAND RIVER AVE #111<br>REDFORD MI 48240  | Dirt Road<br>Gravel Road<br>Paved Road<br>Storm Sewer<br>Sidewalk<br>Water<br>Sewer<br>Electric<br>Gas<br>Curb<br>Street Lights<br>Standard Utilities<br>Underground Utils. | Description   | Frontage           | Depth       | Front Depth             | Rate           | %Adj.          | Reason          | Value          |               |
|  |   | INDUSTRIAL/COMM                                       | 44.000             | Acres       | 5000                    | 75             |                |                 | 165,000        |               |
|  |   | Flat Value: 4-4" WELLS @ 1000 EA@50%                  | 44.00              | Total Acres | Total Est. Land Value = |                |                |                 | 2,000          |               |
|  |   | Land Improvement Cost Estimates                       |                    |             |                         |                |                |                 | 167,000        |               |
| Tax Description  |   | Description   | Rate               | CountyMult. | Size                    | %Good          | Cash Value     |                 |                |               |
| COM AT A PT 888.5' W & 32.8' N OF THE SE COR OF SEC 15 FOR POB OF THIS DES, (BEING THE SE COR OF TOWNSEND'S ADD) THE N 81 DEG 50' W 337.75' TO THE E 1/8 LIN OF SEC 15 TH N ON SD E 1/8 LIN TO THE N CITY LIMIT LIN (BEING THE S 1/8 LIN OF SEC 15) TH S ON SD N & S 1/4 LIN TO THE S 1/4 POST OF SEC 15 TH S ALG THE N & S 1/4 LIN OF SEC 22 TO THE KALA RIVER TH E'LY ALG SD RIVER TO THE W LIN OF NORTH ST TH NLY ALG THE W LIN OF NORTH ST TO A PT THAT IS 214.7' S'LY FROM THE S LIN OF HELEN AVE TH WLY IN A STRAIGHT LIN TO A PT 885.5' W OF THE E LIN OF SD SEC 22 & 200' S'LY FROM THE S LIN OF SD HELEN AVE TH N PPL WITH SD E LIN OF SEC 22 TO THE S LIN OF HELEN AVE TH NPLY ALG S LIN OF SD HELEN AVE TO POB EX COM AT A PT IN THE CTR OF RIVER ST WHERE THE N & S 1/4 LIN OF SEC 15 CROSSES THE SD HWY TH ELY ALG THE CTR LIN OF SD HWY 40 RDS TH N PPL WITH SD 1/4 LIN TO THE N CITY LIMIT (BEING THE S 1/8 | D/W/P: Asphalt Paving   | 1.61  | 1.19               | 100000      | 10                      | 19,159         |                |                 |                |               |
|  |   | Total Estimated Land Improvements                     |                    |             |                         |                | 19,159         |                 |                |               |
| Comments/Influences  | Who   | When  | What               | Year        | Land Value              | Building Value | Assessed Value | Board of Review | Tribunal/Other | Taxable Value |
| The Equalizer. Copyright (c) 1999 - 2009. Licensed To: City of Otsego, County of Allegan   | HAL   | 06/16/1995  | Data Enter         | 2011        | 83,500                  | 288,200        | 371,700        |                 |                | 371,700S      |
|  |   |   | Inspected          | 2010        | 83,500                  | 303,100        | 386,600        |                 |                | 386,600S      |
|  |   |   |                    | 2009        | 83,500                  | 307,000        | 390,500        |                 |                | 390,500S      |
|  |   |   |                    | 2008        | 83,500                  | 592,600        | 676,100        |                 |                | 676,100S      |

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Desc. of Bldg/Section: 2,3,4  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 18,188  
 Stories Above Grd: 1  
 Average Sty Hght : 18  
 Bsmnt Wall Hght  
 Depr. Table : 4%  
 Effective Age : 26  
 Physical %Good: 35  
 Func. %Good : 25  
 Economic %Good: 100  
 Year Built  
 Remodeled  
 Overall Bldg Height  
 Comments:

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: \$+0 \$/SqFt:0.00  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 18188  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*  
 Area #1:  
 Type #1:  
 Area #2:  
 Type #2:  
 Area:  
 Type: Low

<<<<< Calculator Cost Computations >>>>>  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories Number of Stories Multiplier: 1.000  
 Average Height per Story: 18 Height per Story Multiplier: 1.080  
 Ave. Floor Area: 18,188 Perimeter: 0  
 Refined Square Foot Cost for Upper Floors: 21.11 Perim. Multiplier: 1.000  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 25.126  
 Total Floor Area: 18,188 Base Cost New of Upper Floors = 456,986  
 Eff.Age:26 Phy.%Good/Abnr.Phy./Func./Overall %Good: 35 /100/25 /100/8.8  
 Reproduction/Replacement Cost = 456,986  
 Total Depreciated Cost = 39,986  
 ECF (INDUSTRIAL ) 0.812 => TCV of Bldg: 2 = 32,469  
 Replacement Cost/Floor Area= 25.13 Est. TCV/Floor Area= 1.79

(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 Average Many Unfinished Typical                            | Few Average Many Unfinished Typical                       | Few Average Many Unfinished Typical | Few Average Many Unfinished Typical |
| Flex Conduit Rigid Conduit Armored Cable Non-Metallic 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: 7,8  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 19,296  
 Stories Above Grd: 1  
 Average Sty Hght : 18  
 Bsmnt Wall Hght  
 Depr. Table : 4%  
 Effective Age : 26  
 Physical %Good: 35  
 Func. %Good : 25  
 Economic %Good: 25  
 Year Built  
 Remodeled  
 Overall Bldg Height  
 Comments:  
 Area: #1:  
 Type #1:  
 Area #2:  
 Type #2:  
 Area:  
 Type: Low

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: %0 \$/SqFt:0.00 100  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 19296  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*

Calculator Cost Computations  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories Number of Stories Multiplier: 1.000  
 Average Height per Story: 18 Height per Story Multiplier: 1.080  
 Ave. Floor Area: 19,296 Perimeter: 0  
 Refined Square Foot Cost for Upper Floors: 21.11  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 25.126  
 Total Floor Area: 19,296 Base Cost New of Upper Floors = 484,825  
 Reproduction/Replacement Cost = 484,825  
 Eff.Age:26 Phy.%Good/Abnr.Phy./Func./Overall %Good: 35 /100/25 /25 /2.2  
 Total Depreciated Cost = 10,606  
 ECF (INDUSTRIAL ) 0.812 => TCV of Bldg: 4 = 8,612  
 Replacement Cost/Floor Area= 25.13 Est. TCV/Floor Area= 0.45

(1) Excavation/Site Prep:  
 (2) Foundation: Footings Brick/Stone Block  
 X Poured Conc  
 (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 Coal Hand Fired  
 Oil Stoker Boiler

(11) Electric and Lighting:  
 Outlets: Fixtures:  
 Few Average Few  
 Many Unfinished Many Average  
 Typical Typical Unfinished  
 Flex Conduit Incandescent  
 Rigid Conduit Fluorescent  
 Armored Cable Mercury  
 Non-Metallic 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: 10  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 6,720  
 Stories Above Grd: 1  
 Average Sty Hght : 24  
 Bsmnt Wall Hght  
 Depr. Table : 4%  
 Effective Age : 26  
 Physical %Good: 35  
 Func. %Good : 25  
 Economic %Good: 100

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: \$+0 \$/SqFt:0.00  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 6720  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*

Year Built  
 Remodeled  
 Overall Bldg Height  
 Comments:

<<<<<< Calculator Cost Computations >>>>>>  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories  
 Average Height per Story: 24 Number of Stories Multiplier: 1.000  
 Ave. Floor Area: 6,720 Perimeter: 0 Height per Story Multiplier: 1.230  
 Refined Square Foot Cost for Upper Floors: 24.05 Perim. Multiplier: 1.000  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 28.615  
 Total Floor Area: 6,720 Base Cost New of Upper Floors = 192,295  
 Reproduction/Replacement Cost = 192,295  
 Eff.Age:26 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 35 /100/25 /100/8.8  
 Total Depreciated Cost = 16,826  
 ECF (INDUSTRIAL ) 0.812 => TCV of Bldg: 6 = 13,663  
 Replacement Cost/Floor Area= 28.62 Est. TCV/Floor Area= 2.03

(1) Excavation/Site Prep:  
 (2) Foundation:  
 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 Coal Hand Fired  
 Oil Stoker Boiler

(11) Electric and Lighting:  
 Outlets: Fixtures:  
 Few Average Few  
 Many Unfinished Many Average  
 Typical Typical Unfinished  
 Flex Conduit Incandescent  
 Rigid Conduit Fluorescent  
 Armored Cable Mercury  
 Non-Metallic 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: 12&13  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 6,480  
 Stories Above Grd: 1  
 Average Sty Hght: 12  
 Bsmnt Wall Hght

High  Above Ave.  Ave.  Low

Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: %0 \$/SqFt: 0.00  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 6480  
 Ave. Perimeter  
 Has Elevators:

\*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*

Area #1:  
 Type #1:  
 Area #2:  
 Type #2:  
 Area:  
 Type: Low

Comments:

Calculator Cost Computations  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories Number of Stories Multiplier: 1.000  
 Average Height per Story: 12 Height per Story Multiplier: 0.960  
 Ave. Floor Area: 6,480 Perimeter: 0 Perim. Multiplier: 1.000  
 Refined Square Foot Cost for Upper Floors: 18.77  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 22.334  
 Total Floor Area: 6,480 Base Cost New of Upper Floors = 144,724  
 Reproduction/Replacement Cost = 144,724  
 Eff. Age: 26 Phy. %Good/Abnr. Phy./Func./Overall %Good: 35 /100/25 /100/8.8  
 Total Depreciated Cost = 12,663  
 ECF (INDUSTRIAL) 0.812 => TCV of Bldg: 8 = 10,283  
 Replacement Cost/Floor Area= 22.33 Est. TCV/Floor Area= 1.59

(1) Excavation/Site Prep:

(2) Foundation: Footings

(3) Frame: Block

(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           | Average            | Few          | Average            |
| Many          | Unfinished Typical | Many         | Unfinished Typical |
| Flex Conduit  | Armored Cable      | Incandescent | Fluorescent        |
| Rigid Conduit | Non-Metallic       | Mercury      | 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: 15  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 6,720  
 Stories Above Grd: 1  
 Average Sty Hght: 20  
 Bsmnt Wall Hght  
 Depr. Table: 4%  
 Effective Age: 26  
 Physical %Good: 35  
 Func. %Good: 25  
 Economic %Good: 100

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: %0 \$/SqFt: 0.00  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 6720  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*  
 Area:  
 Type: Low

<<<<<< Calculator Cost Computations >>>>>>  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories Number of Stories Multiplier: 1.000  
 Average Height per Story: 20 Height per Story Multiplier: 1.130  
 Ave. Floor Area: 6,720 Perimeter: 0 Perim. Multiplier: 1.000  
 Refined Square Foot Cost for Upper Floors: 22.09  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 26.289  
 Total Floor Area: 6,720 Base Cost New of Upper Floors = 176,661  
 Reproduction/Replacement Cost = 176,661  
 Eff. Age: 26 Phy. %Good/Abnr. Phy./Func./Econ./Overall %Good: 35 /100/25 /100/8.8  
 Total Depreciated Cost = 15,458  
 ECF (INDUSTRIAL) 0.812 => TCV of Bldg: 10 = 12,552  
 Replacement Cost/Floor Area= 26.29 Est. TCV/Floor Area= 1.87

(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 Average   | Many Unfinished Typical | Few Average   | Many Unfinished Typical |
| Flex Conduit  | Incandescent            | Rigid Conduit | Fluorescent             |
| Armored Cable | Mercury Vapor           | Non-Metallic  | 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: 19  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 4,900  
 Stories Above Grd: 1  
 Average Sty Hght : 19  
 Bsmnt Wall Hght

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: \$+0 \$/SqFt:0.00  
 Heat#1: No Heating or Cooling 100  
 Heat#2: Space Heaters, Gas with Fan 0%  
 Ave. SqFt/Story: 4900  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*

Comments:  
 Area #1:  
 Type #1:  
 Area #2:  
 Type #2:  
 Area:  
 Type: Low

Calculator Cost Computations  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories  
 Average Height per Story: 19 Number of Stories Multiplier: 1.000  
 Ave. Floor Area: 4,900 Perimeter: 0 Height per Story Multiplier: 1.105  
 Refined Square Foot Cost for Upper Floors: 21.60 Perim. Multiplier: 1.000  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 25.707  
 Total Floor Area: 4,900 Base Cost New of Upper Floors = 125,966  
 Reproduction/Replacement Cost = 125,966  
 Eff.Age:26 Phy.%Good/Abnr.Phy./Func./Overall %Good: 35 /100/25 /100/8.8  
 Total Depreciated Cost = 11,022  
 BCF (INDUSTRIAL ) 0.812 => TCV of Bldg: 12 = 8,950  
 Replacement Cost/Floor Area= 25.71 Est. TCV/Floor Area= 1.83

(1) Excavation/Site Prep:

(2) Foundation: Footings Brick/Stone Block  
 X Poured Conc

(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 Coal Hand Fired  
 Oil Stoker Boiler

(11) Electric and Lighting:  
 Outlets: Few Average Unfinished Typical  
 Many Unfinished Typical  
 Fixtures: Few Average Unfinished Typical  
 Many Unfinished Typical  
 Flex Conduit Incandescent  
 Rigid Conduit Fluorescent  
 Armored Cable Mercury Vapor  
 Non-Metallic 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: 35,36,37  
 Calculator Occupancy: Warehouse, Storage

Class: C      Quality: Low Cost      Percent Adj: +0

Base Rate for Upper Floors = 21.15

(10) Heating system: No Heating or Cooling      Cost/SqFt: -1.60      100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55

1 Stories      Number of Stories Multiplier: 1.000  
 Average Height per Story: 20      Height per Story Multiplier: 1.130  
 Ave. Floor Area: 47,510      Perimeter: 0      Perim. Multiplier: 1.000  
 Refined Square Foot Cost for Upper Floors: 22.09

County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 26.289

Total Floor Area: 47,510      Base Cost New of Upper Floors = 1,248,985

Reproduction/Replacement Cost = 1,248,985  
 Overall %Good: 38 /100/25 /100/9.5  
 Total Depreciated Cost = 118,654

ECF (INDUSTRIAL )      0.812 => TCV of Bldg: 14 = 96,347  
 Replacement Cost/Floor Area= 26.29      Est. TCV/Floor Area= 2.03

<<<<<<      Calculator Cost Computations      >>>>>>

Class: C      Quality: Low Cost      Percent Adj: +0

Base Rate for Upper Floors = 21.15

(10) Heating system: No Heating or Cooling      Cost/SqFt: -1.60      100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55

1 Stories      Number of Stories Multiplier: 1.000  
 Average Height per Story: 20      Height per Story Multiplier: 1.130  
 Ave. Floor Area: 47,510      Perimeter: 0      Perim. Multiplier: 1.000  
 Refined Square Foot Cost for Upper Floors: 22.09

County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 26.289

Total Floor Area: 47,510      Base Cost New of Upper Floors = 1,248,985

Reproduction/Replacement Cost = 1,248,985  
 Overall %Good: 38 /100/25 /100/9.5  
 Total Depreciated Cost = 118,654

ECF (INDUSTRIAL )      0.812 => TCV of Bldg: 14 = 96,347  
 Replacement Cost/Floor Area= 26.29      Est. TCV/Floor Area= 2.03

|                           |             |                           |                 |                              |          |                                     |                                 |
|---------------------------|-------------|---------------------------|-----------------|------------------------------|----------|-------------------------------------|---------------------------------|
| (1) Excavation/Site Prep: |             | (7) Interior:             |                 | (11) Electric and Lighting:  |          | (39) Miscellaneous:                 |                                 |
| (2) Foundation:           |             | (8) Plumbing:             |                 | Outlets:                     |          | Fixtures:                           |                                 |
| X Poured Conc             | Brick/Stone | Block                     | Many Above Ave. | Average Typical              | Few None | Few Average Many Unfinished Typical | Average Many Unfinished Typical |
| (3) Frame:                |             | Total Fixtures            |                 | Urinals                      |          | Incandescent Fluorescent            |                                 |
| (4) Floor Structure:      |             | 3-Piece Baths             |                 | Wash Bowls                   |          | Mercury Sodium Vapor Transformer    |                                 |
| (5) Floor Cover:          |             | 2-Piece Baths             |                 | Water Heaters                |          | (40) Exterior Wall:                 |                                 |
| (6) Ceiling:              |             | Shower Stalls             |                 | Wash Fountains               |          | Thickness                           |                                 |
|                           |             | Toilets                   |                 | Water Softeners              |          | Bsmnt Insul.                        |                                 |
|                           |             | (9) Sprinklers:           |                 | (13) Roof Structure: Slope=0 |          |                                     |                                 |
|                           |             | (10) Heating and Cooling: |                 | (14) Roof Cover:             |          |                                     |                                 |
|                           |             | Gas Oil Coal Stoker       |                 | Hand Fired Boiler            |          |                                     |                                 |

|  |  |            |       |       |     |       |                      |       |       |       |  |
|--|--|------------|-------|-------|-----|-------|----------------------|-------|-------|-------|--|
| Desc. of Bldg/Section: 23<br>Calculator Occupancy: Warehouse, Storage  | <<<<<< Calculator Cost Computations >>>>>><br>Class: C Quality: Low Cost Percent Adj: +0<br>Base Rate for Upper Floors = 21.15<br>(10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%<br>Adjusted Square Foot Cost for Upper Floors = 19.55<br>1 Stories Number of Stories Multiplier: 1.000<br>Average Height per Story: 18 Height per Story Multiplier: 1.080<br>Ave. Floor Area: 32,450 Perimeter: 0 Perim. Multiplier: 1.000<br>Refined Square Foot Cost for Upper Floors: 21.11<br>County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 25.126<br>Total Floor Area: 32,450 Base Cost New of Upper Floors = 815,328<br>Reproduction/Replacement Cost = 815,328<br>Eff.Age:25 Phy.%Good/Abnr.Phy./Func./Overall %Good: 36 /100/25 /100/9.0<br>Total Depreciated Cost = 73,379<br>ECF (INDUSTRIAL ) 0.812 => TCV of Bldg: 16 = 59,584<br>Replacement Cost/Floor Area= 25.13 Est. TCV/Floor Area= 1.84 |            |       |       |     |       |                      |       |       |       |  |
| Construction Cost<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>High</td> <td>Above Ave.</td> <td>Ave.</td> <td>X</td> <td>Low</td> </tr> <tr> <td>** **</td> <td>Calculator Cost Data</td> <td>** **</td> <td>** **</td> <td>** **</td> </tr> </table> Quality: Low Cost Adj: \$+0 \$/SqFt:0.00 100<br>Heat#1: No Heating or Cooling 100<br>Heat#2: Space Heaters, Gas with Fan 0%<br>Ave. SqFt/Story: 32450<br>Ave. Perimeter<br>Has Elevators:<br>*** Basement Info ***<br>Area:<br>Perimeter:<br>Type:<br>Heat: Hot Water, Radiant Floor<br>* Mezzanine Info *<br>Area #1:<br>Type #1:<br>Area #2:<br>Type #2:<br>* Sprinkler Info *<br>Area:<br>Type: Low | High   | Above Ave. | Ave.  | X     | Low | ** ** | Calculator Cost Data | ** ** | ** ** | ** ** | (1) Excavation/Site Prep:<br>(2) Foundation: Footings<br>X Poured Conc Brick/Stone Block<br>(3) Frame:<br>(4) Floor Structure:<br>(5) Floor Cover:<br>(6) Ceiling: |
| High   | Above Ave.   | Ave.       | X     | Low   |     |       |                      |       |       |       |  |
| ** **  | Calculator Cost Data   | ** **      | ** ** | ** ** |     |       |                      |       |       |       |  |

|  |                         |   |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
|--|-------------------------|---|-------------------------|----------------|---------|--|---------------|------------|--|---------------|---------------|--|---------------|----------------|--|---------|-----------------|--|---------|-------------|-------------------|---|----------|--|-----------|--|-------------|-------------------------|-------------|-------------------------|--|--|---|--|
| (7) Interior:<br>(8) Plumbing:<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Many Above Ave.</td> <td>Average Typical</td> <td>Few None</td> </tr> <tr> <td>Total Fixtures</td> <td>Urinals</td> <td></td> </tr> <tr> <td>3-Piece Baths</td> <td>Wash Bowls</td> <td></td> </tr> <tr> <td>2-Piece Baths</td> <td>Water Heaters</td> <td></td> </tr> <tr> <td>Shower Stalls</td> <td>Wash Fountains</td> <td></td> </tr> <tr> <td>Toilets</td> <td>Water Softeners</td> <td></td> </tr> </table> (9) Sprinklers:<br>(10) Heating and Cooling:<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Gas Oil</td> <td>Coal Stoker</td> <td>Hand Fired Boiler</td> </tr> </table> | 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 |  | Gas Oil | Coal Stoker | Hand Fired Boiler | (11) Electric and Lighting:<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Outlets:</td> <td colspan="2">Fixtures:</td> </tr> <tr> <td>Few Average</td> <td>Many Unfinished Typical</td> <td>Few Average</td> <td>Many Unfinished Typical</td> </tr> <tr> <td>Flex Conduit Rigid Conduit Armored Cable Non-Metallic Bus Duct</td> <td></td> <td>Incandescent Fluorescent Mercury Sodium Vapor Transformer</td> <td></td> </tr> </table> (13) Roof Structure: Slope=0<br>(14) Roof Cover: | Outlets: |  | Fixtures: |  | Few Average | Many Unfinished Typical | Few Average | Many Unfinished Typical | Flex Conduit Rigid Conduit Armored Cable Non-Metallic Bus Duct |  | Incandescent Fluorescent Mercury Sodium Vapor Transformer |  |
| 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         |   |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| Gas Oil  | Coal Stoker             | Hand Fired Boiler   |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| Outlets:   |                         | Fixtures:   |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| Few Average  | Many Unfinished Typical | Few Average   | Many Unfinished Typical |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| Flex Conduit Rigid Conduit Armored Cable Non-Metallic Bus Duct   |                         | Incandescent Fluorescent Mercury Sodium Vapor Transformer |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| (39) Miscellaneous:<br>(40) Exterior Wall:<br><table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Thickness</td> <td>Bsmnt Insul.</td> </tr> </table>   |                         | Thickness   | Bsmnt Insul.            |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |
| Thickness  | Bsmnt Insul.            |   |                         |                |         |  |               |            |  |               |               |  |               |                |  |         |                 |  |         |             |                   |   |          |  |           |  |             |                         |             |                         |  |  |   |  |

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

Desc. of Bldg/Section: 40,41,42,43  
 Calculator Occupancy: Warehouse, Storage  
 Class: C  
 Floor Area: 38,080  
 Stories Above Grd: 1  
 Average Sty Hght : 20  
 Bsmnt Wall Hght  
 Depr. Table : 4%  
 Effective Age : 25  
 Physical %Good: 36  
 Func. %Good : 25  
 Economic %Good: 100  
 Year Built  
 Remodeled  
 Overall Bldg Height  
 Comments:

Construction Cost  
 High Above Ave. Ave. X Low  
 \*\* \*\* Calculator Cost Data \*\* \*\*  
 Quality: Low Cost Adj: %0 \$/SqFt:0.00  
 Heat#1: No Heating or Cooling  
 Heat#2: Space Heaters, Gas with Fan  
 Ave. SqFt/Story: 38080  
 Ave. Perimeter  
 Has Elevators:  
 \*\*\* Basement Info \*\*\*  
 Area:  
 Perimeter:  
 Type:  
 Heat: Hot Water, Radiant Floor  
 \* Mezzanine Info \*  
 \* Sprinkler Info \*  
 Area #1:  
 Type #1:  
 Area #2:  
 Type #2:  
 Area:  
 Type: Low

<<<<<< Calculator Cost Computations >>>>>>  
 Class: C Quality: Low Cost Percent Adj: +0  
 Base Rate for Upper Floors = 21.15  
 (10) Heating system: No Heating or Cooling Cost/SqFt: -1.60 100%  
 Adjusted Square Foot Cost for Upper Floors = 19.55  
 1 Stories Number of Stories Multiplier: 1.000  
 Average Height per Story: 20 Height per Story Multiplier: 1.130  
 Ave. Floor Area: 38,080 Perimeter: 0 Perim. Multiplier: 1.000  
 Refined Square Foot Cost for Upper Floors: 22.09  
 County Multiplier: 1.19, Final Square Foot Cost for Upper Floors = 26.289  
 Total Floor Area: 38,080 Base Cost New of Upper Floors = 1,001,081  
 Eff.Age:25 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 36 /100/25 /100/9.0  
 Reproduction/Replacement Cost = 1,001,081  
 Total Depreciated Cost = 90,097  
 ECF (INDUSTRIAL ) 0.812 => TCV of Bldg: 18 = 73,159  
 Replacement Cost/Floor Area= 26.29 Est. TCV/Floor Area= 1.92

(1) Excavation/Site Prep:

(2) Foundation: Footings

(3) Frame:

(4) Floor Structure:

(5) Floor Cover:

(6) Ceiling:

(7) Interior:

(8) Plumbing:

(9) Sprinklers:

(10) Heating and Cooling:

(11) Electric and Lighting:

(12) Roof Structure:

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:

(40) Exterior Wall:

|                              |              |
|------------------------------|--------------|
| Outlets:                     | Fixtures:    |
| Few                          | Few          |
| Average                      | Average      |
| Many                         | Many         |
| Unfinished                   | Unfinished   |
| Typical                      | Typical      |
| Flex Conduit                 | Incandescent |
| Rigid Conduit                | Fluorescent  |
| Armored Cable                | Mercury      |
| Non-Metallic                 | Sodium Vapor |
| Bus Duct                     | Transformer  |
| (13) Roof Structure: Slope=0 |              |
| (14) Roof Cover:             |              |
| (40) Exterior Wall:          |              |
| Thickness                    | Bsmnt Insul. |

\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

|                                  |  |                    |             |            |                    |                |                |                 |                |               |
|----------------------------------|--|--------------------|-------------|------------|--------------------|----------------|----------------|-----------------|----------------|---------------|
| Grantor                          | Grantee  | Sale Price         | Sale Date   | Inst. Type | Terms of Sale      | Liber & Page   | Verified By    | Prcnt. Trans.   |                |               |
| ROCK-TENN CO                     | COGSWELL PROPERTY LLC                                | 70,000             | 09/08/2006  | WD         | MULTI PARCELS      | 3036/0463      |                | 100.0           |                |               |
| Property Address                 | Class: INDUSTRIAL                                    |                    | Zoning: G-1 |            | Building Permit(s) |                | Date           | Status          |                |               |
| 431 HELEN                        | School: OTSEGO                                       |                    |             |            |                    |                |                |                 |                |               |
| Owner's Name/Address             | P.R.E. 0%  |                    |             |            |                    |                |                |                 |                |               |
| COGSWELL PROPERTY LLC            | MAP #:   |                    |             |            |                    |                |                |                 |                |               |
| %DAVIS MICHAEL JR                | 2011 Est TCV 31,500                                  |                    |             |            |                    |                |                |                 |                |               |
| 26520 GRAND RIVER AVE #111       | Land Value Estimates for Land Table INDUS.INDUSTRIAL |                    |             |            |                    |                |                |                 |                |               |
| REDFORD MI 48240                 | Improved   | X                  | Vacant      |            |                    |                |                |                 |                |               |
| Taxpayer's Name/Address          | Public   |                    |             |            |                    |                |                |                 |                |               |
| COGSWELL PROPERTY LLC            | Improvements   |                    |             |            |                    |                |                |                 |                |               |
| %DAVIS MICHAEL JR                | Dirt Road  |                    |             |            |                    |                |                |                 |                |               |
| 26520 GRAND RIVER AVE #111       | X  | Gravel Road        |             |            |                    |                |                |                 |                |               |
| REDFORD MI 48240                 | X  | Paved Road         |             |            |                    |                |                |                 |                |               |
|                                  | X  | Storm Sewer        |             |            |                    |                |                |                 |                |               |
|                                  | X  | Sidewalk           |             |            |                    |                |                |                 |                |               |
|                                  | X  | Water              |             |            |                    |                |                |                 |                |               |
|                                  | X  | Sewer              |             |            |                    |                |                |                 |                |               |
|                                  | X  | Electric           |             |            |                    |                |                |                 |                |               |
|                                  | X  | Gas                |             |            |                    |                |                |                 |                |               |
|                                  | X  | Curb               |             |            |                    |                |                |                 |                |               |
|                                  | X  | Street Lights      |             |            |                    |                |                |                 |                |               |
|                                  | X  | Standard Utilities |             |            |                    |                |                |                 |                |               |
|                                  | X  | Underground Utils. |             |            |                    |                |                |                 |                |               |
| Tax Description                  | Topography of Site                                   |                    |             |            |                    |                |                |                 |                |               |
| LOT'S 1 THRU 22 INC. MAC SIM BAR | Level  |                    |             |            |                    |                |                |                 |                |               |
| ADDITION.                        | Rolling  |                    |             |            |                    |                |                |                 |                |               |
| Comments/Influences              | Low  |                    |             |            |                    |                |                |                 |                |               |
|                                  | High   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Landscaped   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Swamp  |                    |             |            |                    |                |                |                 |                |               |
|                                  | Wooded   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Pond   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Waterfront   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Ravine   |                    |             |            |                    |                |                |                 |                |               |
|                                  | Wetland  |                    |             |            |                    |                |                |                 |                |               |
|                                  | Flood Plain  |                    |             |            |                    |                |                |                 |                |               |
|                                  | Who  | When               | What        | Year       | Land Value         | Building Value | Assessed Value | Board of Review | Tribunal/Other | Taxable Value |
|                                  | P  | 01/03/2000         | Inspected   | 2011       | 15,800             | 0              | 15,800         |                 |                | 15,800S       |
|                                  | SUE  | 05/25/1995         | Data Enter  | 2010       | 15,800             | 0              | 15,800         |                 |                | 15,752C       |
|                                  |  |                    |             | 2009       | 15,800             | 0              | 15,800         |                 |                | 15,800S       |
|                                  |  |                    |             | 2008       | 15,800             | 0              | 15,800         |                 |                | 15,800S       |

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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

|         |              |         |                       |            |        |           |            |            |    |               |               |              |           |             |  |               |       |
|---------|--------------|---------|-----------------------|------------|--------|-----------|------------|------------|----|---------------|---------------|--------------|-----------|-------------|--|---------------|-------|
| Grantor | ROCK-TENN CO | Grantee | COGSWELL PROPERTY LLC | Sale Price | 70,000 | Sale Date | 09/08/2006 | Inst. Type | WD | Terms of Sale | MULTI PARCELS | Liber & Page | 3036/0463 | Verified By |  | Prcnt. Trans. | 100.0 |
|---------|--------------|---------|-----------------------|------------|--------|-----------|------------|------------|----|---------------|---------------|--------------|-----------|-------------|--|---------------|-------|

|                  |           |        |            |         |     |                    |  |      |  |        |  |        |  |
|------------------|-----------|--------|------------|---------|-----|--------------------|--|------|--|--------|--|--------|--|
| Property Address | 431 HELEN | Class: | INDUSTRIAL | Zoning: | G-1 | Building Permit(s) |  | Date |  | Number |  | Status |  |
|------------------|-----------|--------|------------|---------|-----|--------------------|--|------|--|--------|--|--------|--|

|                      |  |        |  |              |        |
|----------------------|--|--------|--|--------------|--------|
| Owner's Name/Address | COGSWELL PROPERTY LLC<br>%DAVIS MICHAEL JR<br>26520 GRAND RIVER AVE #111<br>REDFORD MI 48240 | MAP #: |  | 2011 Est TCV | 55,453 |
|----------------------|--|--------|--|--------------|--------|

|                         |  |          |                                     |        |                          |  |
|-------------------------|--|----------|-------------------------------------|--------|--------------------------|--|
| Taxpayer's Name/Address | COGSWELL PROPERTY LLC<br>%DAVIS MICHAEL JR<br>26520 GRAND RIVER AVE #111<br>REDFORD MI 48240 | Improved | <input checked="" type="checkbox"/> | Vacant | <input type="checkbox"/> | Land Value Estimates for Land Table INDUS.INDUSTRIAL |
|-------------------------|--|----------|-------------------------------------|--------|--------------------------|--|

|                 |   |                     |  |                                 |            |       |            |       |        |        |
|-----------------|---|---------------------|--|---------------------------------|------------|-------|------------|-------|--------|--------|
| Tax Description | LOTS 1 TO 14 INC ALSO VACATED WILLIAM ST<br>ALSO THE VACATED PART OF HELEN AVE BEING<br>THAT PART LYG W OF W LINE OF JOHN ST<br>EXTENDED TOWNSEND ADDITION. | Public Improvements |  | * Factors *                     |            |       |            |       |        |        |
|                 |   | Dirt Road           |  | Description                     | Frontage   | Depth | Rate       | %Adj. | Reason | Value  |
|                 |   | Gravel Road         |  | INDUSTRIAL/COMM                 | 2.63       | Acres | 14456      | 75    |        | 28,515 |
|                 |   | Paved Road          |  | Land Improvement Cost Estimates | Total Est. | Acres | Land Value | =     |        | 28,515 |
|                 |   | Storm Sewer         |  |                                 |            |       |            |       |        |        |
|                 |   | Sidewalk            |  |                                 |            |       |            |       |        |        |
|                 |   | Water               |  |                                 |            |       |            |       |        |        |
|                 |   | Sewer               |  |                                 |            |       |            |       |        |        |
|                 |   | Electric            |  |                                 |            |       |            |       |        |        |
|                 |   | Gas                 |  |                                 |            |       |            |       |        |        |
|                 |   | Curb                |  |                                 |            |       |            |       |        |        |
|                 |   | Street Lights       |  |                                 |            |       |            |       |        |        |
|                 |   | Standard Utilities  |  |                                 |            |       |            |       |        |        |
|                 |   | Underground Utils.  |  |                                 |            |       |            |       |        |        |

|                    |       |         |      |           |            |       |        |      |            |        |         |             |
|--------------------|-------|---------|------|-----------|------------|-------|--------|------|------------|--------|---------|-------------|
| Topography of Site | Level | Rolling | Low  | High      | Landscaped | Swamp | Wooded | Pond | Waterfront | Ravine | Wetland | Flood Plain |
|                    | Who   | When    | What | Inspected | Data       | Enter | 2009   | 2009 | 2008       | 2008   | 2008    | 2008        |

| Year | Land Value | Building Value | Assessed Value | Board of Review | Tribunal/Other | Taxable Value |
|------|------------|----------------|----------------|-----------------|----------------|---------------|
| 2011 | 14,300     | 13,400         | 27,700         |                 |                | 27,700S       |
| 2010 | 14,700     | 13,400         | 28,100         |                 |                | 28,100S       |
| 2009 | 14,700     | 13,500         | 28,200         |                 |                | 28,200S       |
| 2008 | 14,500     | 16,300         | 30,800         |                 |                | 30,800S       |

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\*\*\* Information herein deemed reliable but not guaranteed\*\*\*

## **APPENDIX B**

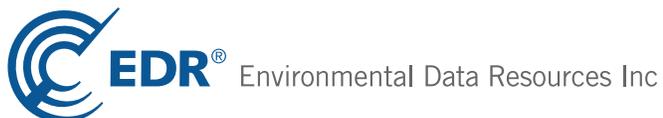
### **EDR-Radius Map Report**

**Rock Tenn Property**

431 Helen  
Otsego, MI 49078

Inquiry Number: 3199656.2s  
November 08, 2011

**The EDR Radius Map™ Report with GeoCheck®**



440 Wheelers Farms Road  
Milford, CT 06461  
Toll Free: 800.352.0050  
[www.edrnet.com](http://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.

### Disclaimer - Copyright and Trademark Notice

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

431 HELEN  
OTSEGO, MI 49078

#### COORDINATES

Latitude (North): 42.464700 - 42° 27' 52.9"  
Longitude (West): 85.704000 - 85° 42' 14.4"  
Universal Transverse Mercator: Zone 16  
UTM X (Meters): 606551.0  
UTM Y (Meters): 4701973.0  
Elevation: 701 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 42085-D6 OTSEGO, MI  
Most Recent Revision: 1973

### AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 2009, 2010  
Source: USDA

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

| <u>Site</u>   | <u>Database(s)</u>          | <u>EPA ID</u> |
|---|-----------------------------|---------------|
| ROCK TENN COMPANY MILL DIVISION<br>431 HELEN AVENUE<br>OTSEGO, MI 49078                   | RCRA-NonGen<br>FINDS<br>AST | MID042492561  |
| MEAD PAPERBOARD PRODUCTS<br>431 HELEN AVE<br>OTSEGO, MI 49078                             | UST                         | N/A           |
| BEHIND THE BUILDING @ 431 HELEN A<br>BEHIND THE BUILDING @ 431 HELEN AVENUE<br>OTSEGO, MI | SPILLS                      | N/A           |
| 431 HELEN AVE.<br>431 HELEN AVE.<br>OTSEGO, MI  | SPILLS                      | N/A           |

## EXECUTIVE SUMMARY

|   |               |     |
|---|---------------|-----|
| 431 HELEN AVENUE<br>431 HELEN AVENUE<br>OTSEGO, MI                          | SPILLS<br>BEA | N/A |
| MEAD PAPERBOARD (TYPE III SLF)<br>NORTH OF RIVER STREET<br>OTSEGO, MI 49078 | HIST LF       | N/A |
| PAPERBOARD MILL<br>431 HELEN ST<br>OTSEGO, MI 49078                         | AIRS          | N/A |
| 431 HELEN AVENUE<br>431 HELEN AVENUE<br>OTSEGO, MI                          | SPILLS        | N/A |

### **DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### **STANDARD ENVIRONMENTAL RECORDS**

#### ***Federal NPL site list***

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
NPL LIENS..... Federal Superfund Liens

#### ***Federal Delisted NPL site list***

Delisted NPL..... National Priority List Deletions

#### ***Federal CERCLIS list***

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
FEDERAL FACILITY..... Federal Facility Site Information listing

#### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

#### ***Federal RCRA non-CORRACTS TSD facilities list***

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

## EXECUTIVE SUMMARY

### ***Federal RCRA generators list***

RCRA-LQG..... RCRA - Large Quantity Generators  
RCRA-SQG..... RCRA - Small Quantity Generators  
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

### ***Federal institutional controls / engineering controls registries***

US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROL..... Sites with Institutional Controls

### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

### ***State and tribal landfill and/or solid waste disposal site lists***

SWF/LF..... Solid Waste Facilities Database

### ***State and tribal leaking storage tank lists***

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

### ***State and tribal registered storage tank lists***

INDIAN UST..... Underground Storage Tanks on Indian Land  
FEMA UST..... Underground Storage Tank Listing

### ***State and tribal institutional control / engineering control registries***

AUL..... Engineering and Institutional Controls

### ***State and tribal voluntary cleanup sites***

INDIAN VCP..... Voluntary Cleanup Priority Listing

### ***State and tribal Brownfields sites***

BROWNFIELDS..... Brownfields and UST Site Database

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

#### ***Local Lists of Landfill / Solid Waste Disposal Sites***

ODI..... Open Dump Inventory  
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations  
SWRCY..... Recycling Facilities  
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

#### ***Local Lists of Hazardous waste / Contaminated Sites***

US CDL..... Clandestine Drug Labs

## EXECUTIVE SUMMARY

|                  |  |
|------------------|--|
| DEL SHWS.....    | Delisted List of Contaminated Sites      |
| CDL.....         | Clandestine Drug Lab Listing             |
| US HIST CDL..... | National Clandestine Laboratory Register |

### **Local Land Records**

|              |                                     |
|--------------|-------------------------------------|
| LIENS 2..... | CERCLA Lien Information             |
| LUCIS.....   | Land Use Control Information System |
| LIENS.....   | Lien List                           |

### **Records of Emergency Release Reports**

|            |  |
|------------|--|
| HMIRS..... | Hazardous Materials Information Reporting System |
|------------|--|

### **Other Ascertainable Records**

|                          |   |
|--------------------------|---|
| DOT OPS.....             | Incident and Accident Data  |
| DOD.....                 | Department of Defense Sites   |
| FUDS.....                | Formerly Used Defense Sites   |
| CONSENT.....             | Superfund (CERCLA) Consent Decrees  |
| ROD.....                 | Records Of Decision   |
| UMTRA.....               | Uranium Mill Tailings Sites   |
| MINES.....               | Mines Master Index File   |
| TRIS.....                | Toxic Chemical Release Inventory System   |
| TSCA.....                | Toxic Substances Control Act  |
| FTTS.....                | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |
| HIST FTTS.....           | FIFRA/TSCA Tracking System Administrative Case Listing  |
| SSTS.....                | Section 7 Tracking Systems  |
| ICIS.....                | Integrated Compliance Information System  |
| PADS.....                | PCB Activity Database System  |
| MLTS.....                | Material Licensing Tracking System  |
| RADINFO.....             | Radiation Information Database  |
| RAATS.....               | RCRA Administrative Action Tracking System  |
| UIC.....                 | Underground Injection Wells Database  |
| WDS.....                 | Waste Data System   |
| DRYCLEANERS.....         | Drycleaning Establishments  |
| NPDES.....               | List of Active NPDES Permits  |
| INDIAN RESERV.....       | Indian Reservations   |
| SCRD DRYCLEANERS.....    | State Coalition for Remediation of Drycleaners Listing  |
| FINANCIAL ASSURANCE..... | Financial Assurance Information Listing   |
| COAL ASH DOE.....        | Sleam-Electric Plan Operation Data  |
| COAL ASH EPA.....        | Coal Combustion Residues Surface Impoundments List  |
| PCB TRANSFORMER.....     | PCB Transformer Registration Database   |
| COAL ASH.....            | Coal Ash Disposal Sites   |

### **SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## EXECUTIVE SUMMARY

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal CERCLIS NFRAP site List***

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 02/25/2011 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>          | <u>Direction / Distance</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|-------------------------|--------------------------------|---------------|-------------|
| <b>MENASHA CORPORATION</b>    | <b>320 NORTH FARMER</b> | <b>E 1/4 - 1/2 (0.416 mi.)</b> | <b>B12</b>    | <b>17</b>   |

#### ***State- and tribal - equivalent CERCLIS***

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Quality's Contaminated Sites List on Diskette With Address.

A review of the SHWS list, as provided by EDR, and dated 08/01/2011 has revealed that there are 2 SHWS sites within approximately 1 mile of the target property.

| <u>Equal/Higher Elevation</u>  | <u>Address</u>               | <u>Direction / Distance</u>     | <u>Map ID</u> | <u>Page</u> |
|--|------------------------------|---------------------------------|---------------|-------------|
| <b>PAPERBOARD DIV MFG PLANT</b><br>Facility Status: Interim Response in progress                         | <b>320 N FARMER</b>          | <b>E 1/4 - 1/2 (0.416 mi.)</b>  | <b>B11</b>    | <b>17</b>   |
| <b>FORMERLY TEXACO NAPH-SAL</b><br>Facility Status: Inactive - no actions taken to address contamination | <b>623 W. ALLEGAN STREET</b> | <b>SW 1/4 - 1/2 (0.438 mi.)</b> | <b>D17</b>    | <b>27</b>   |

#### ***State and tribal leaking storage tank lists***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's Leaking Underground Storage Tank (LUST) Database.

A review of the LUST list, as provided by EDR, and dated 08/01/2011 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u>                  | <u>Address</u>          | <u>Direction / Distance</u>     | <u>Map ID</u> | <u>Page</u> |
|--|-------------------------|---------------------------------|---------------|-------------|
| <b>UNITED #6250</b><br>Facility Status: Closed | <b>703 W ALLEGAN ST</b> | <b>SW 1/4 - 1/2 (0.490 mi.)</b> | <b>18</b>     | <b>27</b>   |
| <b>CLARK OTSEGO</b><br>Facility Status: Open   | <b>134 E ALLEGAN ST</b> | <b>SE 1/4 - 1/2 (0.491 mi.)</b> | <b>19</b>     | <b>29</b>   |

## EXECUTIVE SUMMARY

| <u>Lower Elevation</u>   | <u>Address</u>         | <u>Direction / Distance</u>      | <u>Map ID</u> | <u>Page</u> |
|--|------------------------|----------------------------------|---------------|-------------|
| <b>CITY OF OTSEGO SERVICE DEPT</b><br>Facility Status: Closed<br>Facility Status: Closed | <b>210 N FARMER ST</b> | <b>ESE 1/4 - 1/2 (0.430 mi.)</b> | <b>C14</b>    | <b>24</b>   |

### **State and tribal registered storage tank lists**

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Michigan UST database.

A review of the UST list, as provided by EDR, and dated 08/01/2011 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

| <u>Lower Elevation</u>   | <u>Address</u> | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|--------------------------|----------------|-----------------------------|---------------|-------------|
| OTSEGO SCHOOLS AUTO SHOP | 250 HELEN AVE  | E 1/8 - 1/4 (0.246 mi.)     | 10            | 16          |

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### **Other Ascertainable Records**

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 06/15/2011 has revealed that there is 1 RCRA-NonGen site within approximately 0.25 miles of the target property.

| <u>Lower Elevation</u>               | <u>Address</u>        | <u>Direction / Distance</u>      | <u>Map ID</u> | <u>Page</u> |
|--------------------------------------|-----------------------|----------------------------------|---------------|-------------|
| <b>JB PAINTING AND EQUIPMENT RPR</b> | <b>248 N NORTH ST</b> | <b>ESE 1/8 - 1/4 (0.135 mi.)</b> | <b>9</b>      | <b>14</b>   |

BEA: Baseline Environmental Assessment.

A review of the BEA list, as provided by EDR, and dated 08/29/2011 has revealed that there are 3 BEA sites within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u>                                      | <u>Address</u>                                     | <u>Direction / Distance</u>                                       | <u>Map ID</u>     | <u>Page</u>     |
|--|--|---|-------------------|-----------------|
| <b>MENASHA PACKAGING COMPANY, LLC</b><br>FORMERLY TEXACO, NAPH-SOL | <b>320 N FARMER ST. P.O. B</b><br>623 WEST ALLEGAN | <b>E 1/4 - 1/2 (0.416 mi.)</b><br><b>SW 1/4 - 1/2 (0.438 mi.)</b> | <b>B13</b><br>D16 | <b>23</b><br>27 |

| <u>Lower Elevation</u> | <u>Address</u>          | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|------------------------|-------------------------|-----------------------------|---------------|-------------|
| FORMER WATERWORKS      | 210 NORTH FARMER STREET | ESE 1/4 - 1/2 (0.430 mi.)   | C15           | 26          |

# EXECUTIVE SUMMARY

## EDR PROPRIETARY RECORDS

### ***EDR Proprietary Records***

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

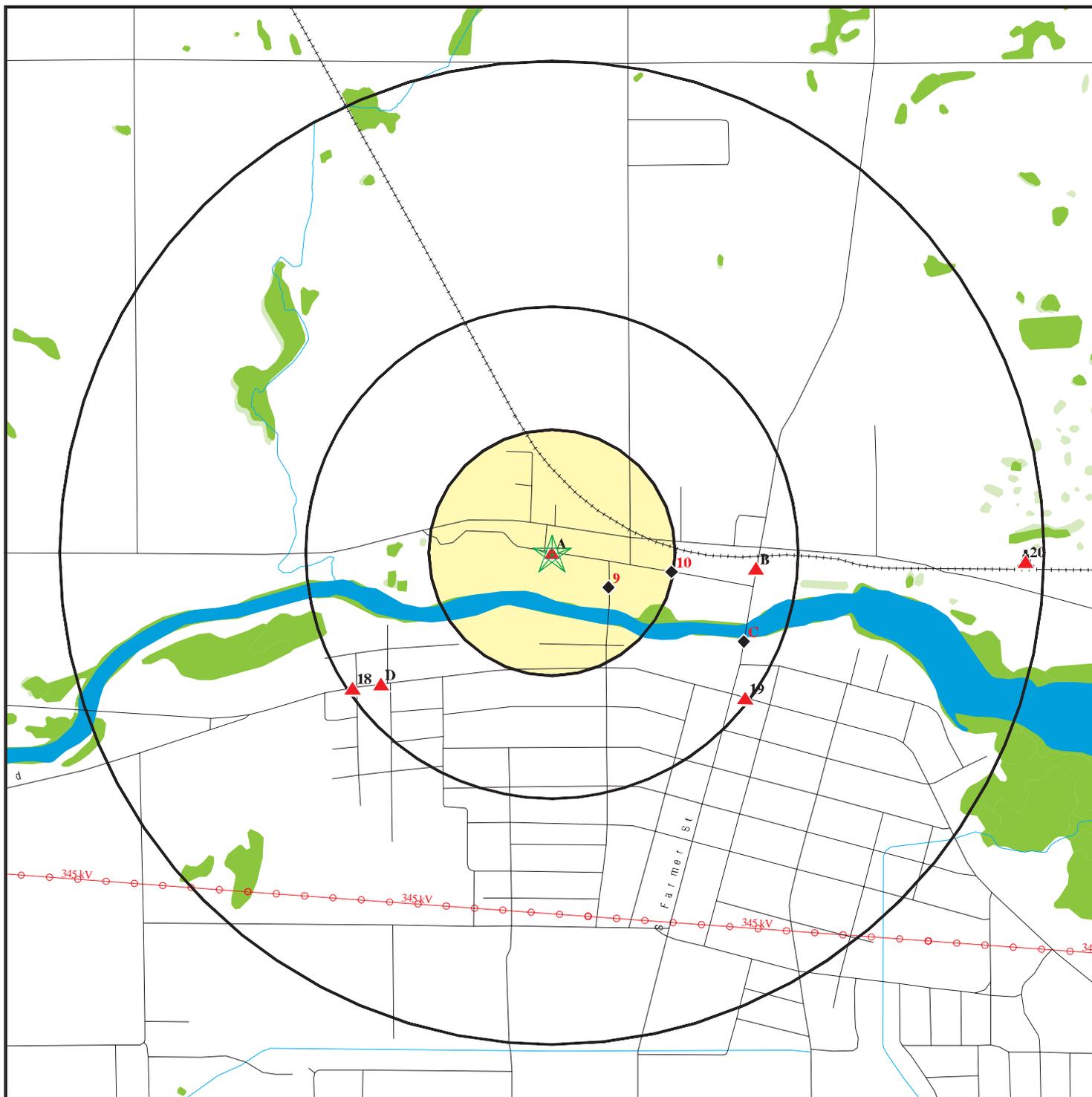
| <u>Equal/Higher Elevation</u> | <u>Address</u> | <u>Direction / Distance</u> | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|----------------|-----------------------------|---------------|-------------|
| ALLEGAN COUNTY GAS CO         | 106TH AVE      | E 1/2 - 1 (0.962 mi.)       | 20            | 31          |

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

| <u>Site Name</u>                 | <u>Database(s)</u> |
|----------------------------------|--------------------|
| MGP OTSEGO - MGU                 | SHWS               |
| FARMER (241 & 243) STREET, NORTH | BEA                |
| FRANZ PROPERTY                   | DEL SHWS           |

# OVERVIEW MAP - 3199656.2s



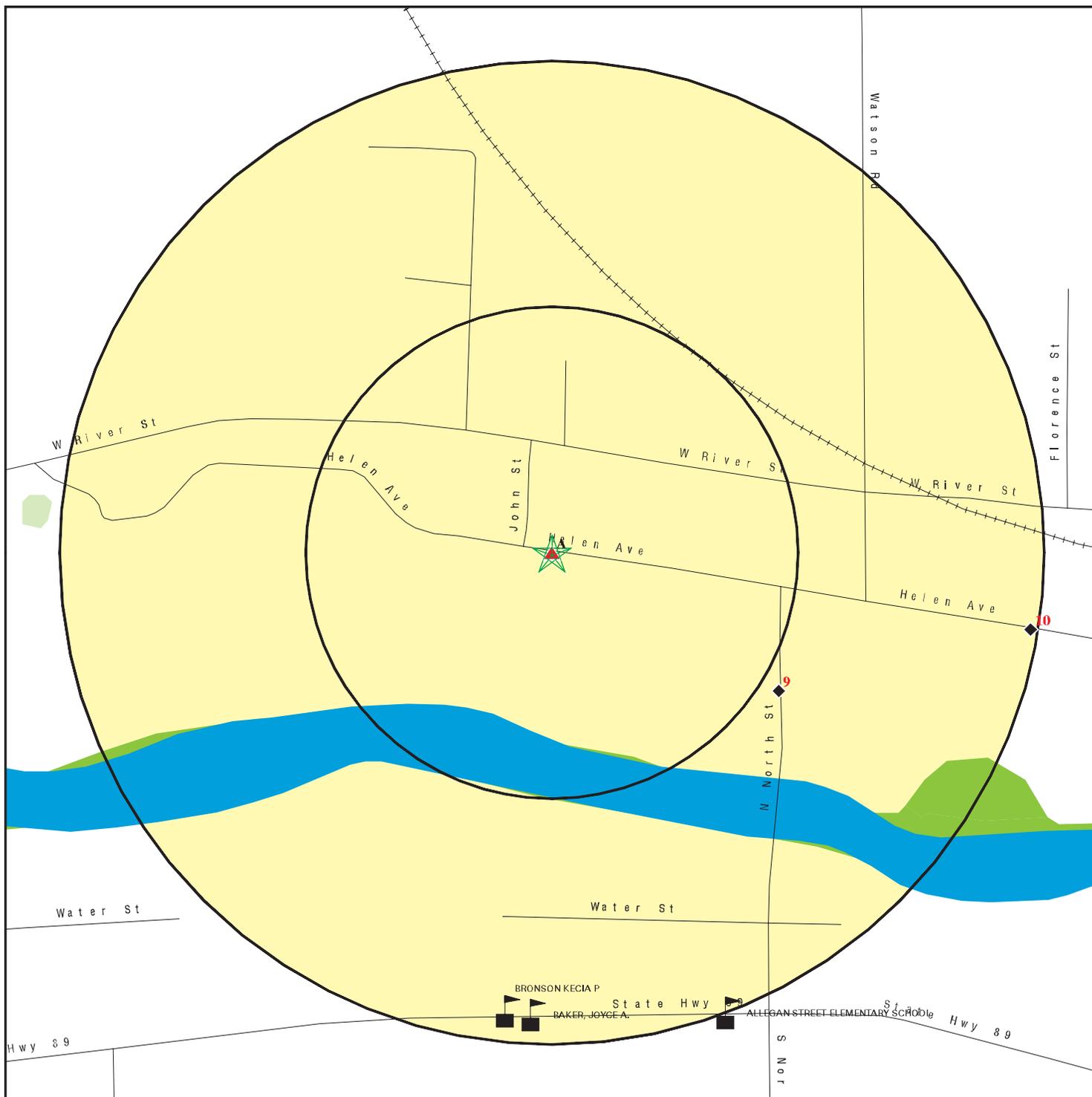
- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 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: Rock Tenn Property  
 ADDRESS: 431 Helen  
 Otsego MI 49078  
 LAT/LONG: 42.4647 / 85.7040

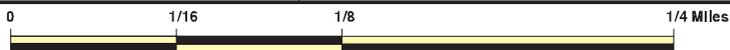
CLIENT: ECT  
 CONTACT: Dirk Mammen  
 INQUIRY #: 3199656.2s  
 DATE: November 08, 2011 2:28 pm

# DETAIL MAP - 3199656.2s



- ★ 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
- ⚡ Oil & Gas pipelines from USGS
- 🟢 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: Rock Tenn Property  
 ADDRESS: 431 Helen  
 Otsego MI 49078  
 LAT/LONG: 42.4647 / 85.7040

CLIENT: ECT  
 CONTACT: Dirk Mammen  
 INQUIRY #: 3199656.2s  
 DATE: November 08, 2011 2:29 pm

## MAP FINDINGS SUMMARY

| Database   | Target<br>Property | Search<br>Distance<br>(Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total<br>Plotted |
|--|--------------------|-------------------------------|-------|-----------|-----------|---------|-----|------------------|
| <b><u>STANDARD ENVIRONMENTAL RECORDS</u></b>                                       |                    |                               |       |           |           |         |     |                  |
| <b><i>Federal NPL site list</i></b>  |                    |                               |       |           |           |         |     |                  |
| NPL  |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| Proposed NPL   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| NPL LIENS  |                    | TP                            | NR    | NR        | NR        | NR      | NR  | 0                |
| <b><i>Federal Delisted NPL site list</i></b>                                       |                    |                               |       |           |           |         |     |                  |
| Delisted NPL   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| <b><i>Federal CERCLIS list</i></b>   |                    |                               |       |           |           |         |     |                  |
| CERCLIS  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| FEDERAL FACILITY   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| <b><i>Federal CERCLIS NFRAP site List</i></b>                                      |                    |                               |       |           |           |         |     |                  |
| CERC-NFRAP   |                    | 0.500                         | 0     | 0         | 1         | NR      | NR  | 1                |
| <b><i>Federal RCRA CORRACTS facilities list</i></b>                                |                    |                               |       |           |           |         |     |                  |
| CORRACTS   |                    | 1.000                         | 0     | 0         | 0         | 0       | NR  | 0                |
| <b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>                        |                    |                               |       |           |           |         |     |                  |
| RCRA-TSDF  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| <b><i>Federal RCRA generators list</i></b>   |                    |                               |       |           |           |         |     |                  |
| RCRA-LQG   |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| RCRA-SQG   |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| RCRA-CESQG   |                    | 0.250                         | 0     | 0         | NR        | NR      | NR  | 0                |
| <b><i>Federal institutional controls /<br/>engineering controls registries</i></b> |                    |                               |       |           |           |         |     |                  |
| US ENG CONTROLS  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| US INST CONTROL  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| <b><i>Federal ERNS list</i></b>  |                    |                               |       |           |           |         |     |                  |
| ERNS   |                    | TP                            | NR    | NR        | NR        | NR      | NR  | 0                |
| <b><i>State- and tribal - equivalent CERCLIS</i></b>                               |                    |                               |       |           |           |         |     |                  |
| SHWS   |                    | 1.000                         | 0     | 0         | 2         | 0       | NR  | 2                |
| <b><i>State and tribal landfill and/or<br/>solid waste disposal site lists</i></b> |                    |                               |       |           |           |         |     |                  |
| SWF/LF   |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| <b><i>State and tribal leaking storage tank lists</i></b>                          |                    |                               |       |           |           |         |     |                  |
| LUST   |                    | 0.500                         | 0     | 0         | 3         | NR      | NR  | 3                |
| INDIAN LUST  |                    | 0.500                         | 0     | 0         | 0         | NR      | NR  | 0                |
| <b><i>State and tribal registered storage tank lists</i></b>                       |                    |                               |       |           |           |         |     |                  |
| UST  | X                  | 0.250                         | 0     | 1         | NR        | NR      | NR  | 1                |

## MAP FINDINGS SUMMARY

| Database   | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|--|-----------------|-------------------------|-------|-----------|-----------|---------|-----|---------------|
| AST  | X               | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| INDIAN UST   |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| FEMA UST   |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| <b>State and tribal institutional control / engineering control registries</b> |                 |                         |       |           |           |         |     |               |
| AUL  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>State and tribal voluntary cleanup sites</b>                                |                 |                         |       |           |           |         |     |               |
| INDIAN VCP   |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>State and tribal Brownfields sites</b>                                      |                 |                         |       |           |           |         |     |               |
| BROWNFIELDS  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>ADDITIONAL ENVIRONMENTAL RECORDS</b>  |                 |                         |       |           |           |         |     |               |
| <b>Local Brownfield lists</b>  |                 |                         |       |           |           |         |     |               |
| US BROWNFIELDS   |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>Local Lists of Landfill / Solid Waste Disposal Sites</b>                    |                 |                         |       |           |           |         |     |               |
| ODI  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| DEBRIS REGION 9  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| SWRCY  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| HIST LF  | X               | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| INDIAN ODI   |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| <b>Local Lists of Hazardous waste / Contaminated Sites</b>                     |                 |                         |       |           |           |         |     |               |
| US CDL   |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| DEL SHWS   |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| CDL  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| US HIST CDL  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| <b>Local Land Records</b>  |                 |                         |       |           |           |         |     |               |
| LIENS 2  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| LUCIS  |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| LIENS  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| <b>Records of Emergency Release Reports</b>                                    |                 |                         |       |           |           |         |     |               |
| HMIRS  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| SPILLS   | X               | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| <b>Other Ascertainable Records</b>   |                 |                         |       |           |           |         |     |               |
| RCRA-NonGen  | X               | 0.250                   | 0     | 1         | NR        | NR      | NR  | 1             |
| DOT OPS  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| DOD  |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| FUDS   |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| CONSENT  |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| ROD  |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |

## MAP FINDINGS SUMMARY

| Database            | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---------------------|-----------------|-------------------------|-------|-----------|-----------|---------|-----|---------------|
| UMTRA               |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| MINES               |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| TRIS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| TSCA                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| FTTS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| HIST FTTS           |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| SSTS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| ICIS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| PADS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| MLTS                |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| RADINFO             |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| FINDS               | X               | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| RAATS               |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| UIC                 |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| WDS                 |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| DRYCLEANERS         |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| NPDES               |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| AIRS                | X               | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| BEA                 | X               | 0.500                   | 0     | 0         | 3         | NR      | NR  | 3             |
| INDIAN RESERV       |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| SCRD DRYCLEANERS    |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| FINANCIAL ASSURANCE |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| COAL ASH DOE        |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| COAL ASH EPA        |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| PCB TRANSFORMER     |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| COAL ASH            |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |

### EDR PROPRIETARY RECORDS

#### *EDR Proprietary Records*

|                         |  |       |   |   |   |   |    |   |
|-------------------------|--|-------|---|---|---|---|----|---|
| Manufactured Gas Plants |  | 1.000 | 0 | 0 | 0 | 1 | NR | 1 |
|-------------------------|--|-------|---|---|---|---|----|---|

#### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

A1  
Target  
Property

ROCK TENN COMPANY MILL DIVISION  
431 HELEN AVENUE  
OTSEGO, MI 49078

RCRA-NonGen  
FINDS  
AST

1000267658  
MID042492561

Site 1 of 8 in cluster A

Actual:  
701 ft.

RCRA-NonGen:  
Date form received by agency: 07/01/2004  
Facility name: ROCK TENN CO  
Facility address: 431 HELEN AVE  
OTSEGO, MI 49078  
EPA ID: MID042492561  
Mailing address: 504 THRASHER ST  
NORCROSS, GA 30071  
Contact: NOT OBTAINED NOT OBTAINED  
Contact address: 431 HELEN AVE  
OTSEGO, MI 49078  
Contact country: US  
Contact telephone: 5551212  
Contact email: Not reported  
EPA Region: 05  
Land type: Other land type  
Classification: Non-Generator  
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Operator  
Owner/Op start date: 07/02/2004  
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: 07/02/2004  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ROCK TENN COMPANY MILL DIVISION (Continued)**

**1000267658**

Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Historical Generators:

Date form received by agency: 06/30/2004  
Facility name: ROCK TENN CO  
Classification: Small Quantity Generator

Date form received by agency: 08/12/2003  
Facility name: ROCK TENN CO  
Classification: Small Quantity Generator

Date form received by agency: 12/04/1985  
Facility name: ROCK TENN CO  
Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001  
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date: 12/19/1994  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: Not reported  
Date achieved compliance: Not reported  
Evaluation lead agency: State

Evaluation date: 07/15/1988  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: Not reported  
Date achieved compliance: Not reported  
Evaluation lead agency: State

FINDS:

Registry ID: 110000733001

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

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ROCK TENN COMPANY MILL DIVISION (Continued)**

**1000267658**

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.

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

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.

AST:

Type: CLOSED  
Owner Name: ROCK TENN CO  
Owner Address: 431 HELEN AVE  
Owner City,St,Zip: OTSEGO, MI 49078-1037  
Owner County: USA  
Owner Contact: Not reported  
Owner Telephone: (616) 692-6211  
Facility ID: 92003333  
District: Kalamazoo District Office  
Contact: GARTH FUESS  
Facility Phone: (616) 692-6211  
Tank ID: 42.4650720000  
Tank Status: Not reported  
Capacity: Not reported  
Install Date: Not reported  
Close Date: Not reported  
Content: Not reported  
Latitude: Not reported  
Longitude: -85.7046000000  
Date of Collection: 18-09-2006  
Accuracy: 15  
Accuracy Value Unit: METERS  
Horizontal Datum: NAD83  
Source: Not reported  
Point Line Area: Not reported  
Description of Category: Not reported  
Method of Collection: Not reported

Type: CLOSED  
Owner Name: ROCK TENN CO  
Owner Address: 431 HELEN AVE  
Owner City,St,Zip: OTSEGO, MI 49078-1037  
Owner County: USA  
Owner Contact: Not reported  
Owner Telephone: (616) 692-6211

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**ROCK TENN COMPANY MILL DIVISION (Continued)**

**1000267658**

Facility ID: 92003333  
District: Kalamazoo District Office  
Contact: GARTH FUESS  
Facility Phone: (616) 692-6211  
Tank ID: 42.4650720000  
Tank Status: Not reported  
Capacity: Not reported  
Install Date: Not reported  
Close Date: Not reported  
Content: Not reported  
Latitude: Not reported  
Longitude: -85.7046000000  
Date of Collection: 18-09-2006  
Accuracy: 15  
Accuracy Value Unit: METERS  
Horizontal Datum: NAD83  
Source: Not reported  
Point Line Area: Not reported  
Description of Category: Not reported  
Method of Collection: Not reported

**A2  
Target  
Property**

**MEAD PAPERBOARD PRODUCTS**

**431 HELEN AVE  
OTSEGO, MI 49078**

**UST U000249225  
N/A**

**Site 2 of 8 in cluster A**

**Actual:  
701 ft.**

UST:  
Facility ID: 00017632  
Facility Type: CLOSED  
Latitude: 42.4650720000  
Longitude: -85.7046000000  
Owner Name: Rock-Tenn Company, Mill Div  
Owner Address: 504 Thrasher St  
Owner City,St,Zip: Norcross, GA 30071-1967  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: (404) 448-2193  
Contact: JAMES L. WALDEN  
Contact Phone: (404) 448-2193  
Date of Collection: 09/18/2006  
Accuracy: 15  
Accuracy Value Unit: METERS  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Not reported  
Method of Collection: Interpolation-Map  
  
Tank ID: 1  
**Tank Status: Removed from Ground**  
Capacity: 500  
Install Date: 04/28/1966  
Product: Gasoline  
Remove Date: 06/05/1989  
Tank Release Detection: Not reported  
Pipe Release Detection: Not reported  
Piping Material: Galvanized Steel

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MEAD PAPERBOARD PRODUCTS (Continued)**

**U000249225**

Piping Type: Not reported  
 Constr Material: Asphalt Coated or Bare Steel  
 Impressed Device: No

**A3  
 Target  
 Property**

**BEHIND THE BUILDING @ 431 HELEN AVENUE  
 OTSEGO, MI**

**SPILLS S105977517  
 N/A**

**Site 3 of 8 in cluster A**

**Actual:  
 701 ft.**

MI PEAS:  
 Incident Date: 07/21/2001  
 Date Of PEAS Call: 07/21/2001  
 Complainant / Company: Mike Cammenga w/Rock Ten  
 Complainant Address: 431 Helen Ave.  
 Company Involved: Mike Cammenga w/Rock Ten  
 DEQ Division Involved: SWQD  
 Incident Description: They have a water treatment system with two clarifiers. One center tankcontrol has failed. They have a large spill of processed water comingfrom the paper mill. Approximately 520 gallons went to the ground.  
 Description: Not reported

**A4  
 Target  
 Property**

**431 HELEN AVE.  
 OTSEGO, MI**

**SPILLS S105975183  
 N/A**

**Site 4 of 8 in cluster A**

**Actual:  
 701 ft.**

MI PEAS:  
 Incident Date: 02/26/2000  
 Date Of PEAS Call: 02/26/2000  
 Complainant / Company: Garth Suess w/Rock 10 Company  
 Complainant Address: 431 Helen Ave.  
 Company Involved: Garth Suess w/Rock 10 Company  
 DEQ Division Involved: ERD  
 Incident Description: Spilled approximately 1,000 gallons of clarified processed waste water tothe ground and approximately 50 gallons went into the Kalamazoo River.  
 Description: Not reported

**A5  
 Target  
 Property**

**431 HELEN AVENUE  
 OTSEGO, MI**

**SPILLS S105978213  
 BEA N/A**

**Site 5 of 8 in cluster A**

**Actual:  
 701 ft.**

MI PEAS:  
 Incident Date: 01/31/2002  
 Date Of PEAS Call: 01/31/2002  
 Complainant / Company: Keith DeBates  
 Complainant Address: 431 Helen Avenue  
 Company Involved: Rock-Tenn Company  
 DEQ Division Involved: SWQD  
 Incident Description: Reporting a sanitary sewer backup. It spilled into the river. Backup

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

(Continued)

S105978213

Description: hascleared and now it is okay.  
Not reported

BEA:

Secondary Address: Not reported  
BEA Number: 1017  
District: Kalamazoo  
Date Received: 10/3/2006 12:59:00 AM  
Submitter Name: Cogswell/Romulus Properties, LLC  
Petition Determination: No Request  
Petition Disclosure: 0  
Category: No Hazardous Substance(s)  
Determination 20107A: No Request  
Reviewer: weaverc1  
Division Assigned: Environmental Response Division

A6  
Target  
Property

MEAD PAPERBOARD (TYPE III SLF)  
NORTH OF RIVER STREET  
OTSEGO, MI 49078

HIST LF S100344433  
N/A

Site 6 of 8 in cluster A

Actual:  
701 ft.

Historical LF:  
Facility ID: 03000034  
Status: INACTIVE  
Contact: Not reported  
Facility Phone: Not reported  
Facility Fax: Not reported  
Facility Type: Not reported  
Facility Email: Not reported  
Facility is Open: Not reported  
Facility Type: Landfill Type III  
Facility Contact: B. CICHON  
County Code: 03  
Facility Number: 000034  
Staff: Not reported  
Active: No  
Permit Date: Not reported  
Permit Number: Not reported  
License Date: / /  
License No: Not reported  
No Waste: Not reported  
Enforcement: Not reported  
Exp Letters: Not reported  
Operator Name: Not reported  
Operator Contact: Not reported  
Operator Address: Not reported  
Operator City,St,Zip: Not reported  
Operator Telephone: Not reported  
Operator Fax: Not reported  
Operator Email: Not reported  
Owner Name: MEAD CORPORATION  
Owner Contact: Not reported  
Attention: RUSS KROSS & J W MCSWINEY  
Owner Address: COURTHOUSE PLAZA N.E.  
Owner City,St,Zip: DAYTON, OH 45463  
Owner Telephone: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MEAD PAPERBOARD (TYPE III SLF) (Continued)**

**S100344433**

Owner Fax: Not reported  
Owner Email: Not reported  
District: Plainwell  
Section: 15  
Permit Applicant: MEAD PAPERBOARD PRODUCTS  
Permit Applicant Contact: B. CICHON  
Permit Applicant Address: 431 HELLEN AVE  
Permit Applicant City,St,Zip: OTSEGO, MI 49078  
Permit Applicant Phone: Not reported  
Application Type: Private  
Liner Information: Not reported  
Nature of Wastes Allowed: Not reported  
Township: Not reported  
Section Number: Not reported  
Township Section: Not reported  
District: Not reported  
Business Type: Not reported  
County Description: Not reported  
County 2 Description: Not reported  
Liner Type: Not reported  
Reported Date: Not reported  
Amount: 0.00  
Financial Instrument: Not reported  
Fund Type: Not reported  
Issued Date: Not reported  
Expires: Not reported  
Expiry: Not reported  
Licensed: Not reported  
Comments: Not reported  
Date of Expiry of Current License: Not reported  
Acreage Currently Licensed: 0.000  
Acres Certified Closed: 0.000  
Issue of 1st Construction Permit Date: Not reported  
Acres Given in 1st Construction Permit: 0.000  
Issue of 2nd Construction Permit Date: Not reported  
Acres Given in 2nd Construction Permit: 0.000  
Issue of 3rd Construction Permit Date: Not reported  
Acres Given in 3rd Construction Permit: 0.000  
Restrictive Deed Covenant Filed: Not reported  
Perpetual Care Fund Type: Not reported  
Perpetual Care Fund Signed: Not reported  
Perpetual Care Fund Agreement Signed: Not reported  
Groundwater Monitoring System Exists: Not reported  
Date landill Certified Closed: Not reported  
Received Waste on or After Oct. 9, 1991: Not reported  
Site Monitorable Under Definition of New Rules: Not reported

**A7  
Target  
Property**

**PAPERBOARD MILL  
431 HELEN ST  
OTSEGO, MI 49078**

**AIRS S107696072  
N/A**

**Site 7 of 8 in cluster A**

**Actual:  
701 ft.**

AIRS:  
State Registration Number: A0025  
Naics Code: Not reported  
Contact Name: Not reported  
Contact Phone: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**PAPERBOARD MILL (Continued)**

**S107696072**

Contact Address: Not reported  
 Contact City,St,Zip: Not reported  
 Permit Number: 168-71  
 Date Received: 8/20/1971  
 State Registration Number: A0025  
 Country: Not reported  
 Application Reason: BOILERS  
 Record Type: Not reported  
 State County FIPS: Not reported  
 Facility Category: Not reported  
 SIC Primary: Not reported  
 Tribal Code: Not reported  
 EI Year: Not reported

**A8**  
**Target**  
**Property**

**431 HELEN AVENUE**  
**OTSEGO, MI**

**SPILLS S105978575**  
**N/A**

**Site 8 of 8 in cluster A**

**Actual:**  
**701 ft.**

MI PEAS:  
 Incident Date: 05/20/2002  
 Date Of PEAS Call: 05/20/2002  
 Complainant / Company: Keith DeBates  
 Complainant Address: 431 Helen Avenue  
 Company Involved: Rock-Tenn Company  
 DEQ Division Involved: SWQD  
 Incident Description: Reporting 100,000 gallons of treated effluent to ground and to the KalamazooRiver. It was caused by pump or float failure at the water treatment plant.It occurred between 3 p.m. on May 19, 2002, and 7 a.m. on May 20, 2002.It was noticed at 7 a.m. and stopped.  
 Description: Not reported

**9**  
**ESE**  
**1/8-1/4**  
**0.135 mi.**  
**712 ft.**

**JB PAINTING AND EQUIPMENT RPR**  
**248 N NORTH ST**  
**OTSEGO, MI 49078**

**RCRA-NonGen 1000530989**  
**FINDS MID985635192**

**Relative:**  
**Lower**

RCRA-NonGen:  
 Date form received by agency: 12/31/2001  
 Facility name: JB PAINTING AND EQUIPMENT RPR  
 Facility address: 248 N NORTH ST  
 OTSEGO, MI 49078  
 EPA ID: MID985635192  
 Contact: VIRGINIA BUDAHN  
 Contact address: 248 N NORTH ST  
 OTSEGO, MI 49078

**Actual:**  
**695 ft.**

Contact country: US  
 Contact telephone: (616) 694-5577  
 Contact email: Not reported  
 EPA Region: 05  
 Classification: Non-Generator  
 Description: Handler: Non-Generators do not presently generate hazardous waste

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JB PAINTING AND EQUIPMENT RPR (Continued)**

**1000530989**

Owner/Operator Summary:

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: 01/01/2002  
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Operator  
Owner/Op start date: 01/01/2002  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Historical Generators:

Date form received by agency: 02/25/1992  
Facility name: JB PAINTING AND EQUIPMENT RPR  
Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001  
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**JB PAINTING AND EQUIPMENT RPR (Continued)**

**1000530989**

FINDS:

Registry ID: 110003668914

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.

**10**  
**East**  
**1/8-1/4**  
**0.246 mi.**  
**1300 ft.**

**OTSEGO SCHOOLS AUTO SHOP**  
**250 HELEN AVE**  
**OTSEGO, MI 49078**

**UST U000249163**  
**N/A**

**Relative:**  
**Lower**

UST:

**Actual:**  
**700 ft.**

Facility ID: 00001166  
Facility Type: CLOSED  
Latitude: 42.4647580000  
Longitude: -85.7032910000  
Owner Name: Otsego Public Schools  
Owner Address: 400 Sherwood St  
Owner City,St,Zip: Otsego, MI 49078-1281  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: (616) 694-5131  
Contact: WALT BOETTCHER  
Contact Phone: (616) 694-4696  
Date of Collection: 01/11/2001  
Accuracy: 100  
Accuracy Value Unit: FEET  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Plant Entrance (Freight)  
Method of Collection: Address Matching-House Number

Tank ID: 1  
**Tank Status: Removed from Ground**  
Capacity: 1000  
Install Date: 02/22/1956  
Product: Used Oil  
Remove Date: 08/01/1988  
Tank Release Detection: Not reported  
Pipe Release Detection: Not reported  
Piping Material: Galvanized Steel  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 2  
**Tank Status: Removed from Ground**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**OTSEGO SCHOOLS AUTO SHOP (Continued)**

**U000249163**

Capacity: 500  
Install Date: 02/22/1956  
Product: Used Oil  
Remove Date: 08/10/1988  
Tank Release Detection: Not reported  
Pipe Release Detection: Not reported  
Piping Material: Galvanized Steel  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

**B11**  
**East**  
**1/4-1/2**  
**0.416 mi.**  
**2196 ft.**

**PAPERBOARD DIV MFG PLANT**  
**320 N FARMER**  
**OTSEGO, MI 49078**

**SHWS S110300587**  
**AIRS N/A**

**Site 1 of 3 in cluster B**

**Relative:**  
**Higher**

SHWS:  
Facility ID: 3000019  
**Facility Status: Interim Response in progress**  
Source: Paper and Allied Products  
SAM Score: 42  
SAM Score Date: 12/29/2009  
Township: Not reported  
Range: Not reported  
Section: Not reported  
Quarter: Not reported  
Quarter/Quarter: Not reported  
Pollutants: As; Naphthalene; PCP; Phenol; Hg; Metals

**Actual:**  
**708 ft.**

**B12**  
**East**  
**1/4-1/2**  
**0.416 mi.**  
**2196 ft.**

**MENASHA CORPORATION**  
**320 NORTH FARMER**  
**OTSEGO, MI 49078**

**CERC-NFRAP 1000158089**  
**RCRA-CESQG MID006012405**  
**FINDS**  
**UST**  
**MANIFEST**

**Site 2 of 3 in cluster B**

**Relative:**  
**Higher**

CERC-NFRAP:  
Site ID: 0502331  
Federal Facility: Not a Federal Facility  
NPL Status: Not on the NPL  
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

**Actual:**  
**708 ft.**

CERCLIS-NFRAP Site Alias Name(s):  
Alias Name: MENASHA CORP  
Alias Address: 320 N FARMER  
OTSEGO, MI 49078

Program Priority:  
Description: Great Lakes

CERCLIS-NFRAP Assessment History:  
Action: DISCOVERY  
Date Started: Not reported  
Date Completed: 12/01/1979  
Priority Level: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

Action: PRELIMINARY ASSESSMENT  
Date Started: Not reported  
Date Completed: 03/31/1986  
Priority Level: Low priority for further assessment

Action: SITE INSPECTION  
Date Started: Not reported  
Date Completed: 02/15/1991  
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE  
Date Started: Not reported  
Date Completed: 09/24/1993  
Priority Level: Not reported

**RCRA-CESQG:**

Date form received by agency: 06/05/2006  
Facility name: OTSEGO PAPER INC  
Facility address: 320 N FARMER ST  
OTSEGO, MI 49078  
EPA ID: MID006012405  
Contact: HENRY KRELL  
Contact address: 320 N FARMER ST  
OTSEGO, MI 49078  
Contact country: US  
Contact telephone: (269) 692-6860  
Contact email: Not reported  
EPA Region: 05  
Land type: Private  
Classification: Conditionally Exempt Small Quantity Generator  
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

**Owner/Operator Summary:**

Owner/operator name: OTSEGO PAPER, INC.  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Owner  
Owner/Op start date: 06/05/2006  
Owner/Op end date: Not reported

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

Owner/operator name: OTSEGO PAPER, INC.  
Owner/operator address: Not reported  
Not reported  
Owner/operator country: Not reported  
Owner/operator telephone: Not reported  
Legal status: Private  
Owner/Operator Type: Operator  
Owner/Op start date: 06/05/2006  
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No  
Mixed waste (haz. and radioactive): No  
Recycler of hazardous waste: No  
Transporter of hazardous waste: No  
Treater, storer or disposer of HW: No  
Underground injection activity: No  
On-site burner exemption: No  
Furnace exemption: No  
Used oil fuel burner: No  
Used oil processor: No  
User oil refiner: No  
Used oil fuel marketer to burner: No  
Used oil Specification marketer: No  
Used oil transfer facility: No  
Used oil transporter: No

Historical Generators:

Date form received by agency: 03/01/2006  
Facility name: OTSEGO PAPER INC  
Classification: Small Quantity Generator  
  
Date form received by agency: 03/17/2005  
Facility name: OTSEGO PAPER INC  
Classification: Small Quantity Generator  
  
Date form received by agency: 03/10/2004  
Facility name: OTSEGO PAPER INC  
Classification: Small Quantity Generator  
  
Date form received by agency: 01/05/1995  
Facility name: OTSEGO PAPER INC  
Classification: Small Quantity Generator

Hazardous Waste Summary:

Waste code: D001  
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Facility Has Received Notices of Violations:

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

Regulation violated: Not reported  
Area of violation: LDR - General  
Date violation determined: 08/09/1994  
Date achieved compliance: 09/12/1994  
Violation lead agency: State  
Enforcement action: WRITTEN INFORMAL  
Enforcement action date: 08/09/1994  
Enf. disposition status: Not reported  
Enf. disp. status date: Not reported  
Enforcement lead agency: State  
Proposed penalty amount: 0  
Final penalty amount: 0  
Paid penalty amount: 0

Evaluation Action Summary:

Evaluation date: 08/05/1994  
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE  
Area of violation: LDR - General  
Date achieved compliance: 09/12/1994  
Evaluation lead agency: State

FINDS:

Registry ID: 110000409291

Environmental Interest/Information System  
Not reported

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.

CAMDBS (Clean Air Markets Division Business System) is a national information system that supports the implementation of market-based air pollution control programs administered by the Clean Air Markets Division, within the Office of Air and Radiation. These programs include the Acid Rain Program, established by Title IV of the Clean Air Act Amendments of 1990, and regional programs designed reduce the transport of ozone. These emissions trading programs allows regulated facilities (primarily electric utilities) to adopt the most cost-effective strategies to reduce emissions at their units. Units that reduce their emissions below the number of allowances they hold -- each allowance is equivalent to one ton of sulfur dioxide or nitrogen oxides -- may trade allowances with other units in their system, sell them to other utilities on the open market or through EPA auctions, or bank them to cover emissions in future years. CAMDBS functions include registering responsible officials, establishing allowance accounts, reporting hourly emissions data, and transferring allowances between accounts.

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

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.

US Emissions & Generation Resource Database (EGRID) contains data on emissions and resource mix for virtually every power plant and company that generates electricity in the United States.

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.

PCS (Permit Compliance System) 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.

UST:

Facility ID: 00017265  
Facility Type: CLOSED  
Latitude: 42.4580780000  
Longitude: -85.6978900000  
Owner Name: Menasha Corp  
Owner Address: 320 N Farmer St  
Owner City,St,Zip: Otsego, MI 49078-1150  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: (616) 692-6141  
Contact: MARK T REED  
Contact Phone: (616) 692-6141  
Date of Collection: 01/11/2001  
Accuracy: 100  
Accuracy Value Unit: FEET  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Plant Entrance (Freight)  
Method of Collection: Address Matching-House Number

Tank ID: 1  
**Tank Status: Removed from Ground**  
Capacity: 1000  
Install Date: 05/06/1956  
Product: Gasoline  
Remove Date: 06/06/1986  
Tank Release Detection: Not reported  
Pipe Release Detection: Not reported  
Piping Material: Bare Steel

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 2  
**Tank Status: Removed from Ground**  
Capacity: 550  
Install Date: 05/07/1971  
Product: Gasoline  
Remove Date: 06/06/1986  
Tank Release Detection: Not reported  
Pipe Realease Detection: Not reported  
Piping Material: Bare Steel  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 3  
**Tank Status: Removed from Ground**  
Capacity: 12000  
Install Date: 05/06/1974  
Product: Diesel  
Remove Date: 11/20/1987  
Tank Release Detection: Not reported  
Pipe Realease Detection: Not reported  
Piping Material: Unknown  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

**WI MANIFEST:**

Year: 05  
EPA ID: MID006012405  
FID: 0  
ACT Code: 202  
ACT Status: A  
ACT Code 1: 202  
ACT Name: HW Generator - Small  
Contact First Name: Not reported  
Contact Last Name: Not reported  
Contact Title: Not reported  
Contact Address: Not reported  
Contact State: Not reported  
Contact City: Not reported  
Contact Zip: 0  
Contact Telephone: 0  
Contact Extention: Not reported  
Contact Email Address: Not reported  
WI MANIFEST SHIP: -  
Manifest DOC ID: Not reported  
Copy Type: Not reported  
Gen EPA ID: Not reported  
Gen Date: Not reported  
TSD Date: Not reported  
TSD EPA ID: Not reported

Map ID  
 Direction  
 Distance  
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
 EPA ID Number

**MENASHA CORPORATION (Continued)**

**1000158089**

GEN Copy Revd Date: Not reported  
 TSG Copy Revd Date: Not reported  
 Manifest DOC ID: Not reported  
 Waste Page No: Not reported  
 Waste Line No: Not reported  
 Waste Code: Not reported  
 Waste Amount: Not reported  
 Unit of Measure: Not reported  
 Waste LBS: Not reported

WI MANIFEST TRANS: -  
 Mifest DOC ID: Not reported  
 TRAN EPA ID: Not reported  
 TRAN ORDER NO: Not reported  
 TRAN Date: Not reported

Manifest DOC ID: Not reported  
 Waste Page No: Not reported  
 Waste Line No: Not reported  
 Waste Code: Not reported  
 Waste Amount: Not reported  
 Unit of Measure: Not reported  
 Waste LBS: Not reported

**B13**  
**East**  
**1/4-1/2**  
**0.416 mi.**  
**2196 ft.**

**MENASHA PACKAGING COMPANY, LLC, OTSEGO MILL**  
**320 N FARMER ST. P.O. BOX 155**  
**OTSEGO, MI 49078**

**AIRS S107696069**  
**BEA N/A**

**Site 3 of 3 in cluster B**

**Relative:**  
**Higher**

AIRS:

State Registration Number: A0023  
 Naics Code: Not reported  
 Contact Name: HENRY KRELL  
 Contact Phone: (269) 692-6860  
 Contact Address: OTSEGO PAPER INC  
 Contact Address 2: 320 NORTH FARMER STREET  
 Contact City,St,Zip: OTSEGO, MI 49078  
 Permit Number: 60-03A  
 Date Received: 12/18/06  
 State Registration Number: A0023  
 Country: Not reported  
 Application Reason: PAPER MACHINE CONVERSION & DECOMMISSION MACHINE 2  
 Record Type: Not reported  
 State County FIPS: Not reported  
 Facility Category: Not reported  
 SIC Primary: Not reported  
 Tribal Code: Not reported  
 EI Year: Not reported

**Actual:**  
**708 ft.**

Facility:

Facility Site(FS) Identifier: A0023  
 FS Program System Code: MIDEQ  
 State And County Fips Code: 26005  
 Tribal Code: Not reported  
 State And Country FIPS Code: Not reported  
 EIS FS Identifier: 13609

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**MENASHA PACKAGING COMPANY, LLC, OTSEGO MILL (Continued)**

**S107696069**

Effective Date: Not reported  
End Date: Not reported  
Organization Formal Name: Not reported  
Affiliation Type Code: Not reported  
Facility Category Code: CAP  
FS Name: OTSEGO PAPER INC  
FS Description: Not reported  
FS Status Code: OP  
FS Status Code Year: 2008  
FS Comment: Not reported  
NAICS Code: 322121  
Location Address Text: 320 N Farmer St.  
Supplemental Location Text: Not reported  
Locality Name: OTSEGO  
Location Address State Code: MI  
Location Address Postal Code: 49078  
Location Address Country Code: USA  
Address Comment: Not reported

**BEA:**

Secondary Address: Not reported  
BEA Number: 980  
District: Kalamazoo  
Date Received: 5/25/2006 12:59:00 AM  
Submitter Name: Otsego Paper, Inc.  
Petition Determination: Affirmed  
Petition Disclosure: 1  
Category: No Hazardous Substance(s)  
Determination 20107A: No Request  
Reviewer: ducharmm  
Division Assigned: RRD

Secondary Address: Not reported  
BEA Number: 981  
District: Kalamazoo  
Date Received: 5/25/2006 12:59:00 AM  
Submitter Name: Otsego Paper, Inc.  
Petition Determination: Affirmed  
Petition Disclosure: 1  
Category: Same Hazardous Substance(s)  
Determination 20107A: No Request  
Reviewer: ducharmm  
Division Assigned: Environmental Response Division

**C14**  
**ESE**  
**1/4-1/2**  
**0.430 mi.**  
**2270 ft.**

**CITY OF OTSEGO SERVICE DEPT**  
**210 N FARMER ST**  
**OTSEGO, MI 49078**  
**Site 1 of 2 in cluster C**

**LUST** **U000249154**  
**UST** **N/A**

**Relative:**  
**Lower**

**LUST:**  
Facility ID: 00013859  
Source: STATE OF MICHIGAN  
Owner Name: City Of Otsego  
Owner Address: 117 E Orleans St  
Owner City,St,Zip: Otsego, MI 49078-1124

**Actual:**  
**685 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

CITY OF OTSEGO SERVICE DEPT (Continued)

U000249154

Owner Contact: Not reported  
Owner Phone: (616) 694-6146  
Country: USA  
District: Kalamazoo District Office  
Site Name: Otsego (City of) Dpw  
Latitude: 42.4592820000  
Longitude: -85.6974610000  
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)

Leak Number: C-0138-90  
Release Date: 01/19/1990  
Substance Released: Not reported  
Release Status: Closed  
Release Closed Date: 02/18/1998

Leak Number: C-1528-91  
Release Date: 07/22/1991  
Substance Released: Unknown  
Release Status: Closed  
Release Closed Date: 02/18/1998

UST:

Facility ID: 00013859  
Facility Type: CLOSED  
Latitude: 42.4592820000  
Longitude: -85.6974610000  
Owner Name: City Of Otsego  
Owner Address: 117 E Orleans St  
Owner City,St,Zip: Otsego, MI 49078-1124  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: (616) 694-6146  
Contact: LESTER GOUDY  
Contact Phone: (616) 694-6636  
Date of Collection: 01/11/2001  
Accuracy: 100  
Accuracy Value Unit: FEET  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Plant Entrance (Freight)  
Method of Collection: Address Matching-House Number

Tank ID: 1  
**Tank Status: Removed from Ground**  
Capacity: 1000  
Install Date: Not reported  
Product: Diesel  
Remove Date: 01/15/1990  
Tank Release Detection: Not reported  
Pipe Realease Detection: Not reported  
Piping Material: Galvanized Steel

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CITY OF OTSEGO SERVICE DEPT (Continued)**

**U000249154**

Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 2  
**Tank Status: Removed from Ground**  
Capacity: 1500  
Install Date: 03/06/1976  
Product: Gasoline  
Remove Date: 06/18/1991  
Tank Release Detection: Not reported  
Pipe Realease Detection: Not reported  
Piping Material: Galvanized Steel  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 3  
**Tank Status: Removed from Ground**  
Capacity: 3000  
Install Date: 03/06/1976  
Product: Gasoline  
Remove Date: 06/18/1991  
Tank Release Detection: Not reported  
Pipe Realease Detection: Not reported  
Piping Material: Galvanized Steel  
Piping Type: Not reported  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

**C15**  
**ESE**  
**1/4-1/2**  
**0.430 mi.**  
**2270 ft.**

**FORMER WATERWORKS**  
**210 NORTH FARMER STREET**  
**OTSEGO, MI 49078**  
**Site 2 of 2 in cluster C**

**BEA S105541548**  
**N/A**

**Relative:**  
**Lower**

BEA:  
Secondary Address: Not reported  
BEA Number: 560  
District: Kalamazoo  
Date Received: 8/1/2002 12:59:00 AM  
Submitter Name: City of Otsego DDA  
Petition Determination: No Request  
Petition Disclosure: 0  
Category: No Hazardous Substance(s)  
Determination 20107A: No Request  
Reviewer: weaverc1  
Division Assigned: Environmental Response Division

**Actual:**  
**685 ft.**

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**D16**      **FORMERLY TEXACO, NAPH-SOL**      **BEA**      **S108236751**  
**SW**      **623 WEST ALLEGAN**      **N/A**  
**1/4-1/2**      **PLAINWELL, MI 49080**  
**0.438 mi.**  
**2313 ft.**      **Site 1 of 2 in cluster D**

**Relative:**      **BEA:**  
**Higher**      Secondary Address:      Not reported  
                  BEA Number:      1031  
**Actual:**      District:      Kalamazoo  
**709 ft.**      Date Received:      11/20/2006 12:59:00 AM  
                  Submitter Name:      Plainwell 623, LLC  
                  Petition Determination:      Affirmed  
                  Petition Disclosure:      1  
                  Category:      No Hazardous Substance(s)  
                  Determination 20107A:      No Request  
                  Reviewer:      powella  
                  Division Assigned:      Storage Tank Division

**D17**      **FORMERLY TEXACO NAPH-SAL**      **SHWS**      **S109029576**  
**SW**      **623 W. ALLEGAN STREET**      **N/A**  
**1/4-1/2**      **PLAINWELL, MI**  
**0.438 mi.**  
**2313 ft.**      **Site 2 of 2 in cluster D**

**Relative:**      **SHWS:**  
**Higher**      Facility ID:      3000238  
                  **Facility Status:**      **Inactive - no actions taken to address contamination**  
**Actual:**      Source:      Gasoline Service Station  
**709 ft.**      SAM Score:      28  
                  SAM Score Date:      09/05/2007  
                  Township:      01N  
                  Range:      11W  
                  Section:      30  
                  Quarter:      NE  
                  Quarter/Quarter:      NW  
                  Pollutants:      As

**18**      **UNITED #6250**      **LUST**      **U002300583**  
**SW**      **703 W ALLEGAN ST**      **UST**      **N/A**  
**1/4-1/2**      **OTSEGO, MI 49078**  
**0.490 mi.**  
**2587 ft.**

**Relative:**      **LUST:**  
**Higher**      Facility ID:      00011867  
                  Source:      STATE OF MICHIGAN  
**Actual:**      Owner Name:      Emro Marketing Co  
**707 ft.**      Owner Address:      Po Box 1500  
                  Owner City,St,Zip:      Springfield, OH 45501-1500  
                  Owner Contact:      Not reported  
                  Owner Phone:      (937) 864-3000  
                  Country:      USA  
                  District:      Kalamazoo District Office  
                  Site Name:      Emro Marketing #6250  
                  Latitude:      42.4605550000  
                  Longitude:      -85.7141230000  
                  Date of Collection:      10/05/2004

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNITED #6250 (Continued)**

**U002300583**

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)

Leak Number: C-0246-94  
Release Date: 03/21/1994  
Substance Released: Gasoline  
Release Status: Closed  
Release Closed Date: 01/27/1995

UST:

Facility ID: 00011867  
Facility Type: CLOSED  
Latitude: 42.4605550000  
Longitude: -85.7141230000  
Owner Name: Emro Marketing Co  
Owner Address: Po Box 1500  
Owner City,St,Zip: Springfield, OH 45501-1500  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: (937) 864-3000  
Contact: R G SCHUMANN  
Contact Phone: (708) 335-0600  
Date of Collection: 10/05/2004  
Accuracy: 100  
Accuracy Value Unit: FEET  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Plant Entrance (Freight)  
Method of Collection: Address Matching-House Number

Tank ID: 1  
**Tank Status: Removed from Ground**  
Capacity: 6000  
Install Date: 05/02/1978  
Product: Gasoline  
Remove Date: 03/22/1994  
Tank Release Detection: Manual Tank Gauging  
Pipe Realease Detection: Automatic Line Leak Detectors,Line Tightness Testing  
Piping Material: Galvanized Steel  
Piping Type: Suction: No Valve At Tank  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 2  
**Tank Status: Removed from Ground**  
Capacity: 10000  
Install Date: 05/02/1978  
Product: Gasoline  
Remove Date: 03/22/1994  
Tank Release Detection: Manual Tank Gauging  
Pipe Realease Detection: Automatic Line Leak Detectors,Line Tightness Testing  
Piping Material: Galvanized Steel

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**UNITED #6250 (Continued)**

**U002300583**

Piping Type: Suction: No Valve At Tank  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 3  
**Tank Status: Removed from Ground**  
Capacity: 10000  
Install Date: 05/02/1978  
Product: Gasoline  
Remove Date: 03/22/1994  
Tank Release Detection: Manual Tank Gauging  
Pipe Realease Detection: Automatic Line Leak Detectors,Line Tightness Testing  
Piping Material: Galvanized Steel  
Piping Type: Suction: No Valve At Tank  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

Tank ID: 4  
**Tank Status: Removed from Ground**  
Capacity: 4000  
Install Date: 05/02/1978  
Product: Kerosene,8  
Remove Date: 03/22/1994  
Tank Release Detection: Manual Tank Gauging  
Pipe Realease Detection: Automatic Line Leak Detectors,Line Tightness Testing  
Piping Material: Galvanized Steel  
Piping Type: Suction: No Valve At Tank  
Constr Material: Asphalt Coated or Bare Steel  
Impressed Device: No

**19  
SE  
1/4-1/2  
0.491 mi.  
2594 ft.**

**CLARK OTSEGO  
134 E ALLEGAN ST  
OTSEGO, MI 49078**

**LUST U003330510  
UST N/A**

**Relative:  
Higher**

LUST:  
Facility ID: 00005116  
Source: STATE OF MICHIGAN  
Owner Name: Landko  
Owner Address: PO Box 215  
Owner City,St,Zip: Ada, MI 49301  
Owner Contact: Not reported  
Owner Phone: Not reported  
Country: USA  
District: Kalamazoo District Office  
Site Name: Clark Service Station #2145 (Otsego)  
Latitude: 43.0000000000  
Longitude: -86.0000000000  
Date of Collection: 11/18/2009  
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)

**Actual:  
710 ft.**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CLARK OTSEGO (Continued)**

**U003330510**

Leak Number: C-0641-97  
Release Date: 08/07/1997  
Substance Released: Unknown,Unknown  
Release Status: Open  
Release Closed Date: Not reported

UST:

Facility ID: 00005116  
Facility Type: ACTIVE  
Latitude: 43.0000000000  
Longitude: -86.0000000000  
Owner Name: Landko  
Owner Address: PO Box 215  
Owner City,St,Zip: Ada, MI 49301  
Owner Country: USA  
Owner Contact: Not reported  
Owner Phone: Not reported  
Contact: Kimberly Weinberg  
Contact Phone: (248) 828-9385  
Date of Collection: 11/18/2009  
Accuracy: 10  
Accuracy Value Unit: METERS  
Horizontal Datum: NAD83  
Source: STATE OF MICHIGAN  
Point Line Area: POINT  
Desc Category: Plant Entrance (Freight)  
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off

Tank ID: 1  
**Tank Status: Currently In Use**  
Capacity: 12000  
Install Date: 01/01/1987  
Product: Gasoline  
Remove Date: Not reported  
Tank Release Detection: SIR  
Pipe Realease Detection: SIR, Automatic Line Leak Detectors  
Piping Material: Galvanized Steel, Cathodically Protected  
Piping Type: Pressure  
Constr Material: Cathodically Protected Steel, Epoxy Coated Steel  
Impressed Device: Yes

Tank ID: 2  
**Tank Status: Currently In Use**  
Capacity: 12000  
Install Date: 06/01/1989  
Product: Gasoline  
Remove Date: Not reported  
Tank Release Detection: SIR  
Pipe Realease Detection: SIR, Automatic Line Leak Detectors  
Piping Material: Galvanized Steel, Cathodically Protected  
Piping Type: Pressure  
Constr Material: Cathodically Protected Steel, Epoxy Coated Steel  
Impressed Device: Yes

Tank ID: 3  
**Tank Status: Currently In Use**

Map ID  
Direction  
Distance  
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number  
EPA ID Number

**CLARK OTSEGO (Continued)**

**U003330510**

Capacity: 12000  
Install Date: 06/01/1987  
Product: Gasoline  
Remove Date: Not reported  
Tank Release Detection: SIR  
Pipe Release Detection: SIR, Automatic Line Leak Detectors  
Piping Material: Galvanized Steel, Cathodically Protected  
Piping Type: Pressure  
Constr Material: Cathodically Protected Steel, Epoxy Coated Steel  
Impressed Device: Yes

Tank ID: 4  
**Tank Status: Currently In Use**  
Capacity: 4000  
Install Date: 06/01/1977  
Product: Kerosene  
Remove Date: Not reported  
Tank Release Detection: Not reported  
Pipe Release Detection: Not reported  
Piping Material: Galvanized Steel, Cathodically Protected  
Piping Type: Repaired  
Constr Material: Cathodically Protected Steel, Epoxy Coated Steel  
Impressed Device: Yes

20  
East  
1/2-1  
0.962 mi.  
5081 ft.

**ALLEGAN COUNTY GAS CO**  
**106TH AVE**  
**OTSEGO, MI 49078**

**Manufactured Gas Plants 1008408141**  
**N/A**

**Relative:**  
**Higher**

Manufactured Gas Plants:

Alternate Name: MICHIGAN FUEL AND LIGHT CO. No additional information available

**Actual:**  
**713 ft.**

Count: 3 records.

ORPHAN SUMMARY

| City   | EDR ID     | Site Name                        | Site Address                  | Zip   | Database(s) |
|--------|------------|----------------------------------|-------------------------------|-------|-------------|
| OTSEGO | S105254401 | FARMER (241 & 243) STREET, NORTH | 241ST & 243RD NORTH FARMER ST | 49078 | BEA         |
| OTSEGO | S110300589 | MGP OTSEGO - MGU                 | RIVER STREET AKA 106TH AVE E  | 49078 | SHWS        |
| OTSEGO | S105965522 | FRANZ PROPERTY                   | 12 STREET                     |       | DEL SHWS    |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

## STANDARD ENVIRONMENTAL RECORDS

### ***Federal NPL site list***

#### NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

|   |  |
|---|--|
| Date of Government Version: 06/30/2011  | Source: EPA                            |
| Date Data Arrived at EDR: 07/12/2011    | Telephone: N/A                         |
| Date Made Active in Reports: 09/29/2011 | Last EDR Contact: 10/12/2011           |
| Number of Days to Update: 79            | Next Scheduled EDR Contact: 01/23/2012 |
|   | 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 6  
Telephone: 214-655-6659

EPA Region 3  
Telephone 215-814-5418

EPA Region 7  
Telephone: 913-551-7247

EPA Region 4  
Telephone 404-562-8033

EPA Region 8  
Telephone: 303-312-6774

EPA Region 5  
Telephone 312-886-6686

EPA Region 9  
Telephone: 415-947-4246

EPA Region 10  
Telephone 206-553-8665

#### 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: 06/30/2011  | Source: EPA                            |
| Date Data Arrived at EDR: 07/12/2011    | Telephone: N/A                         |
| Date Made Active in Reports: 09/29/2011 | Last EDR Contact: 10/12/2011           |
| Number of Days to Update: 79            | Next Scheduled EDR Contact: 01/23/2012 |
|   | 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  | Source: EPA                               |
| Date Data Arrived at EDR: 02/02/1994    | Telephone: 202-564-4267                   |
| Date Made Active in Reports: 03/30/1994 | Last EDR Contact: 08/15/2011              |
| Number of Days to Update: 56            | Next Scheduled EDR Contact: 11/28/2011    |
|   | Data Release Frequency: No Update Planned |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Federal Delisted NPL site list***

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

|   |  |
|---|--|
| Date of Government Version: 06/30/2011  | Source: EPA                            |
| Date Data Arrived at EDR: 07/12/2011    | Telephone: N/A                         |
| Date Made Active in Reports: 09/29/2011 | Last EDR Contact: 10/12/2011           |
| Number of Days to Update: 79            | Next Scheduled EDR Contact: 01/23/2012 |
|   | Data Release Frequency: Quarterly      |

## ***Federal CERCLIS list***

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

|   |  |
|---|--|
| Date of Government Version: 02/25/2011  | Source: EPA                            |
| Date Data Arrived at EDR: 03/01/2011    | Telephone: 703-412-9810                |
| Date Made Active in Reports: 05/02/2011 | Last EDR Contact: 09/01/2011           |
| Number of Days to Update: 62            | Next Scheduled EDR Contact: 12/12/2011 |
|   | Data Release Frequency: Quarterly      |

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: 12/10/2010  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 01/11/2011    | Telephone: 703-603-8704                 |
| Date Made Active in Reports: 02/16/2011 | Last EDR Contact: 10/14/2011            |
| Number of Days to Update: 36            | Next Scheduled EDR Contact: 01/23/2012  |
|   | Data Release Frequency: Varies          |

## ***Federal CERCLIS NFRAP site List***

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

|   |  |
|---|--|
| Date of Government Version: 02/25/2011  | Source: EPA                            |
| Date Data Arrived at EDR: 03/01/2011    | Telephone: 703-412-9810                |
| Date Made Active in Reports: 05/02/2011 | Last EDR Contact: 09/01/2011           |
| Number of Days to Update: 62            | Next Scheduled EDR Contact: 12/12/2011 |
|   | Data Release Frequency: Quarterly      |

## ***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/09/2011  
Date Data Arrived at EDR: 03/15/2011  
Date Made Active in Reports: 06/14/2011  
Number of Days to Update: 91

Source: EPA  
Telephone: 800-424-9346  
Last EDR Contact: 08/15/2011  
Next Scheduled EDR Contact: 11/28/2011  
Data Release Frequency: Quarterly

## ***Federal RCRA non-CORRACTS TSD facilities list***

### **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: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: 312-886-6186  
Last EDR Contact: 10/05/2011  
Next Scheduled EDR Contact: 01/16/2012  
Data Release Frequency: Quarterly

## ***Federal RCRA generators list***

### **RCRA-LQG: RCRA - Large Quantity Generators**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: 312-886-6186  
Last EDR Contact: 10/05/2011  
Next Scheduled EDR Contact: 01/16/2012  
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: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: 312-886-6186  
Last EDR Contact: 10/05/2011  
Next Scheduled EDR Contact: 01/16/2012  
Data Release Frequency: Quarterly

### **RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators**

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/15/2011  
Date Data Arrived at EDR: 07/07/2011  
Date Made Active in Reports: 08/08/2011  
Number of Days to Update: 32

Source: Environmental Protection Agency  
Telephone: 312-886-6186  
Last EDR Contact: 10/05/2011  
Next Scheduled EDR Contact: 01/16/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## ***Federal institutional controls / engineering controls registries***

### US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

|   |   |
|---|---|
| Date of Government Version: 03/16/2011  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 03/25/2011    | Telephone: 703-603-0695                 |
| Date Made Active in Reports: 06/14/2011 | Last EDR Contact: 09/12/2011            |
| Number of Days to Update: 81            | Next Scheduled EDR Contact: 12/26/2011  |
|   | Data Release Frequency: Varies          |

### US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

|   |   |
|---|---|
| Date of Government Version: 03/16/2011  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 03/25/2011    | Telephone: 703-603-0695                 |
| Date Made Active in Reports: 06/14/2011 | Last EDR Contact: 09/12/2011            |
| Number of Days to Update: 81            | Next Scheduled EDR Contact: 12/26/2011  |
|   | Data Release Frequency: Varies          |

## ***Federal ERNS list***

### ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

|   |   |
|---|---|
| Date of Government Version: 07/05/2011  | Source: National Response Center, United States Coast Guard |
| Date Data Arrived at EDR: 07/05/2011    | Telephone: 202-267-2180                                     |
| Date Made Active in Reports: 09/29/2011 | Last EDR Contact: 10/04/2011                                |
| Number of Days to Update: 86            | Next Scheduled EDR Contact: 01/16/2012                      |
|   | Data Release Frequency: Annually                            |

## ***State- and tribal - equivalent CERCLIS***

### SHWS: Contaminated Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

|   |   |
|---|---|
| Date of Government Version: 08/01/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 08/02/2011    | Telephone: 517-373-9541                               |
| Date Made Active in Reports: 08/26/2011 | Last EDR Contact: 08/02/2011                          |
| Number of Days to Update: 24            | Next Scheduled EDR Contact: 11/14/2011                |
|   | Data Release Frequency: Semi-Annually                 |

## ***State and tribal landfill and/or solid waste disposal site lists***

### SWF/LF: Solid Waste Facilities Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/05/2011  
Date Data Arrived at EDR: 01/07/2011  
Date Made Active in Reports: 02/14/2011  
Number of Days to Update: 38

Source: Department of Natural Resources & Environment  
Telephone: 517-335-4035  
Last EDR Contact: 10/03/2011  
Next Scheduled EDR Contact: 01/16/2012  
Data Release Frequency: Semi-Annually

## **State and tribal leaking storage tank lists**

### **LUST: Leaking Underground Storage Tank Sites**

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/01/2011  
Date Data Arrived at EDR: 08/24/2011  
Date Made Active in Reports: 09/30/2011  
Number of Days to Update: 37

Source: Department of Natural Resources & Environment  
Telephone: 517-373-9837  
Last EDR Contact: 10/06/2011  
Next Scheduled EDR Contact: 12/05/2011  
Data Release Frequency: Annually

### **INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land**

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 02/16/2011  
Date Data Arrived at EDR: 06/02/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 103

Source: EPA Region 7  
Telephone: 913-551-7003  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Varies

### **INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land**

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/10/2011  
Date Data Arrived at EDR: 05/11/2011  
Date Made Active in Reports: 06/14/2011  
Number of Days to Update: 34

Source: EPA Region 6  
Telephone: 214-665-6597  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
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: 05/05/2011  
Date Data Arrived at EDR: 08/02/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 42

Source: EPA Region 1  
Telephone: 617-918-1313  
Last EDR Contact: 11/01/2011  
Next Scheduled EDR Contact: 02/13/2012  
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: 08/04/2011  
Date Data Arrived at EDR: 08/05/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 39

Source: EPA Region 10  
Telephone: 206-553-2857  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Quarterly

### **INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land**

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/31/2011  
Date Data Arrived at EDR: 02/01/2011  
Date Made Active in Reports: 03/21/2011  
Number of Days to Update: 48

Source: Environmental Protection Agency  
Telephone: 415-972-3372  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land  
LUSTs on Indian land in Florida, Mississippi and North Carolina.

|   |  |
|---|--|
| Date of Government Version: 08/11/2011  | Source: EPA Region 4                   |
| Date Data Arrived at EDR: 08/12/2011    | Telephone: 404-562-8677                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 32            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Semi-Annually  |

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: 08/18/2011  | Source: EPA Region 8                   |
| Date Data Arrived at EDR: 08/19/2011    | Telephone: 303-312-6271                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 25            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Quarterly      |

## **State and tribal registered storage tank lists**

UST: Underground Storage Tank Facility List  
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

|   |   |
|---|---|
| Date of Government Version: 08/01/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 08/24/2011    | Telephone: 517-335-4035                               |
| Date Made Active in Reports: 09/30/2011 | Last EDR Contact: 10/06/2011                          |
| Number of Days to Update: 37            | Next Scheduled EDR Contact: 12/05/2011                |
|   | Data Release Frequency: Annually                      |

UST 2: Underground Storage Tank Listing  
A listing of underground storage tank site locations that have unknown owner information.

|   |   |
|---|---|
| Date of Government Version: 07/29/2011  | Source: Department of Environmental Quality |
| Date Data Arrived at EDR: 07/29/2011    | Telephone: 517-335-7211                     |
| Date Made Active in Reports: 09/06/2011 | Last EDR Contact: 10/24/2011                |
| Number of Days to Update: 39            | Next Scheduled EDR Contact: 02/06/2012      |
|   | Data Release Frequency: Quarterly           |

AST: Aboveground Tanks  
Registered Aboveground Storage Tanks.

|   |   |
|---|---|
| Date of Government Version: 06/06/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 06/15/2011    | Telephone: 517-373-8168                               |
| Date Made Active in Reports: 06/24/2011 | Last EDR Contact: 08/22/2011                          |
| Number of Days to Update: 9             | Next Scheduled EDR Contact: 12/05/2011                |
|   | Data Release Frequency: No Update Planned             |

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: 08/04/2011  | Source: EPA Region 10                  |
| Date Data Arrived at EDR: 08/05/2011    | Telephone: 206-553-2857                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 39            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Quarterly      |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 08/11/2011  | Source: EPA Region 4                   |
| Date Data Arrived at EDR: 08/12/2011    | Telephone: 404-562-9424                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 32            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Semi-Annually  |

## 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: 08/04/2011  | Source: EPA Region 9                   |
| Date Data Arrived at EDR: 08/05/2011    | Telephone: 415-972-3368                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 39            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Quarterly      |

## 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: 08/18/2011  | Source: EPA Region 8                   |
| Date Data Arrived at EDR: 08/19/2011    | Telephone: 303-312-6137                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 25            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Quarterly      |

## INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

|   |  |
|---|--|
| Date of Government Version: 04/01/2011  | Source: EPA Region 7                   |
| Date Data Arrived at EDR: 06/01/2011    | Telephone: 913-551-7003                |
| Date Made Active in Reports: 06/14/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 13            | Next Scheduled EDR Contact: 02/13/2012 |
|   | 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: 07/01/2011  | Source: EPA Region 5                   |
| Date Data Arrived at EDR: 08/26/2011    | Telephone: 312-886-6136                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 18            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Varies         |

## 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: 05/10/2011  | Source: EPA Region 6                   |
| Date Data Arrived at EDR: 05/11/2011    | Telephone: 214-665-7591                |
| Date Made Active in Reports: 06/14/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 34            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Semi-Annually  |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 05/05/2011  | Source: EPA, Region 1                  |
| Date Data Arrived at EDR: 08/08/2011    | Telephone: 617-918-1313                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/31/2011           |
| Number of Days to Update: 36            | Next Scheduled EDR Contact: 02/13/2012 |
|   | Data Release Frequency: Varies         |

## FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

|   |  |
|---|--|
| Date of Government Version: 01/01/2010  | Source: FEMA                           |
| Date Data Arrived at EDR: 02/16/2010    | Telephone: 202-646-5797                |
| Date Made Active in Reports: 04/12/2010 | Last EDR Contact: 10/17/2011           |
| Number of Days to Update: 55            | Next Scheduled EDR Contact: 01/30/2012 |
|   | 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: 09/19/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 09/21/2011    | Telephone: 517-373-4828                               |
| Date Made Active in Reports: 09/30/2011 | Last EDR Contact: 09/06/2011                          |
| Number of Days to Update: 9             | Next Scheduled EDR Contact: 12/19/2011                |
|   | Data Release Frequency: Varies                        |

### ***State and tribal voluntary cleanup sites***

#### INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

|   |  |
|---|--|
| Date of Government Version: 03/20/2008  | Source: EPA, Region 7                  |
| Date Data Arrived at EDR: 04/22/2008    | Telephone: 913-551-7365                |
| Date Made Active in Reports: 05/19/2008 | Last EDR Contact: 04/20/2009           |
| Number of Days to Update: 27            | 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: 05/05/2011  | Source: EPA, Region 1                  |
| Date Data Arrived at EDR: 07/05/2011    | Telephone: 617-918-1102                |
| Date Made Active in Reports: 09/13/2011 | Last EDR Contact: 10/04/2011           |
| Number of Days to Update: 70            | Next Scheduled EDR Contact: 01/16/2012 |
|   | Data Release Frequency: Varies         |

### ***State and tribal Brownfields sites***

#### BROWNFIELDS: Brownfields and USTfield Site Database

All state funded Part 201 and 213 sites, as well as LUST sites that have been redeveloped by private entities using the BEA process. Be aware that this is not a list of all of the potential brownfield sites in Michigan.

|   |   |
|---|---|
| Date of Government Version: 05/05/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 05/05/2011    | Telephone: 517-373-4805                               |
| Date Made Active in Reports: 05/25/2011 | Last EDR Contact: 10/31/2011                          |
| Number of Days to Update: 20            | Next Scheduled EDR Contact: 02/13/2012                |
|   | Data Release Frequency: Varies                        |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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, Detroit Edison, Detroit Area Commercial Board of Realtors

Date of Government Version: 04/09/2007  
Date Data Arrived at EDR: 04/10/2007  
Date Made Active in Reports: 05/01/2007  
Number of Days to Update: 21

Source: Economic Development Corporation  
Telephone: 888-522-0103  
Last EDR Contact: 09/06/2011  
Next Scheduled EDR Contact: 12/19/2011  
Data Release Frequency: Varies

## **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Brownfield lists***

#### US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 06/27/2011  
Date Data Arrived at EDR: 06/27/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 78

Source: Environmental Protection Agency  
Telephone: 202-566-2777  
Last EDR Contact: 09/28/2011  
Next Scheduled EDR Contact: 01/09/2012  
Data Release Frequency: Semi-Annually

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

#### DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 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: 09/26/2011  
Next Scheduled EDR Contact: 01/09/2012  
Data Release Frequency: No Update Planned

#### 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

#### SWRCY: Recycling Facilities

A listing of recycling center locations.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/24/2009  
Date Data Arrived at EDR: 09/30/2010  
Date Made Active in Reports: 10/28/2010  
Number of Days to Update: 28

Source: Department of Natural Resources & Environment  
Telephone: 517-241-5719  
Last EDR Contact: 10/06/2011  
Next Scheduled EDR Contact: 01/16/2012  
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 Natural Resources & Environment  
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: 11/07/2011  
Next Scheduled EDR Contact: 02/20/2012  
Data Release Frequency: Varies

## **Local Lists of Hazardous waste / Contaminated Sites**

### 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: 06/08/2011  
Date Data Arrived at EDR: 09/16/2011  
Date Made Active in Reports: 09/29/2011  
Number of Days to Update: 13

Source: Drug Enforcement Administration  
Telephone: 202-307-1000  
Last EDR Contact: 09/07/2011  
Next Scheduled EDR Contact: 12/19/2011  
Data Release Frequency: Quarterly

### DEL SHWS: Delisted List of Contaminated Sites

Sites that have been delisted or deleted from the List of Contaminated Sites. The available documentation for the site does not support it's listing or the site no longer meets criteria specified in rules.

Date of Government Version: 08/05/2011  
Date Data Arrived at EDR: 08/05/2011  
Date Made Active in Reports: 08/26/2011  
Number of Days to Update: 21

Source: Department of Natural Resources & Environment  
Telephone: 517-373-9541  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Varies

### CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab locations.

Date of Government Version: 10/20/2008  
Date Data Arrived at EDR: 11/18/2008  
Date Made Active in Reports: 11/21/2008  
Number of Days to Update: 3

Source: Department of Community Health  
Telephone: 517-373-3740  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## US HIST CDL: National Clandestine Laboratory Register

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: 09/01/2007  | Source: Drug Enforcement Administration   |
| Date Data Arrived at EDR: 11/19/2008    | Telephone: 202-307-1000                   |
| Date Made Active in Reports: 03/30/2009 | Last EDR Contact: 03/23/2009              |
| Number of Days to Update: 131           | Next Scheduled EDR Contact: 06/22/2009    |
|   | Data Release Frequency: No Update Planned |

## Local Lists of Registered Storage Tanks

### UST 2: Underground Storage Tank Listing

A listing of underground storage tank site locations that have unknown owner information.

|   |   |
|---|---|
| Date of Government Version: 07/29/2011  | Source: Department of Environmental Quality |
| Date Data Arrived at EDR: 07/29/2011    | Telephone: 517-335-7211                     |
| Date Made Active in Reports: 09/06/2011 | Last EDR Contact: 10/24/2011                |
| Number of Days to Update: 39            | Next Scheduled EDR Contact: 02/06/2012      |
|   | Data Release Frequency: Quarterly           |

## Local Land Records

### LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

|   |   |
|---|---|
| Date of Government Version: 09/09/2011  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 09/16/2011    | Telephone: 202-564-6023                 |
| Date Made Active in Reports: 09/29/2011 | Last EDR Contact: 10/31/2011            |
| Number of Days to Update: 13            | Next Scheduled EDR Contact: 02/13/2012  |
|   | Data Release Frequency: Varies          |

### LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

|   |  |
|---|--|
| Date of Government Version: 12/09/2005  | Source: Department of the Navy         |
| Date Data Arrived at EDR: 12/11/2006    | Telephone: 843-820-7326                |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 07/11/2011           |
| Number of Days to Update: 31            | Next Scheduled EDR Contact: 09/05/2011 |
|   | Data Release Frequency: Varies         |

### LIENS: Lien List

An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC \* 9607(1) and similar state or local laws. In other words: a lien placed upon a property's title due to an environmental condition

|   |   |
|---|---|
| Date of Government Version: 06/13/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 07/25/2011    | Telephone: 517-373-9837                               |
| Date Made Active in Reports: 07/29/2011 | Last EDR Contact: 10/28/2011                          |
| Number of Days to Update: 4             | Next Scheduled EDR Contact: 02/06/2012                |
|   | Data Release Frequency: Varies                        |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## **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: 07/05/2011  | Source: U.S. Department of Transportation |
| Date Data Arrived at EDR: 07/05/2011    | Telephone: 202-366-4555                   |
| Date Made Active in Reports: 09/30/2011 | Last EDR Contact: 10/04/2011              |
| Number of Days to Update: 87            | Next Scheduled EDR Contact: 01/16/2012    |
|   | Data Release Frequency: Annually          |

### PEAS: Pollution Emergency Alerting System

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

|   |   |
|---|---|
| Date of Government Version: 10/21/2010  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 10/22/2010    | Telephone: 517-373-8427                               |
| Date Made Active in Reports: 10/28/2010 | Last EDR Contact: 09/12/2011                          |
| Number of Days to Update: 6             | Next Scheduled EDR Contact: 12/26/2011                |
|   | Data Release Frequency: Quarterly                     |

## **Other Ascertainable Records**

### RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

|   |   |
|---|---|
| Date of Government Version: 06/15/2011  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 07/07/2011    | Telephone: 312-886-6186                 |
| Date Made Active in Reports: 08/08/2011 | Last EDR Contact: 10/05/2011            |
| Number of Days to Update: 32            | Next Scheduled EDR Contact: 01/16/2012  |
|   | Data Release Frequency: Varies          |

### DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

|   |   |
|---|---|
| Date of Government Version: 01/12/2011  | Source: Department of Transportation, Office of Pipeline Safety |
| Date Data Arrived at EDR: 02/11/2011    | Telephone: 202-366-4595   |
| Date Made Active in Reports: 05/02/2011 | Last EDR Contact: 11/08/2011                                    |
| Number of Days to Update: 80            | Next Scheduled EDR Contact: 02/20/2012                          |
|   | 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  | Source: USGS                           |
| Date Data Arrived at EDR: 11/10/2006    | Telephone: 888-275-8747                |
| Date Made Active in Reports: 01/11/2007 | Last EDR Contact: 10/20/2011           |
| Number of Days to Update: 62            | Next Scheduled EDR Contact: 01/30/2012 |
|   | Data Release Frequency: Semi-Annually  |

### FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 08/12/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Varies

## CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/01/2011  
Date Data Arrived at EDR: 08/19/2011  
Date Made Active in Reports: 09/29/2011  
Number of Days to Update: 41

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Last EDR Contact: 10/03/2011  
Next Scheduled EDR Contact: 01/16/2012  
Data Release Frequency: Varies

## ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/31/2011  
Date Data Arrived at EDR: 09/14/2011  
Date Made Active in Reports: 09/29/2011  
Number of Days to Update: 15

Source: EPA  
Telephone: 703-416-0223  
Last EDR Contact: 09/14/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Annually

## UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010  
Date Data Arrived at EDR: 10/21/2010  
Date Made Active in Reports: 01/28/2011  
Number of Days to Update: 99

Source: Department of Energy  
Telephone: 505-845-0011  
Last EDR Contact: 08/31/2011  
Next Scheduled EDR Contact: 12/12/2011  
Data Release Frequency: Varies

## MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2011  
Date Data Arrived at EDR: 09/08/2011  
Date Made Active in Reports: 09/29/2011  
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959  
Last EDR Contact: 09/08/2011  
Next Scheduled EDR Contact: 12/19/2011  
Data Release Frequency: Semi-Annually

## TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 12/17/2010  
Date Made Active in Reports: 03/21/2011  
Number of Days to Update: 94

Source: EPA  
Telephone: 202-566-0250  
Last EDR Contact: 09/01/2011  
Next Scheduled EDR Contact: 12/12/2011  
Data Release Frequency: Annually

## TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2006  
Date Data Arrived at EDR: 09/29/2010  
Date Made Active in Reports: 12/02/2010  
Number of Days to Update: 64

Source: EPA  
Telephone: 202-260-5521  
Last EDR Contact: 09/27/2011  
Next Scheduled EDR Contact: 01/09/2012  
Data Release Frequency: Every 4 Years

**FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)**  
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009  
Date Data Arrived at EDR: 04/16/2009  
Date Made Active in Reports: 05/11/2009  
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances  
Telephone: 202-566-1667  
Last EDR Contact: 08/31/2011  
Next Scheduled EDR Contact: 12/12/2011  
Data Release Frequency: Quarterly

**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: 08/31/2011  
Next Scheduled EDR Contact: 12/12/2011  
Data Release Frequency: Quarterly

**HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing**

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006  
Date Data Arrived at EDR: 03/01/2007  
Date Made Active in Reports: 04/10/2007  
Number of Days to Update: 40

Source: Environmental Protection Agency  
Telephone: 202-564-2501  
Last EDR Contact: 12/17/2007  
Next Scheduled EDR Contact: 03/17/2008  
Data Release Frequency: No Update Planned

**HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing**

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006  
Date Data Arrived at EDR: 03/01/2007  
Date Made Active in Reports: 04/10/2007  
Number of Days to Update: 40

Source: Environmental Protection Agency  
Telephone: 202-564-2501  
Last EDR Contact: 12/17/2008  
Next Scheduled EDR Contact: 03/17/2008  
Data Release Frequency: No Update Planned

**SSTS: Section 7 Tracking Systems**

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2009  
Date Data Arrived at EDR: 12/10/2010  
Date Made Active in Reports: 02/25/2011  
Number of Days to Update: 77

Source: EPA  
Telephone: 202-564-4203  
Last EDR Contact: 10/31/2011  
Next Scheduled EDR Contact: 02/13/2012  
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: 01/07/2011  
Date Data Arrived at EDR: 01/21/2011  
Date Made Active in Reports: 03/21/2011  
Number of Days to Update: 59

Source: Environmental Protection Agency  
Telephone: 202-564-5088  
Last EDR Contact: 09/26/2011  
Next Scheduled EDR Contact: 01/09/2012  
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: 11/01/2010  
Date Data Arrived at EDR: 11/10/2010  
Date Made Active in Reports: 02/16/2011  
Number of Days to Update: 98

Source: EPA  
Telephone: 202-566-0500  
Last EDR Contact: 10/19/2011  
Next Scheduled EDR Contact: 01/30/2012  
Data Release Frequency: Annually

## MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/21/2011  
Date Data Arrived at EDR: 07/15/2011  
Date Made Active in Reports: 09/13/2011  
Number of Days to Update: 60

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169  
Last EDR Contact: 09/12/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Quarterly

## RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/11/2011  
Date Data Arrived at EDR: 01/13/2011  
Date Made Active in Reports: 02/16/2011  
Number of Days to Update: 34

Source: Environmental Protection Agency  
Telephone: 202-343-9775  
Last EDR Contact: 10/13/2011  
Next Scheduled EDR Contact: 01/23/2012  
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: 04/14/2010  
Date Data Arrived at EDR: 04/16/2010  
Date Made Active in Reports: 05/27/2010  
Number of Days to Update: 41

Source: EPA  
Telephone: (312) 353-2000  
Last EDR Contact: 09/13/2011  
Next Scheduled EDR Contact: 12/26/2011  
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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  | Source: EPA                               |
| Date Data Arrived at EDR: 07/03/1995    | Telephone: 202-564-4104                   |
| Date Made Active in Reports: 08/07/1995 | Last EDR Contact: 06/02/2008              |
| Number of Days to Update: 35            | Next Scheduled EDR Contact: 09/01/2008    |
|   | Data Release Frequency: No Update Planned |

## BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

|   |  |
|---|--|
| Date of Government Version: 12/31/2009  | Source: EPA/NTIS                       |
| Date Data Arrived at EDR: 03/01/2011    | Telephone: 800-424-9346                |
| Date Made Active in Reports: 05/02/2011 | Last EDR Contact: 09/01/2011           |
| Number of Days to Update: 62            | Next Scheduled EDR Contact: 12/12/2011 |
|   | Data Release Frequency: Biennially     |

## 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: 02/28/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 03/01/2011    | Telephone: 517-373-9875                               |
| Date Made Active in Reports: 03/28/2011 | Last EDR Contact: 08/31/2011                          |
| Number of Days to Update: 27            | Next Scheduled EDR Contact: 12/12/2011                |
|   | Data Release Frequency: Quarterly                     |

## 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: 08/01/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 08/01/2011    | Telephone: 517-241-1515                               |
| Date Made Active in Reports: 08/26/2011 | Last EDR Contact: 10/31/2011                          |
| Number of Days to Update: 25            | Next Scheduled EDR Contact: 02/13/2012                |
|   | Data Release Frequency: Varies                        |

## DRYCLEANERS: Drycleaning Establishments

A listing of drycleaning facilities in Michigan.

|   |   |
|---|---|
| Date of Government Version: 07/26/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 07/28/2011    | Telephone: 517-335-4586                               |
| Date Made Active in Reports: 09/09/2011 | Last EDR Contact: 10/24/2011                          |
| Number of Days to Update: 43            | Next Scheduled EDR Contact: 02/06/2012                |
|   | Data Release Frequency: Varies                        |

## NPDES: List of Active NPDES Permits

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

|   |   |
|---|---|
| Date of Government Version: 07/12/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 07/12/2011    | Telephone: 517-241-1300                               |
| Date Made Active in Reports: 07/29/2011 | Last EDR Contact: 10/12/2011                          |
| Number of Days to Update: 17            | Next Scheduled EDR Contact: 01/23/2012                |
|   | Data Release Frequency: Varies                        |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**AIRS: Permit and Emissions Inventory Data**  
Permit and emissions inventory data.

Date of Government Version: 01/12/2011  
Date Data Arrived at EDR: 01/14/2011  
Date Made Active in Reports: 02/18/2011  
Number of Days to Update: 35

Source: Department of Natural Resources & Environment  
Telephone: 517-373-7074  
Last EDR Contact: 09/19/2011  
Next Scheduled EDR Contact: 01/09/2012  
Data Release Frequency: Varies

**BEA: BASELINE ENVIRONMENTAL ASSESSMENT DATABASE**

A Baseline Environmental Assessment (BEA) allows people to purchase or begin operating at a facility without being held liable for existing contamination. BEAs are used to gather enough information about the property being transferred so that existing contamination can be distinguished from any new releases that might occur after the new owner or operator takes over the property.

Date of Government Version: 08/29/2011  
Date Data Arrived at EDR: 08/31/2011  
Date Made Active in Reports: 09/09/2011  
Number of Days to Update: 9

Source: Department of Natural Resources & Environment  
Telephone: 517-373-9541  
Last EDR Contact: 08/22/2011  
Next Scheduled EDR Contact: 12/05/2011  
Data Release Frequency: Semi-Annually

**INDIAN RESERV: Indian Reservations**

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 12/08/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 34

Source: USGS  
Telephone: 202-208-3710  
Last EDR Contact: 10/20/2011  
Next Scheduled EDR Contact: 01/30/2012  
Data Release Frequency: Semi-Annually

**SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing**

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011  
Date Data Arrived at EDR: 03/09/2011  
Date Made Active in Reports: 05/02/2011  
Number of Days to Update: 54

Source: Environmental Protection Agency  
Telephone: 615-532-8599  
Last EDR Contact: 10/24/2011  
Next Scheduled EDR Contact: 02/06/2012  
Data Release Frequency: Varies

**FEDLAND: Federal and Indian Lands**

Federally and Indian administered lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005  
Date Data Arrived at EDR: 02/06/2006  
Date Made Active in Reports: 01/11/2007  
Number of Days to Update: 339

Source: U.S. Geological Survey  
Telephone: 888-275-8747  
Last EDR Contact: 10/20/2011  
Next Scheduled EDR Contact: 01/30/2012  
Data Release Frequency: N/A

**PCB TRANSFORMER: PCB Transformer Registration Database**

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008  
Date Data Arrived at EDR: 02/18/2009  
Date Made Active in Reports: 05/29/2009  
Number of Days to Update: 100

Source: Environmental Protection Agency  
Telephone: 202-566-0517  
Last EDR Contact: 11/04/2011  
Next Scheduled EDR Contact: 02/13/2012  
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## 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: 08/17/2010  | Source: Environmental Protection Agency |
| Date Data Arrived at EDR: 01/03/2011    | Telephone: N/A                          |
| Date Made Active in Reports: 03/21/2011 | Last EDR Contact: 09/16/2011            |
| Number of Days to Update: 77            | Next Scheduled EDR Contact: 12/26/2011  |
|   | Data Release Frequency: Varies          |

## COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

|   |  |
|---|--|
| Date of Government Version: 12/31/2005  | Source: Department of Energy           |
| Date Data Arrived at EDR: 08/07/2009    | Telephone: 202-586-8719                |
| Date Made Active in Reports: 10/22/2009 | Last EDR Contact: 10/18/2011           |
| Number of Days to Update: 76            | Next Scheduled EDR Contact: 01/30/2012 |
|   | Data Release Frequency: Varies         |

## COAL ASH: Coal Ash Disposal Sites

Coal fired power plants in Southeast Michigan that have coal ash handling on site.

|   |   |
|---|---|
| Date of Government Version: 04/21/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 04/21/2011    | Telephone: 586-753-3754                               |
| Date Made Active in Reports: 05/13/2011 | Last EDR Contact: 10/11/2011                          |
| Number of Days to Update: 22            | Next Scheduled EDR Contact: 01/23/2012                |
|   | Data Release Frequency: Varies                        |

## FINANCIAL ASSURANCE 1: Financial Assurance Information Listing

Financial assurance information.

|   |   |
|---|---|
| Date of Government Version: 08/19/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 08/23/2011    | Telephone: 517-335-6610                               |
| Date Made Active in Reports: 09/30/2011 | Last EDR Contact: 10/11/2011                          |
| Number of Days to Update: 38            | Next Scheduled EDR Contact: 01/23/2012                |
|   | 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: 01/05/2011  | Source: Department of Natural Resources & Environment |
| Date Data Arrived at EDR: 01/07/2011    | Telephone: 517-335-4034                               |
| Date Made Active in Reports: 02/14/2011 | Last EDR Contact: 10/03/2011                          |
| Number of Days to Update: 38            | Next Scheduled EDR Contact: 01/16/2012                |
|   | Data Release Frequency: Varies                        |

## EDR PROPRIETARY RECORDS

### *EDR Proprietary Records*

#### Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A  
Date Data Arrived at EDR: N/A  
Date Made Active in Reports: N/A  
Number of Days to Update: N/A

Source: EDR, Inc.  
Telephone: N/A  
Last EDR Contact: N/A  
Next Scheduled EDR Contact: N/A  
Data Release Frequency: No Update Planned

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

### CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007  
Date Data Arrived at EDR: 08/26/2009  
Date Made Active in Reports: 09/11/2009  
Number of Days to Update: 16

Source: Department of Environmental Protection  
Telephone: 860-424-3375  
Last EDR Contact: 10/28/2011  
Next Scheduled EDR Contact: 12/05/2011  
Data Release Frequency: Annually

### NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010  
Date Data Arrived at EDR: 07/20/2011  
Date Made Active in Reports: 08/11/2011  
Number of Days to Update: 22

Source: Department of Environmental Protection  
Telephone: N/A  
Last EDR Contact: 10/18/2011  
Next Scheduled EDR Contact: 01/30/2012  
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: 08/01/2011  
Date Data Arrived at EDR: 08/09/2011  
Date Made Active in Reports: 09/16/2011  
Number of Days to Update: 38

Source: Department of Environmental Conservation  
Telephone: 518-402-8651  
Last EDR Contact: 11/08/2011  
Next Scheduled EDR Contact: 02/20/2012  
Data Release Frequency: Annually

### PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2008  
Date Data Arrived at EDR: 12/01/2009  
Date Made Active in Reports: 12/14/2009  
Number of Days to Update: 13

Source: Department of Environmental Protection  
Telephone: 717-783-8990  
Last EDR Contact: 09/26/2011  
Next Scheduled EDR Contact: 01/09/2012  
Data Release Frequency: Annually

### RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2010  
Date Data Arrived at EDR: 06/24/2011  
Date Made Active in Reports: 06/30/2011  
Number of Days to Update: 6

Source: Department of Environmental Management  
Telephone: 401-222-2797  
Last EDR Contact: 08/31/2011  
Next Scheduled EDR Contact: 12/12/2011  
Data Release Frequency: Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2010

Date Data Arrived at EDR: 08/19/2011

Date Made Active in Reports: 09/15/2011

Number of Days to Update: 27

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 09/19/2011

Next Scheduled EDR Contact: 01/02/2012

Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

## Electric Power Transmission Line Data

Source: Rextag Strategies Corp.

Telephone: (281) 769-2247

U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

## AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

## Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

## Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

## Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

## Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

## Daycare Centers: Day Care Centers, Group & Family Homes

Source: Bureau of Regulatory Services

Telephone: 517-373-8300

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

## State Wetlands Data: Wetlands Inventory

Source: Department of Natural Resources

Telephone: 517-241-2254

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## **STREET AND ADDRESS INFORMATION**

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

ROCK TENN PROPERTY  
431 HELEN  
OTSEGO, MI 49078

### TARGET PROPERTY COORDINATES

|                               |                          |
|-------------------------------|--------------------------|
| Latitude (North):             | 42.46470 - 42° 27' 52.9" |
| Longitude (West):             | 85.704 - 85° 42' 14.4"   |
| Universal Tranverse Mercator: | Zone 16                  |
| UTM X (Meters):               | 606551.0                 |
| UTM Y (Meters):               | 4701973.0                |
| Elevation:                    | 701 ft. above sea level  |

### USGS TOPOGRAPHIC MAP

|                       |                     |
|-----------------------|---------------------|
| Target Property Map:  | 42085-D6 OTSEGO, MI |
| Most Recent Revision: | 1973                |

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).

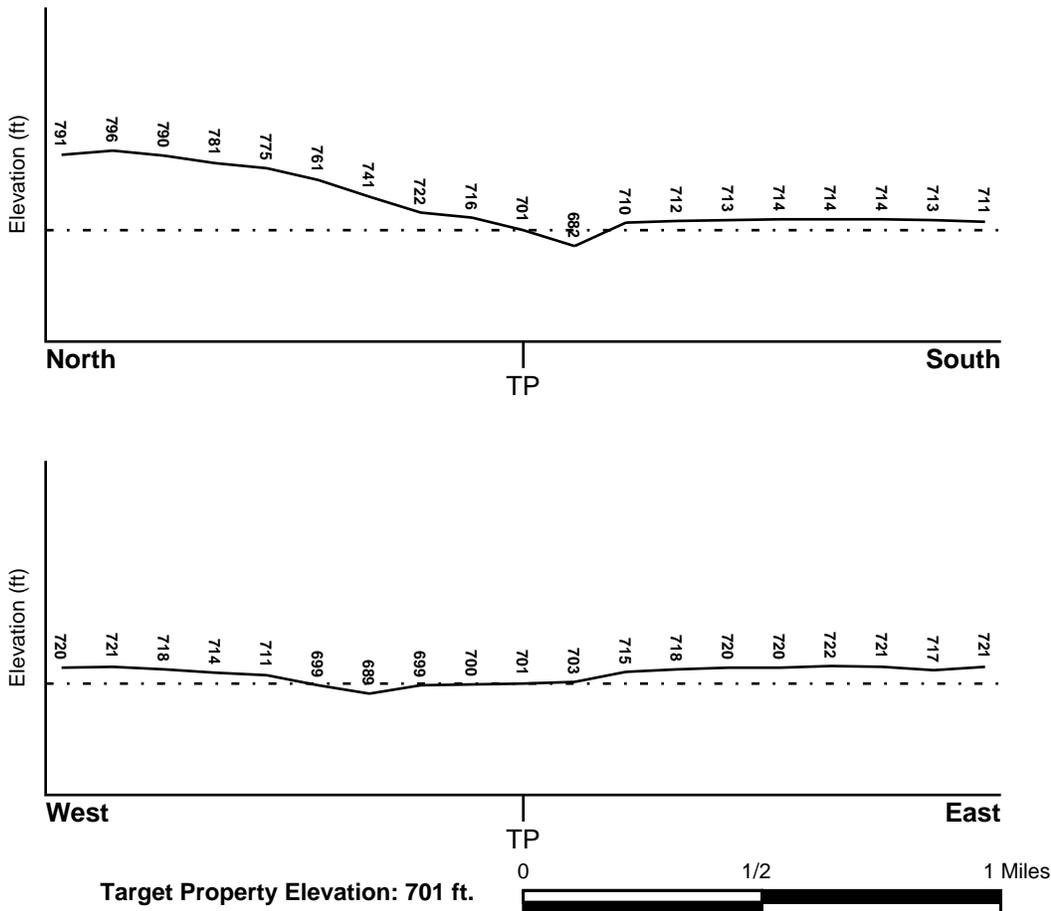
## TOPOGRAPHIC INFORMATION

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 SW

## 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

|                               |                                   |
|-------------------------------|-----------------------------------|
| <u>Target Property County</u> | <u>FEMA Flood Electronic Data</u> |
| ALLEGAN, MI                   | Not Available                     |

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

## NATIONAL WETLAND INVENTORY

|                                    |  |
|------------------------------------|--|
| <u>NWI Quad at Target Property</u> | <u>NWI Electronic Data Coverage</u>            |
| OTSEGO                             | 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.

| <u>MAP ID</u> | <u>LOCATION FROM TP</u> | <u>GENERAL DIRECTION GROUNDWATER FLOW</u> |
|---------------|-------------------------|---|
| Not Reported  |                         |   |

## 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**

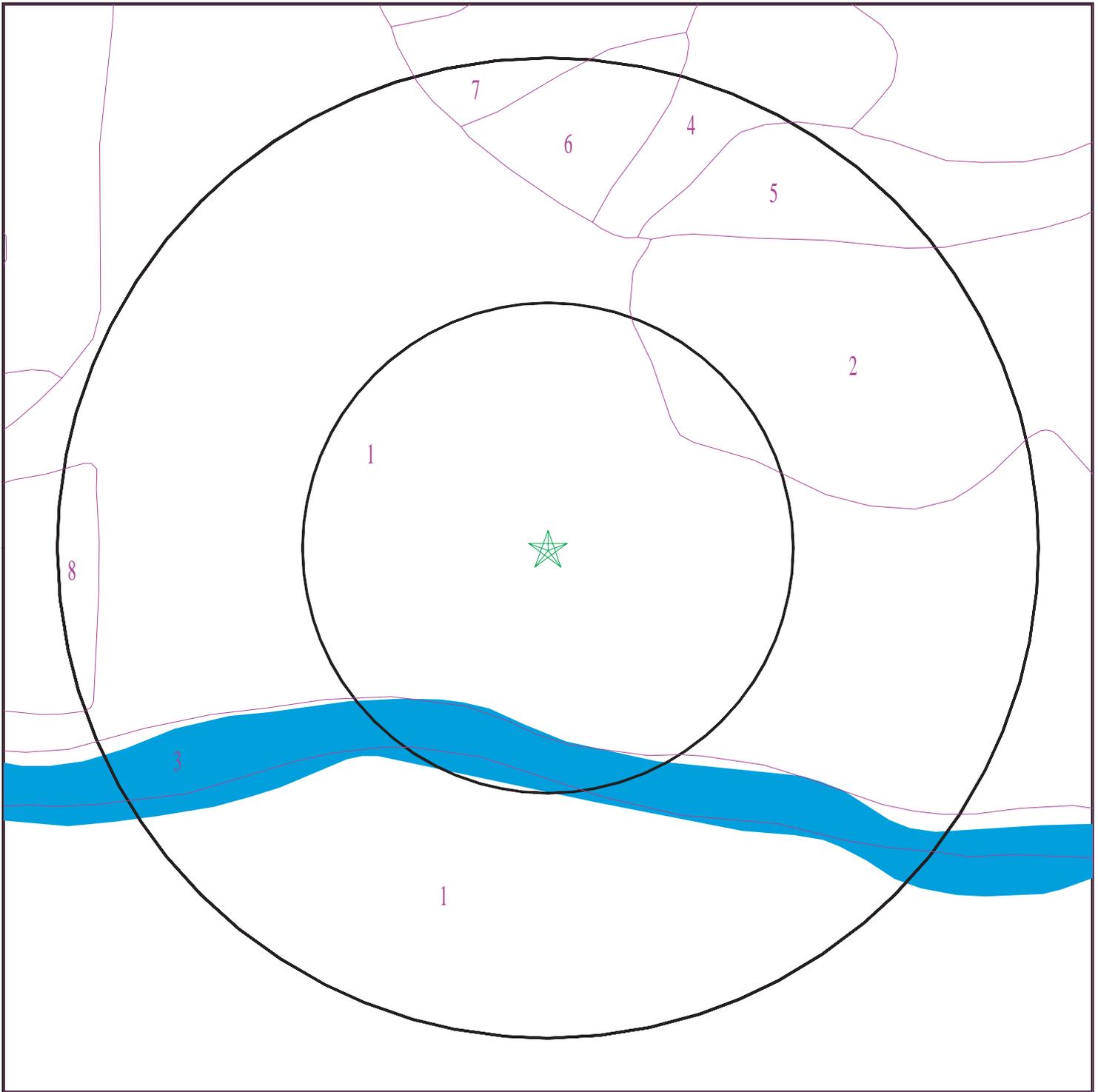
Era: Paleozoic  
System: Mississippian  
Series: Osagean and Kinderhookian Series  
Code: M1 (*decoded above as Era, System & Series*)

#### **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 - 3199656.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Rock Tenn Property  
ADDRESS: 431 Helen  
Otsego MI 49078  
LAT/LONG: 42.4647 / 85.7040

CLIENT: ECT  
CONTACT: Dirk Mammen  
INQUIRY #: 3199656.2s  
DATE: November 08, 2011 2:29 pm

## 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: Urban land

Soil Surface Texture:  
Hydrologic Group: Not reported

Soil Drainage Class:  
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

---

#### Soil Map ID: 2

Soil Component Name: Oakville

Soil Surface Texture: fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                    |  |   |   |                      |
|------------------------|-----------|-----------|--------------------|--|---|---|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification   |   | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                    | AASHTO Group   | Unified Soil  |   |                      |
| 1                      | 0 inches  | 9 inches  | fine sand          | Granular materials (35 pct. or less passing No. 200), Fine Sand. | COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.<br>COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.6 |
| 2                      | 9 inches  | 24 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Fine Sand. | COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.<br>COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.6 |
| 3                      | 24 inches | 59 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Fine Sand. | COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.<br>COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.6 |

### Soil Map ID: 3

Soil Component Name: Water

Soil Surface Texture: fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class:  
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**Soil Map ID: 4**

Soil Component Name: Granby

Soil Surface Texture: loamy sand

Hydrologic Group: Class A/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 |           |           |                    |   |  |   |                      |
|------------------------|-----------|-----------|--------------------|---|--|---|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                    | 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. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 8.4<br>Min: 6.6 |
| 2                      | 11 inches | 25 inches | sand               | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 8.4<br>Min: 6.6 |
| 3                      | 25 inches | 59 inches | sand               | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 8.4<br>Min: 6.6 |

**Soil Map ID: 5**

Soil Component Name: Chelsea

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |           |                    |   |  |   |                      |
|------------------------|----------|-----------|--------------------|---|--|---|----------------------|
| Layer                  | Boundary |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower     |                    | AASHTO Group  | Unified Soil   |   |                      |
| 1                      | 0 inches | 3 inches  | loamy fine sand    | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.1 |
| 2                      | 3 inches | 59 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.1 |

### Soil Map ID: 6

Soil Component Name: Tedrow

Soil Surface Texture: fine sand

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: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                    |   |  |   |                      |
|------------------------|-----------|-----------|--------------------|---|--|---|----------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper     | Lower     |                    | AASHTO Group  | Unified Soil   |   |                      |
| 1                      | 0 inches  | 9 inches  | fine sand          | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 6.1 |
| 2                      | 9 inches  | 33 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 6.1 |
| 3                      | 33 inches | 59 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 6.1 |

### Soil Map ID: 7

Soil Component Name: Chelsea

Soil Surface Texture: loamy fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |          |           |                    |   |  |   |                      |
|------------------------|----------|-----------|--------------------|---|--|---|----------------------|
| Layer                  | Boundary |           | Soil Texture Class | Classification  |  | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH)   |
|                        | Upper    | Lower     |                    | AASHTO Group  | Unified Soil   |   |                      |
| 1                      | 0 inches | 3 inches  | loamy fine sand    | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.1 |
| 2                      | 3 inches | 59 inches | fine sand          | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. | Max: 141<br>Min: 42                             | Max: 7.3<br>Min: 5.1 |

### Soil Map ID: 8

Soil Component Name: Histosols

Soil Surface Texture: muck

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

| Soil Layer Information |          |           |                    |                |              |   |                    |
|------------------------|----------|-----------|--------------------|----------------|--------------|---|--------------------|
| Layer                  | Boundary |           | Soil Texture Class | Classification |              | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH) |
|                        | Upper    | Lower     |                    | AASHTO Group   | Unified Soil |   |                    |
| 1                      | 0 inches | 51 inches | muck               | A-8            | Not reported | Max:<br>Min:                                    | Max: Min:          |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information |           |           |                    |                |              |   |                    |
|------------------------|-----------|-----------|--------------------|----------------|--------------|---|--------------------|
| Layer                  | Boundary  |           | Soil Texture Class | Classification |              | Saturated hydraulic conductivity<br>micro m/sec | Soil Reaction (pH) |
|                        | Upper     | Lower     |                    | AASHTO Group   | Unified Soil |   |                    |
| 2                      | 51 inches | 59 inches |                    | A-8            | Not reported | Max:<br>Min:                                    | Max: Min:          |

## 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.

## WELL SEARCH DISTANCE INFORMATION

| <u>DATABASE</u>  | <u>SEARCH DISTANCE (miles)</u> |
|------------------|--------------------------------|
| Federal USGS     | 1.000                          |
| Federal FRDS PWS | Nearest PWS within 1 mile      |
| State Database   | 1.000                          |

## **FEDERAL USGS WELL INFORMATION**

| <u>MAP ID</u>  | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|----------------|----------------|-------------------------|
| No Wells Found |                |                         |

## **FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 3             | MI0320335      | 1/4 - 1/2 Mile SE       |

Note: PWS System location is not always the same as well location.

## **STATE DATABASE WELL INFORMATION**

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 1             | MI20005554     | 1/4 - 1/2 Mile West     |
| 2             | MI20004539     | 1/4 - 1/2 Mile NNE      |
| A4            | MI20002791     | 1/4 - 1/2 Mile SW       |
| A5            | MI20004267     | 1/2 - 1 Mile SW         |
| A6            | MI20004970     | 1/2 - 1 Mile SW         |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE DATABASE WELL INFORMATION

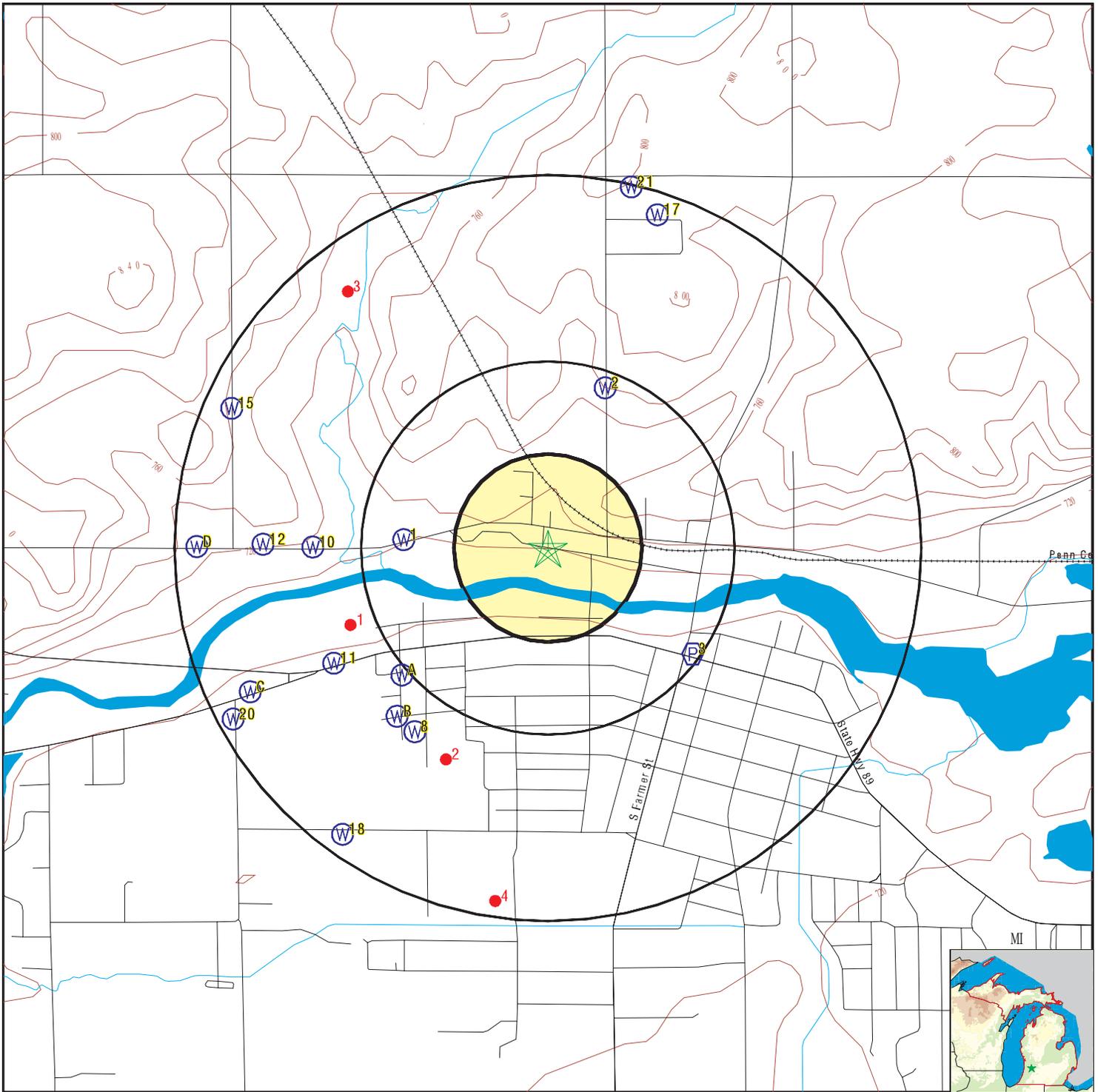
| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION<br/>FROM TP</u> |
|---------------|----------------|-----------------------------|
| B7            | MI20003974     | 1/2 - 1 Mile SW             |
| 8             | MI20006650     | 1/2 - 1 Mile SW             |
| B9            | MI20003275     | 1/2 - 1 Mile SW             |
| 10            | MI20003835     | 1/2 - 1 Mile West           |
| 11            | MI20005808     | 1/2 - 1 Mile WSW            |
| 12            | MI20003986     | 1/2 - 1 Mile West           |
| C13           | MI20005203     | 1/2 - 1 Mile WSW            |
| C14           | MI20003618     | 1/2 - 1 Mile WSW            |
| 15            | MI20006056     | 1/2 - 1 Mile WNW            |
| D16           | MI20006768     | 1/2 - 1 Mile West           |
| 17            | MI20003182     | 1/2 - 1 Mile NNE            |
| 18            | MI20005689     | 1/2 - 1 Mile SW             |
| D19           | MI20005418     | 1/2 - 1 Mile West           |
| 20            | MI20003834     | 1/2 - 1 Mile WSW            |
| 21            | MI20004398     | 1/2 - 1 Mile NNE            |

## OTHER STATE DATABASE INFORMATION

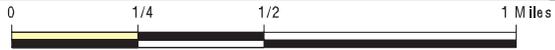
### STATE OIL/GAS WELL INFORMATION

| <u>MAP ID</u> | <u>WELL ID</u>  | <u>LOCATION<br/>FROM TP</u> |
|---------------|-----------------|-----------------------------|
| 1             | MIOG70000007866 | 1/2 - 1 Mile WSW            |
| 2             | MIOG70000007790 | 1/2 - 1 Mile SSW            |
| 3             | MIOG70000008074 | 1/2 - 1 Mile NW             |
| 4             | MIOG70000007707 | 1/2 - 1 Mile South          |

# PHYSICAL SETTING SOURCE MAP - 3199656.2s



- 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



SITE NAME: Rock Tenn Property  
 ADDRESS: 431 Helen  
 Otsego MI 49078  
 LAT/LONG: 42.4647 / 85.7040

CLIENT: ECT  
 CONTACT: Dirk Mammen  
 INQUIRY #: 3199656.2s  
 DATE: November 08, 2011 2:29 pm



## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |              |             |    |
|----------------|--------------|-------------|----|
| Pct aq 2:      | 0            | Pct maq 2:  | 0  |
| Pct cm 2:      | 60           | Pct pcm 2:  | 40 |
| Pct na 2:      | 0            | Pct aq 3:   | 60 |
| Pct maq 3:     | 0            | Pct cm 3:   | 0  |
| Pct pcm 3:     | 40           | Pct na 3:   | 0  |
| Pct aq 4:      | 0            | Pct maq 4:  | 0  |
| Pct cm 4:      | 0            | Pct pcm 4:  | 0  |
| Pct na 4:      | 0            | Pct aq 5:   | 0  |
| Pct maq 5:     | 0            | Pct cm 5:   | 0  |
| Pct pcm 5:     | 0            | Pct na 5:   | 0  |
| Pct aq 6:      | 0            | Pct maq 6:  | 0  |
| Pct cm 6:      | 0            | Pct pcm 6:  | 0  |
| Pct na 6:      | 0            | Pct aq 7:   | 0  |
| Pct maq 7:     | 0            | Pct cm 7:   | 0  |
| Pct pcm 7:     | 0            | Pct na 7:   | 0  |
| Pct aq 8:      | 0            | Pct maq 8:  | 0  |
| Pct cm 8:      | 0            | Pct pcm 8:  | 0  |
| Pct na 8:      | 0            | Pct aq 9:   | 0  |
| Pct maq 9:     | 0            | Pct cm 9:   | 0  |
| Pct pcm 9:     | 0            | Pct na 9:   | 0  |
| Pct aq 10:     | 0            | Pct maq 10: | 0  |
| Pct cm 10:     | 0            | Pct pcm 10: | 0  |
| Pct na 10:     | 0            | Pct aq 11:  | 0  |
| Pct maq 11:    | 0            | Pct cm 11:  | 0  |
| Pct pcm 11:    | 0            | Pct na 11:  | 0  |
| Pct aq 12:     | 0            | Pct maq 12: | 0  |
| Pct cm 12:     | 0            | Pct pcm 12: | 0  |
| Pct na 12:     | 0            | Pct aq 13:  | 0  |
| Pct maq 13:    | 0            | Pct cm 13:  | 0  |
| Pct pcm 13:    | 0            | Pct na 13:  | 0  |
| Within sec:    | N            | Loc match:  | Y  |
| Aq code 1:     | Not Reported |             |    |
| Hit swl:       | Not Reported |             |    |
| Athk2:         | 0            |             |    |
| Horiz Conduct: | 0            |             |    |
| Vert Conduct:  | 0            |             |    |
| T2:            | 0            |             |    |
| D50plek:       | 0            |             |    |

**2**  
**NNE**  
**1/4 - 1/2 Mile**  
**Higher**

**MI WELLS      MI20004539**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000003113             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 14           |
| Owner name: | GARY DELONG             |             |              |
| Well addr:  | 721 16TH STREET         |             |              |
| Well depth: | 112                     |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 2159         |
| Const date: | 2001-12-04 00:00:00.000 | Case type:  | PVC Plastic  |
| Case dia:   | 5                       |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |               |
|-------------|--|-------------|---------------|
| Case depth: | 107                                      |             |               |
| Screen frm: | 107                                      |             |               |
| Screen to:  | 112                                      |             |               |
| Swl:        | 65                                       |             |               |
| Test depth: | 74                                       |             |               |
| Test hours: | 1  |             |               |
| Test rate:  | 30                                       | Test methd: | Air           |
| Grouted:    | 1  | Pmp cpcity: | 10            |
| Latitude:   | 42.47091999                              |             |               |
| Longitude:  | -85.70098902                             |             |               |
| Methd coll: | Address Matching-House Number            |             |               |
| Elevation:  | 0  |             |               |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported  |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |               |
| Swl flag:   | Not Reported                             |             |               |
| Elev dem:   | 754                                      | Elev dif:   | 754           |
| Elev miv:   | 754                                      | Aq code:    | Drift Well    |
| Aq flag:    | Not Reported                             | Pct aq:     | 96            |
| Pct aq d:   | 96                                       | Pct aq r:   | 0             |
| Pct maq:    | 0  | Pct maq d:  | 0             |
| Pct maq r:  | 0  | Pct cm:     | 4             |
| Pct cm d:   | 4  | Pct cm r:   | 0             |
| Pct pcm:    | 0  | Pct pcm d:  | 0             |
| Pct pcm r:  | 0  | Pct na:     | 0             |
| Pct na d:   | 0  | Pct na r:   | 0             |
| Pct flag:   | Not Reported                             | Rock top:   | -1            |
| D r type:   | Not Reported                             | Spc cpcity: | 0             |
| A thicknes: | 47                                       | A pct aq:   | 100           |
| A pct maq:  | 0  | A pct pcm:  | 0             |
| A pct cm:   | 0  | A pct na:   | 0             |
| A thickns2: | 47                                       | A pct aq2:  | 100           |
| A pct maq2: | 0  | A pct pcm2: | 0             |
| A pct cm2:  | 0  | A pct na2:  | 0             |
| A hit swl:  | T  | A hit top:  | F             |
| A hit rock: | F  | A sc lith1: | Sand & Gravel |
| A sc lmod1: | Coarse                                   | A sc lmaq1: | AQ            |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported  |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported  |
| A sc lpct2: | 0  | Pct aq 1:   | 75            |
| Pct maq 1:  | 0  | Pct cm 1:   | 25            |
| Pct pcm 1:  | 0  | Pct na 1:   | 0             |
| Pct aq 2:   | 100                                      | Pct maq 2:  | 0             |
| Pct cm 2:   | 0  | Pct pcm 2:  | 0             |
| Pct na 2:   | 0  | Pct aq 3:   | 100           |
| Pct maq 3:  | 0  | Pct cm 3:   | 0             |
| Pct pcm 3:  | 0  | Pct na 3:   | 0             |
| Pct aq 4:   | 100                                      | Pct maq 4:  | 0             |
| Pct cm 4:   | 0  | Pct pcm 4:  | 0             |
| Pct na 4:   | 0  | Pct aq 5:   | 100           |
| Pct maq 5:  | 0  | Pct cm 5:   | 0             |
| Pct pcm 5:  | 0  | Pct na 5:   | 0             |
| Pct aq 6:   | 0  | Pct maq 6:  | 0             |
| Pct cm 6:   | 0  | Pct pcm 6:  | 0             |
| Pct na 6:   | 0  | Pct aq 7:   | 0             |
| Pct maq 7:  | 0  | Pct cm 7:   | 0             |
| Pct pcm 7:  | 0  | Pct na 7:   | 0             |
| Pct aq 8:   | 0  | Pct maq 8:  | 0             |
| Pct cm 8:   | 0  | Pct pcm 8:  | 0             |
| Pct na 8:   | 0  | Pct aq 9:   | 0             |
| Pct maq 9:  | 0  | Pct cm 9:   | 0             |
| Pct pcm 9:  | 0  | Pct na 9:   | 0             |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |             |   |
|----------------|-----------|-------------|---|
| Pct aq 10:     | 0         | Pct maq 10: | 0 |
| Pct cm 10:     | 0         | Pct pcm 10: | 0 |
| Pct na 10:     | 0         | Pct aq 11:  | 0 |
| Pct maq 11:    | 0         | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0         | Pct na 11:  | 0 |
| Pct aq 12:     | 0         | Pct maq 12: | 0 |
| Pct cm 12:     | 0         | Pct pcm 12: | 0 |
| Pct na 12:     | 0         | Pct aq 13:  | 0 |
| Pct maq 13:    | 0         | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0         | Pct na 13:  | 0 |
| Within sec:    | Y         | Loc match:  | Y |
| Aq code 1:     | D         |             |   |
| Hit swl:       | T         |             |   |
| Athk2:         | 47        |             |   |
| Horiz Conduct: | 158.51064 |             |   |
| Vert Conduct:  | 109.30233 |             |   |
| T2:            | 7450      |             |   |
| D50plek:       | 550.31134 |             |   |

**3**  
**SE**  
**1/4 - 1/2 Mile**  
**Higher**

**FRDS PWS MI0320335**

PWS ID: MI0320335  
 Date Initiated: Not Reported      Date Deactivated: Not Reported  
 PWS Name: UPPER CRUST PIZZA  
 1420 M-89  
 OTSEGO, MI 49078

Addressee / Facility: Not Reported

Facility Latitude: 42 27 38      Facility Longitude: 085 41 47  
 City Served: Not Reported  
 Treatment Class: Untreated      Population: 00000050

Violations information not reported.

**ENFORCEMENT INFORMATION:**

|                    |                                 |              |                                 |
|--------------------|---------------------------------|--------------|---------------------------------|
| System Name:       | UPPER CRUST PIZZA               |              |                                 |
| Violation Type:    | Monitoring, Routine Major (TCR) |              |                                 |
| Contaminant:       | COLIFORM (TCR)                  |              |                                 |
| Compliance Period: | 1994-10-01 - 1994-12-31         |              |                                 |
| Violation ID:      | 9510001                         |              |                                 |
| Enforcement Date:  | Not Reported                    | Enf. Action: | Not Reported                    |
| System Name:       | UPPER CRUST PIZZA               |              |                                 |
| Violation Type:    | Monitoring, Regular             |              |                                 |
| Contaminant:       | NITRATE                         |              |                                 |
| Compliance Period: | 1994-01-01 - 1994-12-31         |              |                                 |
| Violation ID:      | 9510002                         |              |                                 |
| Enforcement Date:  | Not Reported                    | Enf. Action: | Not Reported                    |
| System Name:       | UPPER CRUST PIZZA               |              |                                 |
| Violation Type:    | Monitoring, Routine Major (TCR) |              |                                 |
| Contaminant:       | COLIFORM (TCR)                  |              |                                 |
| Compliance Period: | 1995-01-01 - 1995-03-31         |              |                                 |
| Violation ID:      | 9520001                         |              |                                 |
| Enforcement Date:  | 1995-03-31                      | Enf. Action: | State Violation/Reminder Notice |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

**ENFORCEMENT INFORMATION:**

|                    |                                 |              |                                 |
|--------------------|---------------------------------|--------------|---------------------------------|
| System Name:       | UPPER CRUST PIZZA               | Enf. Action: | State Violation/Reminder Notice |
| Violation Type:    | Monitoring, Routine Major (TCR) |              |                                 |
| Contaminant:       | COLIFORM (TCR)                  |              |                                 |
| Compliance Period: | 1995-10-01 - 1995-12-31         |              |                                 |
| Violation ID:      | 9610010                         |              |                                 |
| Enforcement Date:  | 1996-01-31                      |              |                                 |

**A4  
SW  
1/4 - 1/2 Mile  
Higher**

**MI WELLS      MI20002791**

|             |  |             |              |
|-------------|--|-------------|--------------|
| Wellid:     | 03000000862                              | Import id:  | Not Reported |
| County:     | Allegan                                  | Township:   | Otsego       |
| Town range: | 01N 12W                                  | Section:    | 22           |
| Owner name: | RON PLOTTS                               |             |              |
| Well addr:  | 522 LINCOLN ROAD                         |             |              |
| Well depth: | 59                                       |             |              |
| Well type:  | Household                                |             |              |
| Wssn:       | 0  |             |              |
| Well num:   | Not Reported                             | Driller id: | 1984         |
| Const date: | 2000-04-14 00:00:00.000                  | Case type:  | Steel-black  |
| Case dia:   | 4  |             |              |
| Case depth: | 54                                       |             |              |
| Screen frm: | 54                                       |             |              |
| Screen to:  | 59                                       |             |              |
| Swl:        | 31                                       |             |              |
| Test depth: | 31                                       |             |              |
| Test hours: | 1  |             |              |
| Test rate:  | 40                                       | Test methd: | Other        |
| Grouted:    | 1  | Pmp cpcity: | 10           |
| Latitude:   | 42.46012971                              |             |              |
| Longitude:  | -85.71118375                             |             |              |
| Methd coll: | Interpolation-Map                        |             |              |
| Elevation:  | 0  |             |              |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:   | Not Reported                             |             |              |
| Elev dem:   | 708                                      | Elev dif:   | 708          |
| Elev miv:   | 708                                      | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                             | Pct aq:     | 47           |
| Pct aq d:   | 47                                       | Pct aq r:   | 0            |
| Pct maq:    | 47                                       | Pct maq d:  | 47           |
| Pct maq r:  | 0  | Pct cm:     | 0            |
| Pct cm d:   | 0  | Pct cm r:   | 0            |
| Pct pcm:    | 0  | Pct pcm d:  | 0            |
| Pct pcm r:  | 0  | Pct na:     | 5            |
| Pct na d:   | 5  | Pct na r:   | 0            |
| Pct flag:   | Not Reported                             | Rock top:   | -1           |
| D r type:   | Not Reported                             | Spc cpcity: | 0            |
| A thicknes: | 28                                       | A pct aq:   | 100          |
| A pct maq:  | 0  | A pct pcm:  | 0            |
| A pct cm:   | 0  | A pct na:   | 0            |
| A thickns2: | 28                                       | A pct aq2:  | 100          |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |              |             |              |
|----------------|--------------|-------------|--------------|
| A pct maq2:    | 0            | A pct pcm2: | 0            |
| A pct cm2:     | 0            | A pct na2:  | 0            |
| A hit swl:     | T            | A hit top:  | F            |
| A hit rock:    | F            | A sc lith1: | Sand         |
| A sc lmod1:    | Fine         | A sc lmaq1: | AQ           |
| A sc lpct1:    | 100          | A sc lith2: | Not Reported |
| A sc lmod2:    | Not Reported | A sc lmaq2: | Not Reported |
| A sc lpct2:    | 0            | Pct aq 1:   | 0            |
| Pct maq 1:     | 85           | Pct cm 1:   | 0            |
| Pct pcm 1:     | 0            | Pct na 1:   | 15           |
| Pct aq 2:      | 45           | Pct maq 2:  | 55           |
| Pct cm 2:      | 0            | Pct pcm 2:  | 0            |
| Pct na 2:      | 0            | Pct aq 3:   | 0            |
| Pct maq 3:     | 0            | Pct cm 3:   | 0            |
| Pct pcm 3:     | 0            | Pct na 3:   | 0            |
| Pct aq 4:      | 0            | Pct maq 4:  | 0            |
| Pct cm 4:      | 0            | Pct pcm 4:  | 0            |
| Pct na 4:      | 0            | Pct aq 5:   | 0            |
| Pct maq 5:     | 0            | Pct cm 5:   | 0            |
| Pct pcm 5:     | 0            | Pct na 5:   | 0            |
| Pct aq 6:      | 0            | Pct maq 6:  | 0            |
| Pct cm 6:      | 0            | Pct pcm 6:  | 0            |
| Pct na 6:      | 0            | Pct aq 7:   | 0            |
| Pct maq 7:     | 0            | Pct cm 7:   | 0            |
| Pct pcm 7:     | 0            | Pct na 7:   | 0            |
| Pct aq 8:      | 0            | Pct maq 8:  | 0            |
| Pct cm 8:      | 0            | Pct pcm 8:  | 0            |
| Pct na 8:      | 0            | Pct aq 9:   | 0            |
| Pct maq 9:     | 0            | Pct cm 9:   | 0            |
| Pct pcm 9:     | 0            | Pct na 9:   | 0            |
| Pct aq 10:     | 0            | Pct maq 10: | 0            |
| Pct cm 10:     | 0            | Pct pcm 10: | 0            |
| Pct na 10:     | 0            | Pct aq 11:  | 0            |
| Pct maq 11:    | 0            | Pct cm 11:  | 0            |
| Pct pcm 11:    | 0            | Pct na 11:  | 0            |
| Pct aq 12:     | 0            | Pct maq 12: | 0            |
| Pct cm 12:     | 0            | Pct pcm 12: | 0            |
| Pct na 12:     | 0            | Pct aq 13:  | 0            |
| Pct maq 13:    | 0            | Pct cm 13:  | 0            |
| Pct pcm 13:    | 0            | Pct na 13:  | 0            |
| Within sec:    | Y            | Loc match:  | Y            |
| Aq code 1:     | D            |             |              |
| Hit swl:       | T            |             |              |
| Athk2:         | 28           |             |              |
| Horiz Conduct: | 50           |             |              |
| Vert Conduct:  | 50           |             |              |
| T2:            | 1400         |             |              |
| D50plek:       | 67.00185     |             |              |

**A5  
SW  
1/2 - 1 Mile  
Higher**

**MI WELLS MI20004267**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |               |
|-------------|--|-------------|---------------|
| Wellid:     | 03000002765                              | Import id:  | Not Reported  |
| County:     | Allegan                                  | Township:   | Otsego        |
| Town range: | 01N 12W                                  | Section:    | 22            |
| Owner name: | MARION JUDD                              |             |               |
| Well addr:  | 204 SHERMAN                              |             |               |
| Well depth: | 63                                       |             |               |
| Well type:  | Household                                |             |               |
| Wssn:       | 0  |             |               |
| Well num:   | Not Reported                             | Driller id: | 1601          |
| Const date: | 2001-03-26 00:00:00.000                  | Case type:  | PVC Plastic   |
| Case dia:   | 5  |             |               |
| Case depth: | 58                                       |             |               |
| Screen frm: | 58                                       |             |               |
| Screen to:  | 63                                       |             |               |
| Swl:        | 30                                       |             |               |
| Test depth: | 45                                       |             |               |
| Test hours: | 1  |             |               |
| Test rate:  | 30                                       | Test methd: | Air           |
| Grouted:    | 1  | Pmp cpcity: | 10            |
| Latitude:   | 42.45990922                              |             |               |
| Longitude:  | -85.71198725                             |             |               |
| Methd coll: | Interpolation-Map                        |             |               |
| Elevation:  | 0  |             |               |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported  |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |               |
| Swl flag:   | Not Reported                             |             |               |
| Elev dem:   | 712                                      | Elev dif:   | 712           |
| Elev miv:   | 712                                      | Aq code:    | Drift Well    |
| Aq flag:    | Not Reported                             | Pct aq:     | 30            |
| Pct aq d:   | 30                                       | Pct aq r:   | 0             |
| Pct maq:    | 16                                       | Pct maq d:  | 16            |
| Pct maq r:  | 0  | Pct cm:     | 0             |
| Pct cm d:   | 0  | Pct cm r:   | 0             |
| Pct pcm:    | 54                                       | Pct pcm d:  | 54            |
| Pct pcm r:  | 0  | Pct na:     | 0             |
| Pct na d:   | 0  | Pct na r:   | 0             |
| Pct flag:   | Not Reported                             | Rock top:   | -1            |
| D r type:   | Not Reported                             | Spc cpcity: | 0             |
| A thicknes: | 19                                       | A pct aq:   | 100           |
| A pct maq:  | 0  | A pct pcm:  | 0             |
| A pct cm:   | 0  | A pct na:   | 0             |
| A thickns2: | 33                                       | A pct aq2:  | 58            |
| A pct maq2: | 0  | A pct pcm2: | 42            |
| A pct cm2:  | 0  | A pct na2:  | 0             |
| A hit swl:  | F  | A hit top:  | F             |
| A hit rock: | F  | A sc lith1: | Sand & Gravel |
| A sc lmod1: | Water Bearing                            | A sc lmaq1: | AQ            |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported  |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported  |
| A sc lpct2: | 0  | Pct aq 1:   | 0             |
| Pct maq 1:  | 50                                       | Pct cm 1:   | 0             |
| Pct pcm 1:  | 50                                       | Pct na 1:   | 0             |
| Pct aq 2:   | 0  | Pct maq 2:  | 0             |
| Pct cm 2:   | 0  | Pct pcm 2:  | 100           |
| Pct na 2:   | 0  | Pct aq 3:   | 80            |
| Pct maq 3:  | 0  | Pct cm 3:   | 0             |
| Pct pcm 3:  | 20                                       | Pct na 3:   | 0             |
| Pct aq 4:   | 0  | Pct maq 4:  | 0             |
| Pct cm 4:   | 0  | Pct pcm 4:  | 0             |
| Pct na 4:   | 0  | Pct aq 5:   | 0             |
| Pct maq 5:  | 0  | Pct cm 5:   | 0             |
| Pct pcm 5:  | 0  | Pct na 5:   | 0             |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |             |   |
|----------------|-----------|-------------|---|
| Pct aq 6:      | 0         | Pct maq 6:  | 0 |
| Pct cm 6:      | 0         | Pct pcm 6:  | 0 |
| Pct na 6:      | 0         | Pct aq 7:   | 0 |
| Pct maq 7:     | 0         | Pct cm 7:   | 0 |
| Pct pcm 7:     | 0         | Pct na 7:   | 0 |
| Pct aq 8:      | 0         | Pct maq 8:  | 0 |
| Pct cm 8:      | 0         | Pct pcm 8:  | 0 |
| Pct na 8:      | 0         | Pct aq 9:   | 0 |
| Pct maq 9:     | 0         | Pct cm 9:   | 0 |
| Pct pcm 9:     | 0         | Pct na 9:   | 0 |
| Pct aq 10:     | 0         | Pct maq 10: | 0 |
| Pct cm 10:     | 0         | Pct pcm 10: | 0 |
| Pct na 10:     | 0         | Pct aq 11:  | 0 |
| Pct maq 11:    | 0         | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0         | Pct na 11:  | 0 |
| Pct aq 12:     | 0         | Pct maq 12: | 0 |
| Pct cm 12:     | 0         | Pct pcm 12: | 0 |
| Pct na 12:     | 0         | Pct aq 13:  | 0 |
| Pct maq 13:    | 0         | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0         | Pct na 13:  | 0 |
| Within sec:    | Y         | Loc match:  | Y |
| Aq code 1:     | D         |             |   |
| Hit swl:       | F         |             |   |
| Athk2:         | 33        |             |   |
| Horiz Conduct: | 57.58     |             |   |
| Vert Conduct:  | .02357    |             |   |
| T2:            | 1900.14   |             |   |
| D50plek:       | 105.48932 |             |   |

**A6  
SW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20004970**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000003691             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 22           |
| Owner name: | SUE HIGS                |             |              |
| Well addr:  | 316 SHERMAN             |             |              |
| Well depth: | 88                      |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 112          |
| Const date: | 2002-06-05 00:00:00.000 | Case type:  | Steel-black  |
| Case dia:   | 4                       |             |              |
| Case depth: | 84                      |             |              |
| Screen frm: | 84                      |             |              |
| Screen to:  | 88                      |             |              |
| Swl:        | 27                      |             |              |
| Test depth: | 27                      |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 35                      | Test methd: | Plunger      |
| Grouted:    | 1                       | Pmp cpcity: | 10           |
| Latitude:   | 42.45925144             |             |              |
| Longitude:  | -85.71175409            |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |                               |             |                  |
|--------------|-------------------------------|-------------|------------------|
| Methd coll:  | Address Matching-House Number |             |                  |
| Elevation:   | 699                           |             |                  |
| Elev methd:  | Topographoc Map Interpolation | Depth flag: | Not Reported     |
| Elev flag:   | Not Reported                  |             |                  |
| Swl flag:    | Not Reported                  |             |                  |
| Elev dem:    | 699                           | Elev dif:   | 0                |
| Elev miv:    | 699                           | Aq code:    | Drift Well       |
| Aq flag:     | Not Reported                  | Pct aq:     | 7                |
| Pct aq d:    | 7                             | Pct aq r:   | 0                |
| Pct maq:     | 0                             | Pct maq d:  | 0                |
| Pct maq r:   | 0                             | Pct cm:     | 27               |
| Pct cm d:    | 27                            | Pct cm r:   | 0                |
| Pct pcm:     | 66                            | Pct pcm d:  | 66               |
| Pct pcm r:   | 0                             | Pct na:     | 0                |
| Pct na d:    | 0                             | Pct na r:   | 0                |
| Pct flag:    | Not Reported                  | Rock top:   | -1               |
| D r type:    | Not Reported                  | Spc cpcity: | 1.29999995231628 |
| A thickness: | 12                            | A pct aq:   | 50               |
| A pct maq:   | 0                             | A pct pcm:  | 50               |
| A pct cm:    | 0                             | A pct na:   | 0                |
| A thickns2:  | 61                            | A pct aq2:  | 10               |
| A pct maq2:  | 0                             | A pct pcm2: | 51               |
| A pct cm2:   | 39                            | A pct na2:  | 0                |
| A hit swl:   | F                             | A hit top:  | F                |
| A hit rock:  | F                             | A sc lith1: | Sand             |
| A sc lmod1:  | Coarse                        | A sc lmaq1: | AQ               |
| A sc lpct1:  | 100                           | A sc lith2: | Not Reported     |
| A sc lmod2:  | Not Reported                  | A sc lmaq2: | Not Reported     |
| A sc lpct2:  | 0                             | Pct aq 1:   | 0                |
| Pct maq 1:   | 0                             | Pct cm 1:   | 0                |
| Pct pcm 1:   | 100                           | Pct na 1:   | 0                |
| Pct aq 2:    | 0                             | Pct maq 2:  | 0                |
| Pct cm 2:    | 0                             | Pct pcm 2:  | 100              |
| Pct na 2:    | 0                             | Pct aq 3:   | 0                |
| Pct maq 3:   | 0                             | Pct cm 3:   | 40               |
| Pct pcm 3:   | 60                            | Pct na 3:   | 0                |
| Pct aq 4:    | 5                             | Pct maq 4:  | 0                |
| Pct cm 4:    | 80                            | Pct pcm 4:  | 15               |
| Pct na 4:    | 0                             | Pct aq 5:   | 0                |
| Pct maq 5:   | 0                             | Pct cm 5:   | 0                |
| Pct pcm 5:   | 0                             | Pct na 5:   | 0                |
| Pct aq 6:    | 0                             | Pct maq 6:  | 0                |
| Pct cm 6:    | 0                             | Pct pcm 6:  | 0                |
| Pct na 6:    | 0                             | Pct aq 7:   | 0                |
| Pct maq 7:   | 0                             | Pct cm 7:   | 0                |
| Pct pcm 7:   | 0                             | Pct na 7:   | 0                |
| Pct aq 8:    | 0                             | Pct maq 8:  | 0                |
| Pct cm 8:    | 0                             | Pct pcm 8:  | 0                |
| Pct na 8:    | 0                             | Pct aq 9:   | 0                |
| Pct maq 9:   | 0                             | Pct cm 9:   | 0                |
| Pct pcm 9:   | 0                             | Pct na 9:   | 0                |
| Pct aq 10:   | 0                             | Pct maq 10: | 0                |
| Pct cm 10:   | 0                             | Pct pcm 10: | 0                |
| Pct na 10:   | 0                             | Pct aq 11:  | 0                |
| Pct maq 11:  | 0                             | Pct cm 11:  | 0                |
| Pct pcm 11:  | 0                             | Pct na 11:  | 0                |
| Pct aq 12:   | 0                             | Pct maq 12: | 0                |
| Pct cm 12:   | 0                             | Pct pcm 12: | 0                |
| Pct na 12:   | 0                             | Pct aq 13:  | 0                |
| Pct maq 13:  | 0                             | Pct cm 13:  | 0                |
| Pct pcm 13:  | 0                             | Pct na 13:  | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |            |   |
|----------------|-----------|------------|---|
| Within sec:    | Y         | Loc match: | Y |
| Aq code 1:     | D         |            |   |
| Hit swl:       | F         |            |   |
| Athk2:         | 61        |            |   |
| Horiz Conduct: | 21.3166   |            |   |
| Vert Conduct:  | .00025    |            |   |
| T2:            | 1300.3124 |            |   |
| D50plek:       | 136.10105 |            |   |

**B7  
SW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20003974**

|             |  |             |              |
|-------------|--|-------------|--------------|
| Wellid:     | 03000002409                              | Import id:  | Not Reported |
| County:     | Allegan                                  | Township:   | Otsego       |
| Town range: | 01N 12W                                  | Section:    | 22           |
| Owner name: | STEVE AND SANDY HARVEY                   |             |              |
| Well addr:  | 413 SHERMAN STREET                       |             |              |
| Well depth: | 60                                       |             |              |
| Well type:  | Household                                |             |              |
| Wssn:       | 0  |             |              |
| Well num:   | Not Reported                             | Driller id: | 1203         |
| Const date: | 2000-02-09 00:00:00.000                  | Case type:  | Steel-black  |
| Case dia:   | 4  |             |              |
| Case depth: | 55                                       |             |              |
| Screen frm: | 55                                       |             |              |
| Screen to:  | 60                                       |             |              |
| Swl:        | 32                                       |             |              |
| Test depth: | 50                                       |             |              |
| Test hours: | 2  |             |              |
| Test rate:  | 35                                       | Test methd: | Unknown      |
| Grouted:    | 1  | Pmp cpcity: | 10           |
| Latitude:   | 42.45857265                              |             |              |
| Longitude:  | -85.71204436                             |             |              |
| Methd coll: | Interpolation-Map                        |             |              |
| Elevation:  | 0  |             |              |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:   | Not Reported                             |             |              |
| Elev dem:   | 702                                      | Elev dif:   | 702          |
| Elev miv:   | 702                                      | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                             | Pct aq:     | 95           |
| Pct aq d:   | 95                                       | Pct aq r:   | 0            |
| Pct maq:    | 0  | Pct maq d:  | 0            |
| Pct maq r:  | 0  | Pct cm:     | 5            |
| Pct cm d:   | 5  | Pct cm r:   | 0            |
| Pct pcm:    | 0  | Pct pcm d:  | 0            |
| Pct pcm r:  | 0  | Pct na:     | 0            |
| Pct na d:   | 0  | Pct na r:   | 0            |
| Pct flag:   | Not Reported                             | Rock top:   | -1           |
| D r type:   | Not Reported                             | Spc cpcity: | 0            |
| A thicknes: | 28                                       | A pct aq:   | 89           |
| A pct maq:  | 0  | A pct pcm:  | 0            |
| A pct cm:   | 11                                       | A pct na:   | 0            |
| A thickns2: | 28                                       | A pct aq2:  | 89           |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |              |             |              |
|----------------|--------------|-------------|--------------|
| A pct maq2:    | 0            | A pct pcm2: | 0            |
| A pct cm2:     | 11           | A pct na2:  | 0            |
| A hit swl:     | T            | A hit top:  | F            |
| A hit rock:    | F            | A sc lith1: | Sand         |
| A sc lmod1:    | Coarse       | A sc lmaq1: | AQ           |
| A sc lpct1:    | 100          | A sc lith2: | Not Reported |
| A sc lmod2:    | Not Reported | A sc lmaq2: | Not Reported |
| A sc lpct2:    | 0            | Pct aq 1:   | 100          |
| Pct maq 1:     | 0            | Pct cm 1:   | 0            |
| Pct pcm 1:     | 0            | Pct na 1:   | 0            |
| Pct aq 2:      | 100          | Pct maq 2:  | 0            |
| Pct cm 2:      | 0            | Pct pcm 2:  | 0            |
| Pct na 2:      | 0            | Pct aq 3:   | 85           |
| Pct maq 3:     | 0            | Pct cm 3:   | 15           |
| Pct pcm 3:     | 0            | Pct na 3:   | 0            |
| Pct aq 4:      | 0            | Pct maq 4:  | 0            |
| Pct cm 4:      | 0            | Pct pcm 4:  | 0            |
| Pct na 4:      | 0            | Pct aq 5:   | 0            |
| Pct maq 5:     | 0            | Pct cm 5:   | 0            |
| Pct pcm 5:     | 0            | Pct na 5:   | 0            |
| Pct aq 6:      | 0            | Pct maq 6:  | 0            |
| Pct cm 6:      | 0            | Pct pcm 6:  | 0            |
| Pct na 6:      | 0            | Pct aq 7:   | 0            |
| Pct maq 7:     | 0            | Pct cm 7:   | 0            |
| Pct pcm 7:     | 0            | Pct na 7:   | 0            |
| Pct aq 8:      | 0            | Pct maq 8:  | 0            |
| Pct cm 8:      | 0            | Pct pcm 8:  | 0            |
| Pct na 8:      | 0            | Pct aq 9:   | 0            |
| Pct maq 9:     | 0            | Pct cm 9:   | 0            |
| Pct pcm 9:     | 0            | Pct na 9:   | 0            |
| Pct aq 10:     | 0            | Pct maq 10: | 0            |
| Pct cm 10:     | 0            | Pct pcm 10: | 0            |
| Pct na 10:     | 0            | Pct aq 11:  | 0            |
| Pct maq 11:    | 0            | Pct cm 11:  | 0            |
| Pct pcm 11:    | 0            | Pct na 11:  | 0            |
| Pct aq 12:     | 0            | Pct maq 12: | 0            |
| Pct cm 12:     | 0            | Pct pcm 12: | 0            |
| Pct na 12:     | 0            | Pct aq 13:  | 0            |
| Pct maq 13:    | 0            | Pct cm 13:  | 0            |
| Pct pcm 13:    | 0            | Pct na 13:  | 0            |
| Within sec:    | Y            | Loc match:  | Y            |
| Aq code 1:     | D            |             |              |
| Hit swl:       | T            |             |              |
| Athk2:         | 28           |             |              |
| Horiz Conduct: | 135.7143     |             |              |
| Vert Conduct:  | .00093       |             |              |
| T2:            | 3800.0003    |             |              |
| D50plek:       | 172.82528    |             |              |

8  
SW  
1/2 - 1 Mile  
Higher

MI WELLS MI20006650

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |  |             |                  |
|--------------|--|-------------|------------------|
| Wellid:      | 03000006935                              | Import id:  | Not Reported     |
| County:      | Allegan                                  | Township:   | Otsego           |
| Town range:  | 01N 12W                                  | Section:    | 22               |
| Owner name:  | BOB DE YOUNG                             |             |                  |
| Well addr:   | 509 LINCOLN ROAD                         |             |                  |
| Well depth:  | 60                                       |             |                  |
| Well type:   | Household                                |             |                  |
| Wssn:        | 0  |             |                  |
| Well num:    | Not Reported                             | Driller id: | 1601             |
| Const date:  | 2004-11-18 00:00:00.000                  | Case type:  | Steel            |
| Case dia:    | 4  |             |                  |
| Case depth:  | 56                                       |             |                  |
| Screen frm:  | 56                                       |             |                  |
| Screen to:   | 60                                       |             |                  |
| Swl:         | 27                                       |             |                  |
| Test depth:  | 45                                       |             |                  |
| Test hours:  | 1  |             |                  |
| Test rate:   | 30                                       | Test methd: | Plunger          |
| Grouted:     | 1  | Pmp cpcity: | 10               |
| Latitude:    | 42.457565                                |             |                  |
| Longitude:   | -85.710965                               |             |                  |
| Methd coll:  | Interpolation-Map                        |             |                  |
| Elevation:   | 0  |             |                  |
| Elev methd:  | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:   | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:    | Not Reported                             |             |                  |
| Elev dem:    | 708                                      | Elev dif:   | 708              |
| Elev miv:    | 708                                      | Aq code:    | Drift Well       |
| Aq flag:     | Not Reported                             | Pct aq:     | 100              |
| Pct aq d:    | 100                                      | Pct aq r:   | 0                |
| Pct maq:     | 0  | Pct maq d:  | 0                |
| Pct maq r:   | 0  | Pct cm:     | 0                |
| Pct cm d:    | 0  | Pct cm r:   | 0                |
| Pct pcm:     | 0  | Pct pcm d:  | 0                |
| Pct pcm r:   | 0  | Pct na:     | 0                |
| Pct na d:    | 0  | Pct na r:   | 0                |
| Pct flag:    | Not Reported                             | Rock top:   | -1               |
| D r type:    | Not Reported                             | Spc cpcity: | .699999988079071 |
| A thickness: | 33                                       | A pct aq:   | 100              |
| A pct maq:   | 0  | A pct pcm:  | 0                |
| A pct cm:    | 0  | A pct na:   | 0                |
| A thickns2:  | 33                                       | A pct aq2:  | 100              |
| A pct maq2:  | 0  | A pct pcm2: | 0                |
| A pct cm2:   | 0  | A pct na2:  | 0                |
| A hit swl:   | T  | A hit top:  | F                |
| A hit rock:  | F  | A sc lith1: | Sand & Gravel    |
| A sc lmod1:  | Water Bearing                            | A sc lmaq1: | AQ               |
| A sc lpct1:  | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2:  | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2:  | 0  | Pct aq 1:   | 100              |
| Pct maq 1:   | 0  | Pct cm 1:   | 0                |
| Pct pcm 1:   | 0  | Pct na 1:   | 0                |
| Pct aq 2:    | 100                                      | Pct maq 2:  | 0                |
| Pct cm 2:    | 0  | Pct pcm 2:  | 0                |
| Pct na 2:    | 0  | Pct aq 3:   | 100              |
| Pct maq 3:   | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:   | 0  | Pct na 3:   | 0                |
| Pct aq 4:    | 0  | Pct maq 4:  | 0                |
| Pct cm 4:    | 0  | Pct pcm 4:  | 0                |
| Pct na 4:    | 0  | Pct aq 5:   | 0                |
| Pct maq 5:   | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:   | 0  | Pct na 5:   | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |             |   |
|----------------|-----------|-------------|---|
| Pct aq 6:      | 0         | Pct maq 6:  | 0 |
| Pct cm 6:      | 0         | Pct pcm 6:  | 0 |
| Pct na 6:      | 0         | Pct aq 7:   | 0 |
| Pct maq 7:     | 0         | Pct cm 7:   | 0 |
| Pct pcm 7:     | 0         | Pct na 7:   | 0 |
| Pct aq 8:      | 0         | Pct maq 8:  | 0 |
| Pct cm 8:      | 0         | Pct pcm 8:  | 0 |
| Pct na 8:      | 0         | Pct aq 9:   | 0 |
| Pct maq 9:     | 0         | Pct cm 9:   | 0 |
| Pct pcm 9:     | 0         | Pct na 9:   | 0 |
| Pct aq 10:     | 0         | Pct maq 10: | 0 |
| Pct cm 10:     | 0         | Pct pcm 10: | 0 |
| Pct na 10:     | 0         | Pct aq 11:  | 0 |
| Pct maq 11:    | 0         | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0         | Pct na 11:  | 0 |
| Pct aq 12:     | 0         | Pct maq 12: | 0 |
| Pct cm 12:     | 0         | Pct pcm 12: | 0 |
| Pct na 12:     | 0         | Pct aq 13:  | 0 |
| Pct maq 13:    | 0         | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0         | Pct na 13:  | 0 |
| Within sec:    | Y         | Loc match:  | Y |
| Aq code 1:     | D         |             |   |
| Hit swl:       | T         |             |   |
| Athk2:         | 33        |             |   |
| Horiz Conduct: | 81.81818  |             |   |
| Vert Conduct:  | 73.33333  |             |   |
| T2:            | 2700      |             |   |
| D50plek:       | 147.22882 |             |   |

**B9  
SW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20003275**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000001562             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 22           |
| Owner name: | MARK VICKERY            |             |              |
| Well addr:  | 405 SHERMAN STREET      |             |              |
| Well depth: | 59                      |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 1203         |
| Const date: | 1999-05-02 00:00:00.000 | Case type:  | Steel-black  |
| Case dia:   | 4                       |             |              |
| Case depth: | 54                      |             |              |
| Screen frm: | 54                      |             |              |
| Screen to:  | 59                      |             |              |
| Swl:        | 32                      |             |              |
| Test depth: | 50                      |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 35                      | Test methd: | Plunger      |
| Grouted:    | 1                       | Pmp cpcity: | 10           |
| Latitude:   | 42.45775491             |             |              |
| Longitude:  | -85.71174775            |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |                  |
|-------------|--|-------------|------------------|
| Methd coll: | Interpolation-Map                        |             |                  |
| Elevation:  | 0  |             |                  |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:   | Not Reported                             |             |                  |
| Elev dem:   | 712                                      | Elev dif:   | 712              |
| Elev miv:   | 712                                      | Aq code:    | Drift Well       |
| Aq flag:    | Not Reported                             | Pct aq:     | 100              |
| Pct aq d:   | 100                                      | Pct aq r:   | 0                |
| Pct maq:    | 0  | Pct maq d:  | 0                |
| Pct maq r:  | 0  | Pct cm:     | 0                |
| Pct cm d:   | 0  | Pct cm r:   | 0                |
| Pct pcm:    | 0  | Pct pcm d:  | 0                |
| Pct pcm r:  | 0  | Pct na:     | 0                |
| Pct na d:   | 0  | Pct na r:   | 0                |
| Pct flag:   | Not Reported                             | Rock top:   | -1               |
| D r type:   | Not Reported                             | Spc cpcity: | .699999988079071 |
| A thicknes: | 27                                       | A pct aq:   | 100              |
| A pct maq:  | 0  | A pct pcm:  | 0                |
| A pct cm:   | 0  | A pct na:   | 0                |
| A thickns2: | 27                                       | A pct aq2:  | 100              |
| A pct maq2: | 0  | A pct pcm2: | 0                |
| A pct cm2:  | 0  | A pct na2:  | 0                |
| A hit swl:  | T  | A hit top:  | F                |
| A hit rock: | F  | A sc lith1: | Sand & Gravel    |
| A sc lmod1: | Coarse                                   | A sc lmaq1: | AQ               |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2: | 0  | Pct aq 1:   | 100              |
| Pct maq 1:  | 0  | Pct cm 1:   | 0                |
| Pct pcm 1:  | 0  | Pct na 1:   | 0                |
| Pct aq 2:   | 100                                      | Pct maq 2:  | 0                |
| Pct cm 2:   | 0  | Pct pcm 2:  | 0                |
| Pct na 2:   | 0  | Pct aq 3:   | 0                |
| Pct maq 3:  | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:  | 0  | Pct na 3:   | 0                |
| Pct aq 4:   | 0  | Pct maq 4:  | 0                |
| Pct cm 4:   | 0  | Pct pcm 4:  | 0                |
| Pct na 4:   | 0  | Pct aq 5:   | 0                |
| Pct maq 5:  | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:  | 0  | Pct na 5:   | 0                |
| Pct aq 6:   | 0  | Pct maq 6:  | 0                |
| Pct cm 6:   | 0  | Pct pcm 6:  | 0                |
| Pct na 6:   | 0  | Pct aq 7:   | 0                |
| Pct maq 7:  | 0  | Pct cm 7:   | 0                |
| Pct pcm 7:  | 0  | Pct na 7:   | 0                |
| Pct aq 8:   | 0  | Pct maq 8:  | 0                |
| Pct cm 8:   | 0  | Pct pcm 8:  | 0                |
| Pct na 8:   | 0  | Pct aq 9:   | 0                |
| Pct maq 9:  | 0  | Pct cm 9:   | 0                |
| Pct pcm 9:  | 0  | Pct na 9:   | 0                |
| Pct aq 10:  | 0  | Pct maq 10: | 0                |
| Pct cm 10:  | 0  | Pct pcm 10: | 0                |
| Pct na 10:  | 0  | Pct aq 11:  | 0                |
| Pct maq 11: | 0  | Pct cm 11:  | 0                |
| Pct pcm 11: | 0  | Pct na 11:  | 0                |
| Pct aq 12:  | 0  | Pct maq 12: | 0                |
| Pct cm 12:  | 0  | Pct pcm 12: | 0                |
| Pct na 12:  | 0  | Pct aq 13:  | 0                |
| Pct maq 13: | 0  | Pct cm 13:  | 0                |
| Pct pcm 13: | 0  | Pct na 13:  | 0                |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |            |   |
|----------------|-----------|------------|---|
| Within sec:    | Y         | Loc match: | Y |
| Aq code 1:     | D         |            |   |
| Hit swl:       | T         |            |   |
| Athk2:         | 27        |            |   |
| Horiz Conduct: | 200       |            |   |
| Vert Conduct:  | 200       |            |   |
| T2:            | 5400      |            |   |
| D50plek:       | 232.75244 |            |   |

**10  
West  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20003835**

|             |  |             |                  |
|-------------|--|-------------|------------------|
| Wellid:     | 03000002258                              | Import id:  | Not Reported     |
| County:     | Allegan                                  | Township:   | Otsego           |
| Town range: | 01N 12W                                  | Section:    | 22               |
| Owner name: | E&B MACHINE                              |             |                  |
| Well addr:  | 1754 106TH AVENUE                        |             |                  |
| Well depth: | 109                                      |             |                  |
| Well type:  | Type III public                          |             |                  |
| Wssn:       | 0  |             |                  |
| Well num:   | Not Reported                             | Driller id: | 1203             |
| Const date: | 2000-11-08 00:00:00.000                  | Case type:  | Steel-black      |
| Case dia:   | 4  |             |                  |
| Case depth: | 104                                      |             |                  |
| Screen frm: | 104                                      |             |                  |
| Screen to:  | 109                                      |             |                  |
| Swl:        | 18                                       |             |                  |
| Test depth: | 99                                       |             |                  |
| Test hours: | 1  |             |                  |
| Test rate:  | 35                                       | Test methd: | Plunger          |
| Grouted:    | 1  | Pmp cpcity: | 19               |
| Latitude:   | 42.46473712                              |             |                  |
| Longitude:  | -85.71631399                             |             |                  |
| Methd coll: | Address Matching-House Number            |             |                  |
| Elevation:  | 0  |             |                  |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:   | Not Reported                             |             |                  |
| Elev dem:   | 715                                      | Elev dif:   | 715              |
| Elev miv:   | 715                                      | Aq code:    | Drift Well       |
| Aq flag:    | Not Reported                             | Pct aq:     | 95               |
| Pct aq d:   | 95                                       | Pct aq r:   | 0                |
| Pct maq:    | 0  | Pct maq d:  | 0                |
| Pct maq r:  | 0  | Pct cm:     | 5                |
| Pct cm d:   | 5  | Pct cm r:   | 0                |
| Pct pcm:    | 0  | Pct pcm d:  | 0                |
| Pct pcm r:  | 0  | Pct na:     | 0                |
| Pct na d:   | 0  | Pct na r:   | 0                |
| Pct flag:   | Not Reported                             | Rock top:   | -1               |
| D r type:   | Not Reported                             | Spc cpcity: | .400000005960464 |
| A thicknes: | 69                                       | A pct aq:   | 100              |
| A pct maq:  | 0  | A pct pcm:  | 0                |
| A pct cm:   | 0  | A pct na:   | 0                |
| A thickns2: | 91                                       | A pct aq2:  | 95               |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |              |             |              |
|----------------|--------------|-------------|--------------|
| A pct maq2:    | 0            | A pct pcm2: | 0            |
| A pct cm2:     | 5            | A pct na2:  | 0            |
| A hit swl:     | F            | A hit top:  | F            |
| A hit rock:    | F            | A sc lith1: | Gravel       |
| A sc lmod1:    | Not Reported | A sc lmaq1: | AQ           |
| A sc lpct1:    | 100          | A sc lith2: | Not Reported |
| A sc lmod2:    | Not Reported | A sc lmaq2: | Not Reported |
| A sc lpct2:    | 0            | Pct aq 1:   | 100          |
| Pct maq 1:     | 0            | Pct cm 1:   | 0            |
| Pct pcm 1:     | 0            | Pct na 1:   | 0            |
| Pct aq 2:      | 75           | Pct maq 2:  | 0            |
| Pct cm 2:      | 25           | Pct pcm 2:  | 0            |
| Pct na 2:      | 0            | Pct aq 3:   | 100          |
| Pct maq 3:     | 0            | Pct cm 3:   | 0            |
| Pct pcm 3:     | 0            | Pct na 3:   | 0            |
| Pct aq 4:      | 100          | Pct maq 4:  | 0            |
| Pct cm 4:      | 0            | Pct pcm 4:  | 0            |
| Pct na 4:      | 0            | Pct aq 5:   | 100          |
| Pct maq 5:     | 0            | Pct cm 5:   | 0            |
| Pct pcm 5:     | 0            | Pct na 5:   | 0            |
| Pct aq 6:      | 0            | Pct maq 6:  | 0            |
| Pct cm 6:      | 0            | Pct pcm 6:  | 0            |
| Pct na 6:      | 0            | Pct aq 7:   | 0            |
| Pct maq 7:     | 0            | Pct cm 7:   | 0            |
| Pct pcm 7:     | 0            | Pct na 7:   | 0            |
| Pct aq 8:      | 0            | Pct maq 8:  | 0            |
| Pct cm 8:      | 0            | Pct pcm 8:  | 0            |
| Pct na 8:      | 0            | Pct aq 9:   | 0            |
| Pct maq 9:     | 0            | Pct cm 9:   | 0            |
| Pct pcm 9:     | 0            | Pct na 9:   | 0            |
| Pct aq 10:     | 0            | Pct maq 10: | 0            |
| Pct cm 10:     | 0            | Pct pcm 10: | 0            |
| Pct na 10:     | 0            | Pct aq 11:  | 0            |
| Pct maq 11:    | 0            | Pct cm 11:  | 0            |
| Pct pcm 11:    | 0            | Pct na 11:  | 0            |
| Pct aq 12:     | 0            | Pct maq 12: | 0            |
| Pct cm 12:     | 0            | Pct pcm 12: | 0            |
| Pct na 12:     | 0            | Pct aq 13:  | 0            |
| Pct maq 13:    | 0            | Pct cm 13:  | 0            |
| Pct pcm 13:    | 0            | Pct na 13:  | 0            |
| Within sec:    | Y            | Loc match:  | Y            |
| Aq code 1:     | D            |             |              |
| Hit swl:       | F            |             |              |
| Athk2:         | 91           |             |              |
| Horiz Conduct: | 180.21979    |             |              |
| Vert Conduct:  | .00182       |             |              |
| T2:            | 16400.0005   |             |              |
| D50plek:       | 2259.66765   |             |              |

11  
WSW  
1/2 - 1 Mile  
Higher

MI WELLS MI20005808

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |              |
|-------------|--|-------------|--------------|
| Wellid:     | 03000004976                              | Import id:  | Not Reported |
| County:     | Allegan                                  | Township:   | Otsego       |
| Town range: | 01N 12W                                  | Section:    | 22           |
| Owner name: | BOB FUHRMAN                              |             |              |
| Well addr:  | 528 LINCOLN                              |             |              |
| Well depth: | 91                                       |             |              |
| Well type:  | Household                                |             |              |
| Wssn:       | 0  |             |              |
| Well num:   | Not Reported                             | Driller id: | 112          |
| Const date: | 2003-07-03 00:00:00.000                  | Case type:  | Steel        |
| Case dia:   | 4  |             |              |
| Case depth: | 81                                       |             |              |
| Screen frm: | 81                                       |             |              |
| Screen to:  | 91                                       |             |              |
| Swl:        | 34                                       |             |              |
| Test depth: | 34                                       |             |              |
| Test hours: | 1  |             |              |
| Test rate:  | 35                                       | Test methd: | Plunger      |
| Grouted:    | 1  | Pmp cpcity: | 10           |
| Latitude:   | 42.46022506                              |             |              |
| Longitude:  | -85.71521003                             |             |              |
| Methd coll: | Address Matching-House Number            |             |              |
| Elevation:  | 0  |             |              |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:   | Not Reported                             |             |              |
| Elev dem:   | 712                                      | Elev dif:   | 712          |
| Elev miv:   | 712                                      | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                             | Pct aq:     | 77           |
| Pct aq d:   | 77                                       | Pct aq r:   | 0            |
| Pct maq:    | 0  | Pct maq d:  | 0            |
| Pct maq r:  | 0  | Pct cm:     | 0            |
| Pct cm d:   | 0  | Pct cm r:   | 0            |
| Pct pcm:    | 23                                       | Pct pcm d:  | 23           |
| Pct pcm r:  | 0  | Pct na:     | 0            |
| Pct na d:   | 0  | Pct na r:   | 0            |
| Pct flag:   | Not Reported                             | Rock top:   | -1           |
| D r type:   | Not Reported                             | Spc cpcity: | 1            |
| A thicknes: | 57                                       | A pct aq:   | 91           |
| A pct maq:  | 0  | A pct pcm:  | 9            |
| A pct cm:   | 0  | A pct na:   | 0            |
| A thickns2: | 57                                       | A pct aq2:  | 91           |
| A pct maq2: | 0  | A pct pcm2: | 9            |
| A pct cm2:  | 0  | A pct na2:  | 0            |
| A hit swl:  | T  | A hit top:  | F            |
| A hit rock: | F  | A sc lith1: | Sand         |
| A sc lmod1: | Fine                                     | A sc lmaq1: | AQ           |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported |
| A sc lpct2: | 0  | Pct aq 1:   | 60           |
| Pct maq 1:  | 0  | Pct cm 1:   | 0            |
| Pct pcm 1:  | 40                                       | Pct na 1:   | 0            |
| Pct aq 2:   | 35                                       | Pct maq 2:  | 0            |
| Pct cm 2:   | 0  | Pct pcm 2:  | 65           |
| Pct na 2:   | 0  | Pct aq 3:   | 100          |
| Pct maq 3:  | 0  | Pct cm 3:   | 0            |
| Pct pcm 3:  | 0  | Pct na 3:   | 0            |
| Pct aq 4:   | 100                                      | Pct maq 4:  | 0            |
| Pct cm 4:   | 0  | Pct pcm 4:  | 0            |
| Pct na 4:   | 0  | Pct aq 5:   | 0            |
| Pct maq 5:  | 0  | Pct cm 5:   | 0            |
| Pct pcm 5:  | 0  | Pct na 5:   | 0            |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |          |             |   |
|----------------|----------|-------------|---|
| Pct aq 6:      | 0        | Pct maq 6:  | 0 |
| Pct cm 6:      | 0        | Pct pcm 6:  | 0 |
| Pct na 6:      | 0        | Pct aq 7:   | 0 |
| Pct maq 7:     | 0        | Pct cm 7:   | 0 |
| Pct pcm 7:     | 0        | Pct na 7:   | 0 |
| Pct aq 8:      | 0        | Pct maq 8:  | 0 |
| Pct cm 8:      | 0        | Pct pcm 8:  | 0 |
| Pct na 8:      | 0        | Pct aq 9:   | 0 |
| Pct maq 9:     | 0        | Pct cm 9:   | 0 |
| Pct pcm 9:     | 0        | Pct na 9:   | 0 |
| Pct aq 10:     | 0        | Pct maq 10: | 0 |
| Pct cm 10:     | 0        | Pct pcm 10: | 0 |
| Pct na 10:     | 0        | Pct aq 11:  | 0 |
| Pct maq 11:    | 0        | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0        | Pct na 11:  | 0 |
| Pct aq 12:     | 0        | Pct maq 12: | 0 |
| Pct cm 12:     | 0        | Pct pcm 12: | 0 |
| Pct na 12:     | 0        | Pct aq 13:  | 0 |
| Pct maq 13:    | 0        | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0        | Pct na 13:  | 0 |
| Within sec:    | Y        | Loc match:  | Y |
| Aq code 1:     | D        |             |   |
| Hit swl:       | T        |             |   |
| Athk2:         | 57       |             |   |
| Horiz Conduct: | 45.61491 |             |   |
| Vert Conduct:  | .11376   |             |   |
| T2:            | 2600.05  |             |   |
| D50plek:       | 245.3589 |             |   |

**12  
West  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20003986**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000002421             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 15           |
| Owner name: | MARK SIMPSON            |             |              |
| Well addr:  | 1783 106TH AVENUE       |             |              |
| Well depth: | 60                      |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 1984         |
| Const date: | 2000-03-23 00:00:00.000 | Case type:  | Steel-black  |
| Case dia:   | 4                       |             |              |
| Case depth: | 55                      |             |              |
| Screen frm: | 55                      |             |              |
| Screen to:  | 60                      |             |              |
| Swl:        | 29                      |             |              |
| Test depth: | 29                      |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 50                      | Test methd: | Plunger      |
| Grouted:    | 1                       | Pmp cpcity: | 12           |
| Latitude:   | 42.46484434             |             |              |
| Longitude:  | -85.71892202            |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |                  |
|-------------|--|-------------|------------------|
| Methd coll: | Address Matching-House Number            |             |                  |
| Elevation:  | 0  |             |                  |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:   | Not Reported                             |             |                  |
| Elev dem:   | 715                                      | Elev dif:   | 715              |
| Elev niv:   | 715                                      | Aq code:    | Drift Well       |
| Aq flag:    | Not Reported                             | Pct aq:     | 92               |
| Pct aq d:   | 92                                       | Pct aq r:   | 0                |
| Pct maq:    | 0  | Pct maq d:  | 0                |
| Pct maq r:  | 0  | Pct cm:     | 8                |
| Pct cm d:   | 8  | Pct cm r:   | 0                |
| Pct pcm:    | 0  | Pct pcm d:  | 0                |
| Pct pcm r:  | 0  | Pct na:     | 0                |
| Pct na d:   | 0  | Pct na r:   | 0                |
| Pct flag:   | Not Reported                             | Rock top:   | -1               |
| D r type:   | Not Reported                             | Spc cpcity: | 1.70000004768372 |
| A thicknes: | 31                                       | A pct aq:   | 100              |
| A pct maq:  | 0  | A pct pcm:  | 0                |
| A pct cm:   | 0  | A pct na:   | 0                |
| A thickns2: | 31                                       | A pct aq2:  | 100              |
| A pct maq2: | 0  | A pct pcm2: | 0                |
| A pct cm2:  | 0  | A pct na2:  | 0                |
| A hit swl:  | T  | A hit top:  | F                |
| A hit rock: | F  | A sc lith1: | Sand             |
| A sc lmod1: | Medium                                   | A sc lmaq1: | AQ               |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2: | 0  | Pct aq 1:   | 75               |
| Pct maq 1:  | 0  | Pct cm 1:   | 25               |
| Pct pcm 1:  | 0  | Pct na 1:   | 0                |
| Pct aq 2:   | 100                                      | Pct maq 2:  | 0                |
| Pct cm 2:   | 0  | Pct pcm 2:  | 0                |
| Pct na 2:   | 0  | Pct aq 3:   | 100              |
| Pct maq 3:  | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:  | 0  | Pct na 3:   | 0                |
| Pct aq 4:   | 0  | Pct maq 4:  | 0                |
| Pct cm 4:   | 0  | Pct pcm 4:  | 0                |
| Pct na 4:   | 0  | Pct aq 5:   | 0                |
| Pct maq 5:  | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:  | 0  | Pct na 5:   | 0                |
| Pct aq 6:   | 0  | Pct maq 6:  | 0                |
| Pct cm 6:   | 0  | Pct pcm 6:  | 0                |
| Pct na 6:   | 0  | Pct aq 7:   | 0                |
| Pct maq 7:  | 0  | Pct cm 7:   | 0                |
| Pct pcm 7:  | 0  | Pct na 7:   | 0                |
| Pct aq 8:   | 0  | Pct maq 8:  | 0                |
| Pct cm 8:   | 0  | Pct pcm 8:  | 0                |
| Pct na 8:   | 0  | Pct aq 9:   | 0                |
| Pct maq 9:  | 0  | Pct cm 9:   | 0                |
| Pct pcm 9:  | 0  | Pct na 9:   | 0                |
| Pct aq 10:  | 0  | Pct maq 10: | 0                |
| Pct cm 10:  | 0  | Pct pcm 10: | 0                |
| Pct na 10:  | 0  | Pct aq 11:  | 0                |
| Pct maq 11: | 0  | Pct cm 11:  | 0                |
| Pct pcm 11: | 0  | Pct na 11:  | 0                |
| Pct aq 12:  | 0  | Pct maq 12: | 0                |
| Pct cm 12:  | 0  | Pct pcm 12: | 0                |
| Pct na 12:  | 0  | Pct aq 13:  | 0                |
| Pct maq 13: | 0  | Pct cm 13:  | 0                |
| Pct pcm 13: | 0  | Pct na 13:  | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |            |   |
|----------------|-----------|------------|---|
| Within sec:    | Y         | Loc match: | Y |
| Aq code 1:     | D         |            |   |
| Hit swl:       | T         |            |   |
| Athk2:         | 31        |            |   |
| Horiz Conduct: | 100       |            |   |
| Vert Conduct:  | 100       |            |   |
| T2:            | 3100      |            |   |
| D50plek:       | 157.69273 |            |   |

**C13  
WSW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20005203**

|             |  |             |              |
|-------------|--|-------------|--------------|
| Wellid:     | 03000004063                              | Import id:  | Not Reported |
| County:     | Allegan                                  | Township:   | Otsego       |
| Town range: | 01N 12W                                  | Section:    | 21           |
| Owner name: | LARRY MERRITT                            |             |              |
| Well addr:  | 1776 JEFFERSON RD                        |             |              |
| Well depth: | 49                                       |             |              |
| Well type:  | Household                                |             |              |
| Wssn:       | 0  |             |              |
| Well num:   | Not Reported                             | Driller id: | 1601         |
| Const date: | 2002-11-18 00:00:00.000                  | Case type:  | PVC Plastic  |
| Case dia:   | 5  |             |              |
| Case depth: | 44                                       |             |              |
| Screen frm: | 44                                       |             |              |
| Screen to:  | 49                                       |             |              |
| Swl:        | 31                                       |             |              |
| Test depth: | 45                                       |             |              |
| Test hours: | 1  |             |              |
| Test rate:  | 15                                       | Test methd: | Air          |
| Grouted:    | 1  | Pmp cpcity: | 10           |
| Latitude:   | 42.45925157                              |             |              |
| Longitude:  | -85.71949019                             |             |              |
| Methd coll: | Address Matching-House Number            |             |              |
| Elevation:  | 0  |             |              |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:   | Not Reported                             |             |              |
| Elev dem:   | 705                                      | Elev dif:   | 705          |
| Elev miv:   | 705                                      | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                             | Pct aq:     | 88           |
| Pct aq d:   | 88                                       | Pct aq r:   | 0            |
| Pct maq:    | 0  | Pct maq d:  | 0            |
| Pct maq r:  | 0  | Pct cm:     | 12           |
| Pct cm d:   | 12                                       | Pct cm r:   | 0            |
| Pct pcm:    | 0  | Pct pcm d:  | 0            |
| Pct pcm r:  | 0  | Pct na:     | 0            |
| Pct na d:   | 0  | Pct na r:   | 0            |
| Pct flag:   | Not Reported                             | Rock top:   | -1           |
| D r type:   | Not Reported                             | Spc cpcity: | 0            |
| A thicknes: | 18                                       | A pct aq:   | 78           |
| A pct maq:  | 0  | A pct pcm:  | 0            |
| A pct cm:   | 22                                       | A pct na:   | 0            |
| A thickns2: | 18                                       | A pct aq2:  | 78           |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |               |             |               |
|----------------|---------------|-------------|---------------|
| A pct maq2:    | 0             | A pct pcm2: | 0             |
| A pct cm2:     | 22            | A pct na2:  | 0             |
| A hit swl:     | T             | A hit top:  | F             |
| A hit rock:    | F             | A sc lith1: | Sand & Gravel |
| A sc lmod1:    | Water Bearing | A sc lmaq1: | AQ            |
| A sc lpct1:    | 100           | A sc lith2: | Not Reported  |
| A sc lmod2:    | Not Reported  | A sc lmaq2: | Not Reported  |
| A sc lpct2:    | 0             | Pct aq 1:   | 100           |
| Pct maq 1:     | 0             | Pct cm 1:   | 0             |
| Pct pcm 1:     | 0             | Pct na 1:   | 0             |
| Pct aq 2:      | 70            | Pct maq 2:  | 0             |
| Pct cm 2:      | 30            | Pct pcm 2:  | 0             |
| Pct na 2:      | 0             | Pct aq 3:   | 0             |
| Pct maq 3:     | 0             | Pct cm 3:   | 0             |
| Pct pcm 3:     | 0             | Pct na 3:   | 0             |
| Pct aq 4:      | 0             | Pct maq 4:  | 0             |
| Pct cm 4:      | 0             | Pct pcm 4:  | 0             |
| Pct na 4:      | 0             | Pct aq 5:   | 0             |
| Pct maq 5:     | 0             | Pct cm 5:   | 0             |
| Pct pcm 5:     | 0             | Pct na 5:   | 0             |
| Pct aq 6:      | 0             | Pct maq 6:  | 0             |
| Pct cm 6:      | 0             | Pct pcm 6:  | 0             |
| Pct na 6:      | 0             | Pct aq 7:   | 0             |
| Pct maq 7:     | 0             | Pct cm 7:   | 0             |
| Pct pcm 7:     | 0             | Pct na 7:   | 0             |
| Pct aq 8:      | 0             | Pct maq 8:  | 0             |
| Pct cm 8:      | 0             | Pct pcm 8:  | 0             |
| Pct na 8:      | 0             | Pct aq 9:   | 0             |
| Pct maq 9:     | 0             | Pct cm 9:   | 0             |
| Pct pcm 9:     | 0             | Pct na 9:   | 0             |
| Pct aq 10:     | 0             | Pct maq 10: | 0             |
| Pct cm 10:     | 0             | Pct pcm 10: | 0             |
| Pct na 10:     | 0             | Pct aq 11:  | 0             |
| Pct maq 11:    | 0             | Pct cm 11:  | 0             |
| Pct pcm 11:    | 0             | Pct na 11:  | 0             |
| Pct aq 12:     | 0             | Pct maq 12: | 0             |
| Pct cm 12:     | 0             | Pct pcm 12: | 0             |
| Pct na 12:     | 0             | Pct aq 13:  | 0             |
| Pct maq 13:    | 0             | Pct cm 13:  | 0             |
| Pct pcm 13:    | 0             | Pct na 13:  | 0             |
| Within sec:    | Y             | Loc match:  | Y             |
| Aq code 1:     | D             |             |               |
| Hit swl:       | T             |             |               |
| Athk2:         | 18            |             |               |
| Horiz Conduct: | 77.7778       |             |               |
| Vert Conduct:  | .00045        |             |               |
| T2:            | 1400.0004     |             |               |
| D50plek:       | 43.07263      |             |               |

**C14**  
**WSW**  
**1/2 - 1 Mile**  
**Higher**

**MI WELLS MI20003618**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |                               |             |                  |
|--------------|-------------------------------|-------------|------------------|
| Wellid:      | 03000001985                   | Import id:  | Not Reported     |
| County:      | Allegan                       | Township:   | Otsego           |
| Town range:  | 01N 12W                       | Section:    | 21               |
| Owner name:  | John Rice                     |             |                  |
| Well addr:   | 1784 Jefferson Road           |             |                  |
| Well depth:  | 51                            |             |                  |
| Well type:   | Household                     |             |                  |
| Wssn:        | 0                             |             |                  |
| Well num:    | Not Reported                  | Driller id: | 1203             |
| Const date:  | 2002-04-20 00:00:00.000       | Case type:  | Steel-black      |
| Case dia:    | 4                             |             |                  |
| Case depth:  | 46                            |             |                  |
| Screen frm:  | 46                            |             |                  |
| Screen to:   | 51                            |             |                  |
| Swl:         | 30                            |             |                  |
| Test depth:  | 40                            |             |                  |
| Test hours:  | 1                             |             |                  |
| Test rate:   | 30                            | Test methd: | Plunger          |
| Grouted:     | 1                             | Pmp cpcity: | 10               |
| Latitude:    | 42.45897484                   |             |                  |
| Longitude:   | -85.71968669                  |             |                  |
| Methd coll:  | Address Matching-House Number |             |                  |
| Elevation:   | 699                           |             |                  |
| Elev methd:  | Topographoc Map Interpolation | Depth flag: | Not Reported     |
| Elev flag:   | Not Reported                  |             |                  |
| Swl flag:    | Not Reported                  |             |                  |
| Elev dem:    | 708                           | Elev dif:   | 9                |
| Elev miv:    | 699                           | Aq code:    | Drift Well       |
| Aq flag:     | Not Reported                  | Pct aq:     | 100              |
| Pct aq d:    | 100                           | Pct aq r:   | 0                |
| Pct maq:     | 0                             | Pct maq d:  | 0                |
| Pct maq r:   | 0                             | Pct cm:     | 0                |
| Pct cm d:    | 0                             | Pct cm r:   | 0                |
| Pct pcm:     | 0                             | Pct pcm d:  | 0                |
| Pct pcm r:   | 0                             | Pct na:     | 0                |
| Pct na d:    | 0                             | Pct na r:   | 0                |
| Pct flag:    | Not Reported                  | Rock top:   | -1               |
| D r type:    | Not Reported                  | Spc cpcity: | .800000011920929 |
| A thickness: | 21                            | A pct aq:   | 100              |
| A pct maq:   | 0                             | A pct pcm:  | 0                |
| A pct cm:    | 0                             | A pct na:   | 0                |
| A thickns2:  | 21                            | A pct aq2:  | 100              |
| A pct maq2:  | 0                             | A pct pcm2: | 0                |
| A pct cm2:   | 0                             | A pct na2:  | 0                |
| A hit swl:   | T                             | A hit top:  | F                |
| A hit rock:  | F                             | A sc lith1: | Sand             |
| A sc lmod1:  | Not Reported                  | A sc lmaq1: | AQ               |
| A sc lpct1:  | 100                           | A sc lith2: | Not Reported     |
| A sc lmod2:  | Not Reported                  | A sc lmaq2: | Not Reported     |
| A sc lpct2:  | 0                             | Pct aq 1:   | 100              |
| Pct maq 1:   | 0                             | Pct cm 1:   | 0                |
| Pct pcm 1:   | 0                             | Pct na 1:   | 0                |
| Pct aq 2:    | 100                           | Pct maq 2:  | 0                |
| Pct cm 2:    | 0                             | Pct pcm 2:  | 0                |
| Pct na 2:    | 0                             | Pct aq 3:   | 0                |
| Pct maq 3:   | 0                             | Pct cm 3:   | 0                |
| Pct pcm 3:   | 0                             | Pct na 3:   | 0                |
| Pct aq 4:    | 0                             | Pct maq 4:  | 0                |
| Pct cm 4:    | 0                             | Pct pcm 4:  | 0                |
| Pct na 4:    | 0                             | Pct aq 5:   | 0                |
| Pct maq 5:   | 0                             | Pct cm 5:   | 0                |
| Pct pcm 5:   | 0                             | Pct na 5:   | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |             |   |
|----------------|-----------|-------------|---|
| Pct aq 6:      | 0         | Pct maq 6:  | 0 |
| Pct cm 6:      | 0         | Pct pcm 6:  | 0 |
| Pct na 6:      | 0         | Pct aq 7:   | 0 |
| Pct maq 7:     | 0         | Pct cm 7:   | 0 |
| Pct pcm 7:     | 0         | Pct na 7:   | 0 |
| Pct aq 8:      | 0         | Pct maq 8:  | 0 |
| Pct cm 8:      | 0         | Pct pcm 8:  | 0 |
| Pct na 8:      | 0         | Pct aq 9:   | 0 |
| Pct maq 9:     | 0         | Pct cm 9:   | 0 |
| Pct pcm 9:     | 0         | Pct na 9:   | 0 |
| Pct aq 10:     | 0         | Pct maq 10: | 0 |
| Pct cm 10:     | 0         | Pct pcm 10: | 0 |
| Pct na 10:     | 0         | Pct aq 11:  | 0 |
| Pct maq 11:    | 0         | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0         | Pct na 11:  | 0 |
| Pct aq 12:     | 0         | Pct maq 12: | 0 |
| Pct cm 12:     | 0         | Pct pcm 12: | 0 |
| Pct na 12:     | 0         | Pct aq 13:  | 0 |
| Pct maq 13:    | 0         | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0         | Pct na 13:  | 0 |
| Within sec:    | Y         | Loc match:  | Y |
| Aq code 1:     | D         |             |   |
| Hit swl:       | T         |             |   |
| Athk2:         | 21        |             |   |
| Horiz Conduct: | 214.28571 |             |   |
| Vert Conduct:  | 161.53846 |             |   |
| T2:            | 4500      |             |   |
| D50plek:       | 152.21539 |             |   |

**15  
WNW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20006056**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000005755             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 16           |
| Owner name: | MARK PONITZ             |             |              |
| Well addr:  | 678 18TH STREET         |             |              |
| Well depth: | 100                     |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 1793         |
| Const date: | 2003-12-11 00:00:00.000 | Case type:  | PVC Plastic  |
| Case dia:   | 5                       |             |              |
| Case depth: | 95                      |             |              |
| Screen frm: | 95                      |             |              |
| Screen to:  | 100                     |             |              |
| Swl:        | 62                      |             |              |
| Test depth: | 0                       |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 40                      | Test methd: | Air          |
| Grouted:    | 1                       | Pmp cpcity: | 10           |
| Latitude:   | 42.470126               |             |              |
| Longitude:  | -85.720565              |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |                               |             |              |
|-------------|-------------------------------|-------------|--------------|
| Methd coll: | Address Matching-House Number |             |              |
| Elevation:  | 761                           |             |              |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Not Reported |
| Elev flag:  | Not Reported                  |             |              |
| Swl flag:   | Not Reported                  |             |              |
| Elev dem:   | 764                           | Elev dif:   | 3            |
| Elev niv:   | 761                           | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                  | Pct aq:     | 57           |
| Pct aq d:   | 57                            | Pct aq r:   | 0            |
| Pct maq:    | 0                             | Pct maq d:  | 0            |
| Pct maq r:  | 0                             | Pct cm:     | 33           |
| Pct cm d:   | 33                            | Pct cm r:   | 0            |
| Pct pcm:    | 10                            | Pct pcm d:  | 10           |
| Pct pcm r:  | 0                             | Pct na:     | 0            |
| Pct na d:   | 0                             | Pct na r:   | 0            |
| Pct flag:   | Not Reported                  | Rock top:   | -1           |
| D r type:   | Not Reported                  | Spc cpcity: | 0            |
| A thicknes: | 38                            | A pct aq:   | 97           |
| A pct maq:  | 0                             | A pct pcm:  | 3            |
| A pct cm:   | 0                             | A pct na:   | 0            |
| A thickns2: | 38                            | A pct aq2:  | 97           |
| A pct maq2: | 0                             | A pct pcm2: | 3            |
| A pct cm2:  | 0                             | A pct na2:  | 0            |
| A hit swl:  | T                             | A hit top:  | F            |
| A hit rock: | F                             | A sc lith1: | Sand         |
| A sc lmod1: | Fine To Medium                | A sc lmaq1: | AQ           |
| A sc lpct1: | 100                           | A sc lith2: | Not Reported |
| A sc lmod2: | Not Reported                  | A sc lmaq2: | Not Reported |
| A sc lpct2: | 0                             | Pct aq 1:   | 45           |
| Pct maq 1:  | 0                             | Pct cm 1:   | 55           |
| Pct pcm 1:  | 0                             | Pct na 1:   | 0            |
| Pct aq 2:   | 55                            | Pct maq 2:  | 0            |
| Pct cm 2:   | 45                            | Pct pcm 2:  | 0            |
| Pct na 2:   | 0                             | Pct aq 3:   | 0            |
| Pct maq 3:  | 0                             | Pct cm 3:   | 65           |
| Pct pcm 3:  | 35                            | Pct na 3:   | 0            |
| Pct aq 4:   | 85                            | Pct maq 4:  | 0            |
| Pct cm 4:   | 0                             | Pct pcm 4:  | 15           |
| Pct na 4:   | 0                             | Pct aq 5:   | 100          |
| Pct maq 5:  | 0                             | Pct cm 5:   | 0            |
| Pct pcm 5:  | 0                             | Pct na 5:   | 0            |
| Pct aq 6:   | 0                             | Pct maq 6:  | 0            |
| Pct cm 6:   | 0                             | Pct pcm 6:  | 0            |
| Pct na 6:   | 0                             | Pct aq 7:   | 0            |
| Pct maq 7:  | 0                             | Pct cm 7:   | 0            |
| Pct pcm 7:  | 0                             | Pct na 7:   | 0            |
| Pct aq 8:   | 0                             | Pct maq 8:  | 0            |
| Pct cm 8:   | 0                             | Pct pcm 8:  | 0            |
| Pct na 8:   | 0                             | Pct aq 9:   | 0            |
| Pct maq 9:  | 0                             | Pct cm 9:   | 0            |
| Pct pcm 9:  | 0                             | Pct na 9:   | 0            |
| Pct aq 10:  | 0                             | Pct maq 10: | 0            |
| Pct cm 10:  | 0                             | Pct pcm 10: | 0            |
| Pct na 10:  | 0                             | Pct aq 11:  | 0            |
| Pct maq 11: | 0                             | Pct cm 11:  | 0            |
| Pct pcm 11: | 0                             | Pct na 11:  | 0            |
| Pct aq 12:  | 0                             | Pct maq 12: | 0            |
| Pct cm 12:  | 0                             | Pct pcm 12: | 0            |
| Pct na 12:  | 0                             | Pct aq 13:  | 0            |
| Pct maq 13: | 0                             | Pct cm 13:  | 0            |
| Pct pcm 13: | 0                             | Pct na 13:  | 0            |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |            |   |
|----------------|-----------|------------|---|
| Within sec:    | Y         | Loc match: | Y |
| Aq code 1:     | D         |            |   |
| Hit swl:       | T         |            |   |
| Athk2:         | 38        |            |   |
| Horiz Conduct: | 48.71053  |            |   |
| Vert Conduct:  | 21.83908  |            |   |
| T2:            | 1851      |            |   |
| D50plek:       | 118.49113 |            |   |

**D16  
West  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20006768**

|             |  |             |              |
|-------------|--|-------------|--------------|
| Wellid:     | 03000007155                              | Import id:  | Not Reported |
| County:     | Allegan                                  | Township:   | Otsego       |
| Town range: | 01N 12W                                  | Section:    | 16           |
| Owner name: | WALTER REED                              |             |              |
| Well addr:  | 1820 106TH ST                            |             |              |
| Well depth: | 56                                       |             |              |
| Well type:  | Household                                |             |              |
| Wssn:       | 0  |             |              |
| Well num:   | Not Reported                             | Driller id: | 1601         |
| Const date: | 2005-01-13 00:00:00.000                  | Case type:  | PVC Plastic  |
| Case dia:   | 5  |             |              |
| Case depth: | 51                                       |             |              |
| Screen frm: | 51                                       |             |              |
| Screen to:  | 56                                       |             |              |
| Swl:        | 28                                       |             |              |
| Test depth: | 52                                       |             |              |
| Test hours: | 1  |             |              |
| Test rate:  | 50                                       | Test methd: | Air          |
| Grouted:    | 1  | Pmp cpcity: | 10           |
| Latitude:   | 42.46482902                              |             |              |
| Longitude:  | -85.72215166                             |             |              |
| Methd coll: | Address Matching-House Number            |             |              |
| Elevation:  | 0  |             |              |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:   | Not Reported                             |             |              |
| Elev dem:   | 718                                      | Elev dif:   | 718          |
| Elev miv:   | 718                                      | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                             | Pct aq:     | 88           |
| Pct aq d:   | 88                                       | Pct aq r:   | 0            |
| Pct maq:    | 0  | Pct maq d:  | 0            |
| Pct maq r:  | 0  | Pct cm:     | 13           |
| Pct cm d:   | 13                                       | Pct cm r:   | 0            |
| Pct pcm:    | 0  | Pct pcm d:  | 0            |
| Pct pcm r:  | 0  | Pct na:     | 0            |
| Pct na d:   | 0  | Pct na r:   | 0            |
| Pct flag:   | Not Reported                             | Rock top:   | -1           |
| D r type:   | Not Reported                             | Spc cpcity: | 0            |
| A thicknes: | 10                                       | A pct aq:   | 100          |
| A pct maq:  | 0  | A pct pcm:  | 0            |
| A pct cm:   | 0  | A pct na:   | 0            |
| A thickns2: | 28                                       | A pct aq2:  | 75           |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |               |             |              |
|----------------|---------------|-------------|--------------|
| A pct maq2:    | 0             | A pct pcm2: | 0            |
| A pct cm2:     | 25            | A pct na2:  | 0            |
| A hit swl:     | F             | A hit top:  | F            |
| A hit rock:    | F             | A sc lith1: | Sand         |
| A sc lmod1:    | Water Bearing | A sc lmaq1: | AQ           |
| A sc lpct1:    | 100           | A sc lith2: | Not Reported |
| A sc lmod2:    | Not Reported  | A sc lmaq2: | Not Reported |
| A sc lpct2:    | 0             | Pct aq 1:   | 100          |
| Pct maq 1:     | 0             | Pct cm 1:   | 0            |
| Pct pcm 1:     | 0             | Pct na 1:   | 0            |
| Pct aq 2:      | 95            | Pct maq 2:  | 0            |
| Pct cm 2:      | 5             | Pct pcm 2:  | 0            |
| Pct na 2:      | 0             | Pct aq 3:   | 0            |
| Pct maq 3:     | 0             | Pct cm 3:   | 0            |
| Pct pcm 3:     | 0             | Pct na 3:   | 0            |
| Pct aq 4:      | 0             | Pct maq 4:  | 0            |
| Pct cm 4:      | 0             | Pct pcm 4:  | 0            |
| Pct na 4:      | 0             | Pct aq 5:   | 0            |
| Pct maq 5:     | 0             | Pct cm 5:   | 0            |
| Pct pcm 5:     | 0             | Pct na 5:   | 0            |
| Pct aq 6:      | 0             | Pct maq 6:  | 0            |
| Pct cm 6:      | 0             | Pct pcm 6:  | 0            |
| Pct na 6:      | 0             | Pct aq 7:   | 0            |
| Pct maq 7:     | 0             | Pct cm 7:   | 0            |
| Pct pcm 7:     | 0             | Pct na 7:   | 0            |
| Pct aq 8:      | 0             | Pct maq 8:  | 0            |
| Pct cm 8:      | 0             | Pct pcm 8:  | 0            |
| Pct na 8:      | 0             | Pct aq 9:   | 0            |
| Pct maq 9:     | 0             | Pct cm 9:   | 0            |
| Pct pcm 9:     | 0             | Pct na 9:   | 0            |
| Pct aq 10:     | 0             | Pct maq 10: | 0            |
| Pct cm 10:     | 0             | Pct pcm 10: | 0            |
| Pct na 10:     | 0             | Pct aq 11:  | 0            |
| Pct maq 11:    | 0             | Pct cm 11:  | 0            |
| Pct pcm 11:    | 0             | Pct na 11:  | 0            |
| Pct aq 12:     | 0             | Pct maq 12: | 0            |
| Pct cm 12:     | 0             | Pct pcm 12: | 0            |
| Pct na 12:     | 0             | Pct aq 13:  | 0            |
| Pct maq 13:    | 0             | Pct cm 13:  | 0            |
| Pct pcm 13:    | 0             | Pct na 13:  | 0            |
| Within sec:    | Y             | Loc match:  | Y            |
| Aq code 1:     | D             |             |              |
| Hit swl:       | F             |             |              |
| Athk2:         | 28            |             |              |
| Horiz Conduct: | 75.00002      |             |              |
| Vert Conduct:  | .0004         |             |              |
| T2:            | 2100.0007     |             |              |
| D50plek:       | 98.41323      |             |              |

17  
**NNE**  
**1/2 - 1 Mile**  
**Higher**

**MI WELLS MI20003182**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |  |             |                  |
|--------------|--|-------------|------------------|
| Wellid:      | 03000001421                              | Import id:  | Not Reported     |
| County:      | Allegan                                  | Township:   | Otsego           |
| Town range:  | 01N 12W                                  | Section:    | 14               |
| Owner name:  | Carl Mayer                               |             |                  |
| Well addr:   | 1590 Woodbea Dr.                         |             |                  |
| Well depth:  | 131                                      |             |                  |
| Well type:   | Household                                |             |                  |
| Wssn:        | 0  |             |                  |
| Well num:    | Not Reported                             | Driller id: | 2249             |
| Const date:  | Not Reported                             | Case type:  | Steel-black      |
| Case dia:    | 4  |             |                  |
| Case depth:  | 131                                      |             |                  |
| Screen frm:  | 127                                      |             |                  |
| Screen to:   | 131                                      |             |                  |
| Swl:         | 40                                       |             |                  |
| Test depth:  | 40                                       |             |                  |
| Test hours:  | 1  |             |                  |
| Test rate:   | 14                                       | Test methd: | Plunger          |
| Grouted:     | 1  | Pmp cpcity: | 10               |
| Latitude:    | 42.47763847                              |             |                  |
| Longitude:   | -85.69825376                             |             |                  |
| Methd coll:  | Address Matching-House Number            |             |                  |
| Elevation:   | 0  |             |                  |
| Elev methd:  | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:   | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:    | Not Reported                             |             |                  |
| Elev dem:    | 790                                      | Elev dif:   | 790              |
| Elev miv:    | 790                                      | Aq code:    | Drift Well       |
| Aq flag:     | Not Reported                             | Pct aq:     | 24               |
| Pct aq d:    | 24                                       | Pct aq r:   | 0                |
| Pct maq:     | 0  | Pct maq d:  | 0                |
| Pct maq r:   | 0  | Pct cm:     | 21               |
| Pct cm d:    | 21                                       | Pct cm r:   | 0                |
| Pct pcm:     | 54                                       | Pct pcm d:  | 54               |
| Pct pcm r:   | 0  | Pct na:     | 0                |
| Pct na d:    | 0  | Pct na r:   | 0                |
| Pct flag:    | Not Reported                             | Rock top:   | -1               |
| D r type:    | Not Reported                             | Spc cpcity: | .400000005960464 |
| A thickness: | 17                                       | A pct aq:   | 100              |
| A pct maq:   | 0  | A pct pcm:  | 0                |
| A pct cm:    | 0  | A pct na:   | 0                |
| A thickns2:  | 91                                       | A pct aq2:  | 34               |
| A pct maq2:  | 0  | A pct pcm2: | 66               |
| A pct cm2:   | 0  | A pct na2:  | 0                |
| A hit swl:   | F  | A hit top:  | F                |
| A hit rock:  | F  | A sc lith1: | Sand             |
| A sc lmod1:  | Wet/Moist                                | A sc lmaq1: | AQ               |
| A sc lpct1:  | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2:  | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2:  | 0  | Pct aq 1:   | 0                |
| Pct maq 1:   | 0  | Pct cm 1:   | 100              |
| Pct pcm 1:   | 0  | Pct na 1:   | 0                |
| Pct aq 2:    | 5  | Pct maq 2:  | 0                |
| Pct cm 2:    | 40                                       | Pct pcm 2:  | 55               |
| Pct na 2:    | 0  | Pct aq 3:   | 70               |
| Pct maq 3:   | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:   | 30                                       | Pct na 3:   | 0                |
| Pct aq 4:    | 0  | Pct maq 4:  | 0                |
| Pct cm 4:    | 0  | Pct pcm 4:  | 100              |
| Pct na 4:    | 0  | Pct aq 5:   | 0                |
| Pct maq 5:   | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:   | 100                                      | Pct na 5:   | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |           |             |    |
|----------------|-----------|-------------|----|
| Pct aq 6:      | 44        | Pct maq 6:  | 0  |
| Pct cm 6:      | 0         | Pct pcm 6:  | 56 |
| Pct na 6:      | 0         | Pct aq 7:   | 0  |
| Pct maq 7:     | 0         | Pct cm 7:   | 0  |
| Pct pcm 7:     | 0         | Pct na 7:   | 0  |
| Pct aq 8:      | 0         | Pct maq 8:  | 0  |
| Pct cm 8:      | 0         | Pct pcm 8:  | 0  |
| Pct na 8:      | 0         | Pct aq 9:   | 0  |
| Pct maq 9:     | 0         | Pct cm 9:   | 0  |
| Pct pcm 9:     | 0         | Pct na 9:   | 0  |
| Pct aq 10:     | 0         | Pct maq 10: | 0  |
| Pct cm 10:     | 0         | Pct pcm 10: | 0  |
| Pct na 10:     | 0         | Pct aq 11:  | 0  |
| Pct maq 11:    | 0         | Pct cm 11:  | 0  |
| Pct pcm 11:    | 0         | Pct na 11:  | 0  |
| Pct aq 12:     | 0         | Pct maq 12: | 0  |
| Pct cm 12:     | 0         | Pct pcm 12: | 0  |
| Pct na 12:     | 0         | Pct aq 13:  | 0  |
| Pct maq 13:    | 0         | Pct cm 13:  | 0  |
| Pct pcm 13:    | 0         | Pct na 13:  | 0  |
| Within sec:    | Y         | Loc match:  | Y  |
| Aq code 1:     | D         |             |    |
| Hit swl:       | F         |             |    |
| Athk2:         | 91        |             |    |
| Horiz Conduct: | 34.07253  |             |    |
| Vert Conduct:  | .01517    |             |    |
| T2:            | 3100.6    |             |    |
| D50plek:       | 462.98956 |             |    |

**18  
SW  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20005689**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000004749             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 22           |
| Owner name: | JOHN DORTCHM            |             |              |
| Well addr:  | 1766 104TH AVENUE       |             |              |
| Well depth: | 62                      |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 1601         |
| Const date: | 2003-06-13 00:00:00.000 | Case type:  | PVC Plastic  |
| Case dia:   | 5                       |             |              |
| Case depth: | 57                      |             |              |
| Screen frm: | 57                      |             |              |
| Screen to:  | 62                      |             |              |
| Swl:        | 38                      |             |              |
| Test depth: | 60                      |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 45                      | Test methd: | Air          |
| Grouted:    | 1                       | Pmp cpcity: | 10           |
| Latitude:   | 42.45357729             |             |              |
| Longitude:  | -85.71475253            |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |  |             |              |
|--------------|--|-------------|--------------|
| Methd coll:  | Address Matching-House Number            |             |              |
| Elevation:   | 0  |             |              |
| Elev methd:  | DEM30M                                   | Depth flag: | Not Reported |
| Elev flag:   | Elevation < DEMmin or Elevation > DEMmax |             |              |
| Swl flag:    | Not Reported                             |             |              |
| Elev dem:    | 718                                      | Elev dif:   | 718          |
| Elev niv:    | 718                                      | Aq code:    | Drift Well   |
| Aq flag:     | Not Reported                             | Pct aq:     | 81           |
| Pct aq d:    | 81                                       | Pct aq r:   | 0            |
| Pct maq:     | 0  | Pct maq d:  | 0            |
| Pct maq r:   | 0  | Pct cm:     | 19           |
| Pct cm d:    | 19                                       | Pct cm r:   | 0            |
| Pct pcm:     | 0  | Pct pcm d:  | 0            |
| Pct pcm r:   | 0  | Pct na:     | 0            |
| Pct na d:    | 0  | Pct na r:   | 0            |
| Pct flag:    | Not Reported                             | Rock top:   | -1           |
| D r type:    | Not Reported                             | Spc cpcity: | 0            |
| A thickness: | 24                                       | A pct aq:   | 100          |
| A pct maq:   | 0  | A pct pcm:  | 0            |
| A pct cm:    | 0  | A pct na:   | 0            |
| A thickns2:  | 24                                       | A pct aq2:  | 100          |
| A pct maq2:  | 0  | A pct pcm2: | 0            |
| A pct cm2:   | 0  | A pct na2:  | 0            |
| A hit swl:   | T  | A hit top:  | F            |
| A hit rock:  | F  | A sc lith1: | Sand         |
| A sc lmod1:  | Water Bearing                            | A sc lmaq1: | AQ           |
| A sc lpct1:  | 100                                      | A sc lith2: | Not Reported |
| A sc lmod2:  | Not Reported                             | A sc lmaq2: | Not Reported |
| A sc lpct2:  | 0  | Pct aq 1:   | 95           |
| Pct maq 1:   | 0  | Pct cm 1:   | 5            |
| Pct pcm 1:   | 0  | Pct na 1:   | 0            |
| Pct aq 2:    | 45                                       | Pct maq 2:  | 0            |
| Pct cm 2:    | 55                                       | Pct pcm 2:  | 0            |
| Pct na 2:    | 0  | Pct aq 3:   | 100          |
| Pct maq 3:   | 0  | Pct cm 3:   | 0            |
| Pct pcm 3:   | 0  | Pct na 3:   | 0            |
| Pct aq 4:    | 0  | Pct maq 4:  | 0            |
| Pct cm 4:    | 0  | Pct pcm 4:  | 0            |
| Pct na 4:    | 0  | Pct aq 5:   | 0            |
| Pct maq 5:   | 0  | Pct cm 5:   | 0            |
| Pct pcm 5:   | 0  | Pct na 5:   | 0            |
| Pct aq 6:    | 0  | Pct maq 6:  | 0            |
| Pct cm 6:    | 0  | Pct pcm 6:  | 0            |
| Pct na 6:    | 0  | Pct aq 7:   | 0            |
| Pct maq 7:   | 0  | Pct cm 7:   | 0            |
| Pct pcm 7:   | 0  | Pct na 7:   | 0            |
| Pct aq 8:    | 0  | Pct maq 8:  | 0            |
| Pct cm 8:    | 0  | Pct pcm 8:  | 0            |
| Pct na 8:    | 0  | Pct aq 9:   | 0            |
| Pct maq 9:   | 0  | Pct cm 9:   | 0            |
| Pct pcm 9:   | 0  | Pct na 9:   | 0            |
| Pct aq 10:   | 0  | Pct maq 10: | 0            |
| Pct cm 10:   | 0  | Pct pcm 10: | 0            |
| Pct na 10:   | 0  | Pct aq 11:  | 0            |
| Pct maq 11:  | 0  | Pct cm 11:  | 0            |
| Pct pcm 11:  | 0  | Pct na 11:  | 0            |
| Pct aq 12:   | 0  | Pct maq 12: | 0            |
| Pct cm 12:   | 0  | Pct pcm 12: | 0            |
| Pct na 12:   | 0  | Pct aq 13:  | 0            |
| Pct maq 13:  | 0  | Pct cm 13:  | 0            |
| Pct pcm 13:  | 0  | Pct na 13:  | 0            |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |          |            |   |
|----------------|----------|------------|---|
| Within sec:    | Y        | Loc match: | Y |
| Aq code 1:     | D        |            |   |
| Hit swl:       | T        |            |   |
| Athk2:         | 24       |            |   |
| Horiz Conduct: | 100      |            |   |
| Vert Conduct:  | 100      |            |   |
| T2:            | 2400     |            |   |
| D50plek:       | 95.74916 |            |   |

**D19**  
**West**  
**1/2 - 1 Mile**  
**Higher**

**MI WELLS      MI20005418**

|             |                               |             |              |
|-------------|-------------------------------|-------------|--------------|
| Wellid:     | 03000004343                   | Import id:  | Not Reported |
| County:     | Allegan                       | Township:   | Otsego       |
| Town range: | 01N 12W                       | Section:    | 16           |
| Owner name: | Barbara Little                |             |              |
| Well addr:  | 1823-106th Avenue             |             |              |
| Well depth: | 90                            |             |              |
| Well type:  | Household                     |             |              |
| Wssn:       | 0                             |             |              |
| Well num:   | Not Reported                  | Driller id: | 1203         |
| Const date: | 2003-02-06 00:00:00.000       | Case type:  | PVC Plastic  |
| Case dia:   | 5                             |             |              |
| Case depth: | 8.5                           |             |              |
| Screen frm: | 85                            |             |              |
| Screen to:  | 90                            |             |              |
| Swl:        | 50                            |             |              |
| Test depth: | 85                            |             |              |
| Test hours: | 2                             |             |              |
| Test rate:  | 30                            | Test methd: | Air          |
| Grouted:    | 1                             | Pmp cpcity: | 19           |
| Latitude:   | 42.46468114                   |             |              |
| Longitude:  | -85.72262939                  |             |              |
| Methd coll: | Address Matching-House Number |             |              |
| Elevation:  | 748                           |             |              |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Not Reported |
| Elev flag:  | Not Reported                  |             |              |
| Swl flag:   | Not Reported                  |             |              |
| Elev dem:   | 728                           | Elev dif:   | 20           |
| Elev miv:   | 748                           | Aq code:    | Drift Well   |
| Aq flag:    | Not Reported                  | Pct aq:     | 100          |
| Pct aq d:   | 100                           | Pct aq r:   | 0            |
| Pct maq:    | 0                             | Pct maq d:  | 0            |
| Pct maq r:  | 0                             | Pct cm:     | 0            |
| Pct cm d:   | 0                             | Pct cm r:   | 0            |
| Pct pcm:    | 0                             | Pct pcm d:  | 0            |
| Pct pcm r:  | 0                             | Pct na:     | 0            |
| Pct na d:   | 0                             | Pct na r:   | 0            |
| Pct flag:   | Not Reported                  | Rock top:   | -1           |
| D r type:   | Not Reported                  | Spc cpcity: | 0            |
| A thicknes: | 40                            | A pct aq:   | 100          |
| A pct maq:  | 0                             | A pct pcm:  | 0            |
| A pct cm:   | 0                             | A pct na:   | 0            |
| A thickns2: | 40                            | A pct aq2:  | 100          |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |              |             |               |
|----------------|--------------|-------------|---------------|
| A pct maq2:    | 0            | A pct pcm2: | 0             |
| A pct cm2:     | 0            | A pct na2:  | 0             |
| A hit swl:     | T            | A hit top:  | F             |
| A hit rock:    | F            | A sc lith1: | Sand & Gravel |
| A sc lmod1:    | Not Reported | A sc lmaq1: | AQ            |
| A sc lpct1:    | 100          | A sc lith2: | Not Reported  |
| A sc lmod2:    | Not Reported | A sc lmaq2: | Not Reported  |
| A sc lpct2:    | 0            | Pct aq 1:   | 100           |
| Pct maq 1:     | 0            | Pct cm 1:   | 0             |
| Pct pcm 1:     | 0            | Pct na 1:   | 0             |
| Pct aq 2:      | 100          | Pct maq 2:  | 0             |
| Pct cm 2:      | 0            | Pct pcm 2:  | 0             |
| Pct na 2:      | 0            | Pct aq 3:   | 100           |
| Pct maq 3:     | 0            | Pct cm 3:   | 0             |
| Pct pcm 3:     | 0            | Pct na 3:   | 0             |
| Pct aq 4:      | 100          | Pct maq 4:  | 0             |
| Pct cm 4:      | 0            | Pct pcm 4:  | 0             |
| Pct na 4:      | 0            | Pct aq 5:   | 0             |
| Pct maq 5:     | 0            | Pct cm 5:   | 0             |
| Pct pcm 5:     | 0            | Pct na 5:   | 0             |
| Pct aq 6:      | 0            | Pct maq 6:  | 0             |
| Pct cm 6:      | 0            | Pct pcm 6:  | 0             |
| Pct na 6:      | 0            | Pct aq 7:   | 0             |
| Pct maq 7:     | 0            | Pct cm 7:   | 0             |
| Pct pcm 7:     | 0            | Pct na 7:   | 0             |
| Pct aq 8:      | 0            | Pct maq 8:  | 0             |
| Pct cm 8:      | 0            | Pct pcm 8:  | 0             |
| Pct na 8:      | 0            | Pct aq 9:   | 0             |
| Pct maq 9:     | 0            | Pct cm 9:   | 0             |
| Pct pcm 9:     | 0            | Pct na 9:   | 0             |
| Pct aq 10:     | 0            | Pct maq 10: | 0             |
| Pct cm 10:     | 0            | Pct pcm 10: | 0             |
| Pct na 10:     | 0            | Pct aq 11:  | 0             |
| Pct maq 11:    | 0            | Pct cm 11:  | 0             |
| Pct pcm 11:    | 0            | Pct na 11:  | 0             |
| Pct aq 12:     | 0            | Pct maq 12: | 0             |
| Pct cm 12:     | 0            | Pct pcm 12: | 0             |
| Pct na 12:     | 0            | Pct aq 13:  | 0             |
| Pct maq 13:    | 0            | Pct cm 13:  | 0             |
| Pct pcm 13:    | 0            | Pct na 13:  | 0             |
| Within sec:    | Y            | Loc match:  | Y             |
| Aq code 1:     | D            |             |               |
| Hit swl:       | T            |             |               |
| Athk2:         | 40           |             |               |
| Horiz Conduct: | 100          |             |               |
| Vert Conduct:  | 100          |             |               |
| T2:            | 4000         |             |               |
| D50plek:       | 259.22593    |             |               |

20  
WSW  
1/2 - 1 Mile  
Higher

MI WELLS MI20003834

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|              |  |             |                  |
|--------------|--|-------------|------------------|
| Wellid:      | 03000002257                              | Import id:  | Not Reported     |
| County:      | Allegan                                  | Township:   | Otsego           |
| Town range:  | 01N 12W                                  | Section:    | 21               |
| Owner name:  | CINDY SWARTZ                             |             |                  |
| Well addr:   | 504 18TH STREE                           |             |                  |
| Well depth:  | 91                                       |             |                  |
| Well type:   | Household                                |             |                  |
| Wssn:        | 0  |             |                  |
| Well num:    | Not Reported                             | Driller id: | 1203             |
| Const date:  | 2000-10-23 00:00:00.000                  | Case type:  | Steel-black      |
| Case dia:    | 4  |             |                  |
| Case depth:  | 86                                       |             |                  |
| Screen frm:  | 86                                       |             |                  |
| Screen to:   | 91                                       |             |                  |
| Swl:         | 30                                       |             |                  |
| Test depth:  | 80                                       |             |                  |
| Test hours:  | 1  |             |                  |
| Test rate:   | 35                                       | Test methd: | Plunger          |
| Grouted:     | 1  | Pmp cpcity: | 10               |
| Latitude:    | 42.45805555                              |             |                  |
| Longitude:   | -85.72048563                             |             |                  |
| Methd coll:  | Address Matching-House Number            |             |                  |
| Elevation:   | 0  |             |                  |
| Elev methd:  | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:   | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:    | Not Reported                             |             |                  |
| Elev dem:    | 712                                      | Elev dif:   | 712              |
| Elev miv:    | 712                                      | Aq code:    | Drift Well       |
| Aq flag:     | Not Reported                             | Pct aq:     | 95               |
| Pct aq d:    | 95                                       | Pct aq r:   | 0                |
| Pct maq:     | 0  | Pct maq d:  | 0                |
| Pct maq r:   | 0  | Pct cm:     | 5                |
| Pct cm d:    | 5  | Pct cm r:   | 0                |
| Pct pcm:     | 0  | Pct pcm d:  | 0                |
| Pct pcm r:   | 0  | Pct na:     | 0                |
| Pct na d:    | 0  | Pct na r:   | 0                |
| Pct flag:    | Not Reported                             | Rock top:   | -1               |
| D r type:    | Not Reported                             | Spc cpcity: | .400000005960464 |
| A thickness: | 61                                       | A pct aq:   | 100              |
| A pct maq:   | 0  | A pct pcm:  | 0                |
| A pct cm:    | 0  | A pct na:   | 0                |
| A thickns2:  | 61                                       | A pct aq2:  | 100              |
| A pct maq2:  | 0  | A pct pcm2: | 0                |
| A pct cm2:   | 0  | A pct na2:  | 0                |
| A hit swl:   | T  | A hit top:  | F                |
| A hit rock:  | F  | A sc lith1: | Gravel           |
| A sc lmod1:  | Not Reported                             | A sc lmaq1: | AQ               |
| A sc lpct1:  | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2:  | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2:  | 0  | Pct aq 1:   | 75               |
| Pct maq 1:   | 0  | Pct cm 1:   | 25               |
| Pct pcm 1:   | 0  | Pct na 1:   | 0                |
| Pct aq 2:    | 100                                      | Pct maq 2:  | 0                |
| Pct cm 2:    | 0  | Pct pcm 2:  | 0                |
| Pct na 2:    | 0  | Pct aq 3:   | 100              |
| Pct maq 3:   | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:   | 0  | Pct na 3:   | 0                |
| Pct aq 4:    | 100                                      | Pct maq 4:  | 0                |
| Pct cm 4:    | 0  | Pct pcm 4:  | 0                |
| Pct na 4:    | 0  | Pct aq 5:   | 0                |
| Pct maq 5:   | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:   | 0  | Pct na 5:   | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |            |             |   |
|----------------|------------|-------------|---|
| Pct aq 6:      | 0          | Pct maq 6:  | 0 |
| Pct cm 6:      | 0          | Pct pcm 6:  | 0 |
| Pct na 6:      | 0          | Pct aq 7:   | 0 |
| Pct maq 7:     | 0          | Pct cm 7:   | 0 |
| Pct pcm 7:     | 0          | Pct na 7:   | 0 |
| Pct aq 8:      | 0          | Pct maq 8:  | 0 |
| Pct cm 8:      | 0          | Pct pcm 8:  | 0 |
| Pct na 8:      | 0          | Pct aq 9:   | 0 |
| Pct maq 9:     | 0          | Pct cm 9:   | 0 |
| Pct pcm 9:     | 0          | Pct na 9:   | 0 |
| Pct aq 10:     | 0          | Pct maq 10: | 0 |
| Pct cm 10:     | 0          | Pct pcm 10: | 0 |
| Pct na 10:     | 0          | Pct aq 11:  | 0 |
| Pct maq 11:    | 0          | Pct cm 11:  | 0 |
| Pct pcm 11:    | 0          | Pct na 11:  | 0 |
| Pct aq 12:     | 0          | Pct maq 12: | 0 |
| Pct cm 12:     | 0          | Pct pcm 12: | 0 |
| Pct na 12:     | 0          | Pct aq 13:  | 0 |
| Pct maq 13:    | 0          | Pct cm 13:  | 0 |
| Pct pcm 13:    | 0          | Pct na 13:  | 0 |
| Within sec:    | Y          | Loc match:  | Y |
| Aq code 1:     | D          |             |   |
| Hit swl:       | T          |             |   |
| Athk2:         | 61         |             |   |
| Horiz Conduct: | 218.03279  |             |   |
| Vert Conduct:  | 164.86486  |             |   |
| T2:            | 13300      |             |   |
| D50plek:       | 1240.45905 |             |   |

**21  
NNE  
1/2 - 1 Mile  
Higher**

**MI WELLS      MI20004398**

|             |                         |             |              |
|-------------|-------------------------|-------------|--------------|
| Wellid:     | 03000002932             | Import id:  | Not Reported |
| County:     | Allegan                 | Township:   | Otsego       |
| Town range: | 01N 12W                 | Section:    | 14           |
| Owner name: | MARY RICE               |             |              |
| Well addr:  | 1585 WOODLEY DR         |             |              |
| Well depth: | 98                      |             |              |
| Well type:  | Household               |             |              |
| Wssn:       | 0                       |             |              |
| Well num:   | Not Reported            | Driller id: | 2342         |
| Const date: | 2001-09-07 00:00:00.000 | Case type:  | PVC Plastic  |
| Case dia:   | 5                       |             |              |
| Case depth: | 88                      |             |              |
| Screen frm: | 88                      |             |              |
| Screen to:  | 98                      |             |              |
| Swl:        | 67                      |             |              |
| Test depth: | 77                      |             |              |
| Test hours: | 1                       |             |              |
| Test rate:  | 25                      | Test methd: | Test Pump    |
| Grouted:    | 1                       | Pmp cpcity: | 10           |
| Latitude:   | 42.4787222              |             |              |
| Longitude:  | -85.69962142            |             |              |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |  |             |                  |
|-------------|--|-------------|------------------|
| Methd coll: | Interpolation-Map                        |             |                  |
| Elevation:  | 0  |             |                  |
| Elev methd: | DEM30M                                   | Depth flag: | Not Reported     |
| Elev flag:  | Elevation < DEMmin or Elevation > DEMmax |             |                  |
| Swl flag:   | Not Reported                             |             |                  |
| Elev dem:   | 797                                      | Elev dif:   | 797              |
| Elev miv:   | 797                                      | Aq code:    | Drift Well       |
| Aq flag:    | Not Reported                             | Pct aq:     | 55               |
| Pct aq d:   | 55                                       | Pct aq r:   | 0                |
| Pct maq:    | 12                                       | Pct maq d:  | 12               |
| Pct maq r:  | 0  | Pct cm:     | 12               |
| Pct cm d:   | 12                                       | Pct cm r:   | 0                |
| Pct pcm:    | 20                                       | Pct pcm d:  | 20               |
| Pct pcm r:  | 0  | Pct na:     | 0                |
| Pct na d:   | 0  | Pct na r:   | 0                |
| Pct flag:   | Not Reported                             | Rock top:   | -1               |
| D r type:   | Not Reported                             | Spc cpcity: | .300000011920929 |
| A thicknes: | 31                                       | A pct aq:   | 81               |
| A pct maq:  | 19                                       | A pct pcm:  | 0                |
| A pct cm:   | 0  | A pct na:   | 0                |
| A thickns2: | 31                                       | A pct aq2:  | 81               |
| A pct maq2: | 19                                       | A pct pcm2: | 0                |
| A pct cm2:  | 0  | A pct na2:  | 0                |
| A hit swl:  | T  | A hit top:  | F                |
| A hit rock: | F  | A sc lith1: | Sand             |
| A sc lmod1: | Fine To Medium                           | A sc lmaq1: | AQ               |
| A sc lpct1: | 100                                      | A sc lith2: | Not Reported     |
| A sc lmod2: | Not Reported                             | A sc lmaq2: | Not Reported     |
| A sc lpct2: | 0  | Pct aq 1:   | 55               |
| Pct maq 1:  | 0  | Pct cm 1:   | 45               |
| Pct pcm 1:  | 0  | Pct na 1:   | 0                |
| Pct aq 2:   | 85                                       | Pct maq 2:  | 0                |
| Pct cm 2:   | 15                                       | Pct pcm 2:  | 0                |
| Pct na 2:   | 0  | Pct aq 3:   | 5                |
| Pct maq 3:  | 0  | Pct cm 3:   | 0                |
| Pct pcm 3:  | 95                                       | Pct na 3:   | 0                |
| Pct aq 4:   | 35                                       | Pct maq 4:  | 60               |
| Pct cm 4:   | 0  | Pct pcm 4:  | 5                |
| Pct na 4:   | 0  | Pct aq 5:   | 0                |
| Pct maq 5:  | 0  | Pct cm 5:   | 0                |
| Pct pcm 5:  | 0  | Pct na 5:   | 0                |
| Pct aq 6:   | 0  | Pct maq 6:  | 0                |
| Pct cm 6:   | 0  | Pct pcm 6:  | 0                |
| Pct na 6:   | 0  | Pct aq 7:   | 0                |
| Pct maq 7:  | 0  | Pct cm 7:   | 0                |
| Pct pcm 7:  | 0  | Pct na 7:   | 0                |
| Pct aq 8:   | 0  | Pct maq 8:  | 0                |
| Pct cm 8:   | 0  | Pct pcm 8:  | 0                |
| Pct na 8:   | 0  | Pct aq 9:   | 0                |
| Pct maq 9:  | 0  | Pct cm 9:   | 0                |
| Pct pcm 9:  | 0  | Pct na 9:   | 0                |
| Pct aq 10:  | 0  | Pct maq 10: | 0                |
| Pct cm 10:  | 0  | Pct pcm 10: | 0                |
| Pct na 10:  | 0  | Pct aq 11:  | 0                |
| Pct maq 11: | 0  | Pct cm 11:  | 0                |
| Pct pcm 11: | 0  | Pct na 11:  | 0                |
| Pct aq 12:  | 0  | Pct maq 12: | 0                |
| Pct cm 12:  | 0  | Pct pcm 12: | 0                |
| Pct na 12:  | 0  | Pct aq 13:  | 0                |
| Pct maq 13: | 0  | Pct cm 13:  | 0                |
| Pct pcm 13: | 0  | Pct na 13:  | 0                |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                |          |            |   |
|----------------|----------|------------|---|
| Within sec:    | Y        | Loc match: | Y |
| Aq code 1:     | D        |            |   |
| Hit swl:       | T        |            |   |
| Athk2:         | 31       |            |   |
| Horiz Conduct: | 42.25806 |            |   |
| Vert Conduct:  | 28.18182 |            |   |
| T2:            | 1310     |            |   |
| D50plek:       | 69.65423 |            |   |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance

Database EDR ID Number

**1**

**WSW**

**1/2 - 1 Mile**

**OIL\_GAS**

**MIOG7000007866**

|                  |                                     |                 |                   |
|------------------|-------------------------------------|-----------------|-------------------|
| Api wellno:      | 21005178380000                      |                 |                   |
| Operator no:     | 3081                                |                 |                   |
| Operator Name:   | TRI COUNTY DEVELOPMENT CO           |                 |                   |
| Operator Status: | Inactive-no active wells at present |                 |                   |
| Operator City:   | Not Reported                        | Operator State: | Not Reported      |
| Permit no:       | 17838                               |                 |                   |
| Lease name:      | NEWTON & SCHELB COMM                |                 |                   |
| Well no:         | 1                                   |                 |                   |
| Deepest fmt:     | TRVR4                               | Obj fmtn:       | Not Reported      |
| Drillerstd:      | 0                                   | Truetd:         | 0                 |
| County:          | ALLEGAN                             | Slant:          | V                 |
| Well type:       | Dry Hole                            | Well status:    | Plugging Approved |
| Source loc:      | C                                   | Wh sec:         | 22                |
| Wh twpn:         | 1                                   | Wh twpd:        | N                 |
| Wh rngn:         | 12                                  | Wh rngd:        | W                 |
| Wh qq:           | SE                                  | Wh qq:          | NE                |
| Wh q:            | NW                                  |                 |                   |
| Wh lat:          | 42.46171                            |                 |                   |
| Wh long:         | -85.71435                           |                 |                   |
| Wh georef :      | 523375.31                           |                 |                   |
| Wh georef1:      | 212376.17                           |                 |                   |
| Bh georef :      | 523375.31                           |                 |                   |
| Bh georef1:      | 212376.17                           |                 |                   |
| Bh sourcel:      | C                                   |                 |                   |
| Bh lat:          | 42.46171                            |                 |                   |
| Bh long:         | -85.71435                           |                 |                   |
| Site id:         | MIOG7000007866                      |                 |                   |

**2**

**SSW**

**1/2 - 1 Mile**

**OIL\_GAS**

**MIOG7000007790**

|                  |                                     |                 |                   |
|------------------|-------------------------------------|-----------------|-------------------|
| Api wellno:      | 21005175730000                      |                 |                   |
| Operator no:     | 3081                                |                 |                   |
| Operator Name:   | TRI COUNTY DEVELOPMENT CO           |                 |                   |
| Operator Status: | Inactive-no active wells at present |                 |                   |
| Operator City:   | Not Reported                        | Operator State: | Not Reported      |
| Permit no:       | 17573                               |                 |                   |
| Lease name:      | MC LEOD, EARL K                     |                 |                   |
| Well no:         | 2                                   |                 |                   |
| Deepest fmt:     | TRVR4                               | Obj fmtn:       | Not Reported      |
| Drillerstd:      | 1402                                | Truetd:         | 0                 |
| County:          | ALLEGAN                             | Slant:          | V                 |
| Well type:       | Dry Hole                            | Well status:    | Plugging Approved |
| Source loc:      | C                                   | Wh sec:         | 22                |
| Wh twpn:         | 1                                   | Wh twpd:        | N                 |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|             |                 |          |    |
|-------------|-----------------|----------|----|
| Wh rngn:    | 12              | Wh rngd: | W  |
| Wh qq:      | NW              | Wh qq:   | NW |
| Wh q:       | SE              |          |    |
| Wh lat:     | 42.45649        |          |    |
| Wh long:    | -85.70934       |          |    |
| Wh georef : | 523789.66       |          |    |
| Wh georef1: | 211798.03       |          |    |
| Bh georef : | 523789.66       |          |    |
| Bh georef1: | 211798.03       |          |    |
| Bh sourcel: | C               |          |    |
| Bh lat:     | 42.45649        |          |    |
| Bh long:    | -85.70934       |          |    |
| Site id:    | MIOG70000007790 |          |    |

**3  
NW  
1/2 - 1 Mile**

**OIL\_GAS      MIOG70000008074**

|                  |                                     |                 |                   |
|------------------|-------------------------------------|-----------------|-------------------|
| Api wellno:      | 21005053940000                      |                 |                   |
| Operator no:     | 1847                                |                 |                   |
| Operator Name:   | OBRIAN R L                          |                 |                   |
| Operator Status: | Inactive-no active wells at present |                 |                   |
| Operator City:   | Not Reported                        | Operator State: | Not Reported      |
| Permit no:       | 5394                                |                 |                   |
| Lease name:      | JEWELL, FRED                        |                 |                   |
| Well no:         | 1                                   |                 |                   |
| Deepest fmt:     | TRVR4                               | Obj fmtn:       | Not Reported      |
| Drillerstd:      | 1750                                | Truetd:         | 0                 |
| County:          | ALLEGAN                             | Slant:          | V                 |
| Well type:       | Dry Hole                            | Well status:    | Plugging Approved |
| Source loc:      | C                                   | Wh sec:         | 15                |
| Wh twpn:         | 1                                   | Wh twpd:        | N                 |
| Wh rngn:         | 12                                  | Wh rngd:        | W                 |
| Wh qq:           | NW                                  | Wh qq:          | SE                |
| Wh q:            | NW                                  |                 |                   |
| Wh lat:          | 42.47466                            |                 |                   |
| Wh long:         | -85.71448                           |                 |                   |
| Wh georef :      | 523359.13                           |                 |                   |
| Wh georef1:      | 213814.99                           |                 |                   |
| Bh georef :      | 523359.13                           |                 |                   |
| Bh georef1:      | 213814.99                           |                 |                   |
| Bh sourcel:      | C                                   |                 |                   |
| Bh lat:          | 42.47466                            |                 |                   |
| Bh long:         | -85.71448                           |                 |                   |
| Site id:         | MIOG70000008074                     |                 |                   |

**4  
South  
1/2 - 1 Mile**

**OIL\_GAS      MIOG70000007707**

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

|                  |                                     |                 |                   |
|------------------|-------------------------------------|-----------------|-------------------|
| Api wellno:      | 21005174020000                      |                 |                   |
| Operator no:     | 3081                                |                 |                   |
| Operator Name:   | TRI COUNTY DEVELOPMENT CO           |                 |                   |
| Operator Status: | Inactive-no active wells at present |                 |                   |
| Operator City:   | Not Reported                        | Operator State: | Not Reported      |
| Permit no:       | 17402                               |                 |                   |
| Lease name:      | MCLEOD, EARL K                      |                 |                   |
| Well no:         | 1                                   |                 |                   |
| Deepest fmt:     | TRVR4                               | Obj fmtn:       | Not Reported      |
| Drillerstd:      | 1381                                | Truetd:         | 0                 |
| County:          | ALLEGAN                             | Slant:          | V                 |
| Well type:       | Dry Hole                            | Well status:    | Plugging Approved |
| Source loc:      | C                                   | Wh sec:         | 22                |
| Wh twpn:         | 1                                   | Wh twpd:        | N                 |
| Wh rngn:         | 12                                  | Wh rngd:        | W                 |
| Wh qq:           | SE                                  | Wh qq:          | SW                |
| Wh q:            | SE                                  |                 |                   |
| Wh lat:          | 42.45099                            |                 |                   |
| Wh long:         | -85.70676                           |                 |                   |
| Wh georef :      | 524003.5                            |                 |                   |
| Wh georef1:      | 211188.73                           |                 |                   |
| Bh georef :      | 524003.5                            |                 |                   |
| Bh georef1:      | 211188.73                           |                 |                   |
| Bh sourcel:      | C                                   |                 |                   |
| Bh lat:          | 42.45099                            |                 |                   |
| Bh long:         | -85.70676                           |                 |                   |
| Site id:         | MIOG70000007707                     |                 |                   |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: MI Radon

### Radon Test Results

| Zipcode | Test Date | LT Sign | Result |
|---------|-----------|---------|--------|
| 49078   | 11/2/2009 |         | 1.3    |
| 49078   | 7/15/1995 |         | 1.1    |
| 49078   | 9/23/2008 |         | 1.9    |
| 49078   | 7/14/2008 |         | 1.9    |
| 49078   | 2/24/2003 |         | 0.8    |
| 49078   | 9/29/2000 |         | 0.7    |
| 49078   | 9/20/1994 |         | 0.5    |
| 49078   | 12/4/1998 |         | 0.8    |
| 49078   | 12/2/2000 |         | 1.8    |
| 49078   | 9/1/1999  |         | 2.8    |
| 49078   | 1/4/2003  |         | 2.5    |
| 49078   | 2/14/1994 |         | 2.6    |
| 49078   | 4/13/2006 |         | 3.8    |
| 49078   | 1/18/1995 |         | 3.9    |
| 49078   | 2/18/2009 |         | 6.8    |
| 49078   | 3/25/2009 |         | 6.0    |
| 49078   | 6/5/2004  |         | 14.2   |
| 49078   | 1/14/2009 |         | 10.4   |
| 49078   | 1/25/2010 |         | 9.4    |
| 49078   | 2/26/2007 |         | 2.0    |

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: 49078

Number of sites tested: 2

| 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                | 2.000 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.

### Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

### State Wetlands Data: Wetlands Inventory

Source: Department of Natural Resources

Telephone: 517-241-2254

## HYDROGEOLOGIC INFORMATION

### AQUIFLOW<sup>R</sup> 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 Services

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 Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, 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

## OTHER STATE DATABASE INFORMATION

#### Michigan Oil and Gas Wells

Source: Department of Environmental Quality

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.

#### 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.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### 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

### STREET AND ADDRESS INFORMATION

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## **APPENDIX C**

### **Historical Topographic Maps**



**Rock Tenn Property**

431 Helen

Otsego, MI 49078

Inquiry Number: 3199656.4

November 02, 2011

# EDR Historical Topographic Map Report

# EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

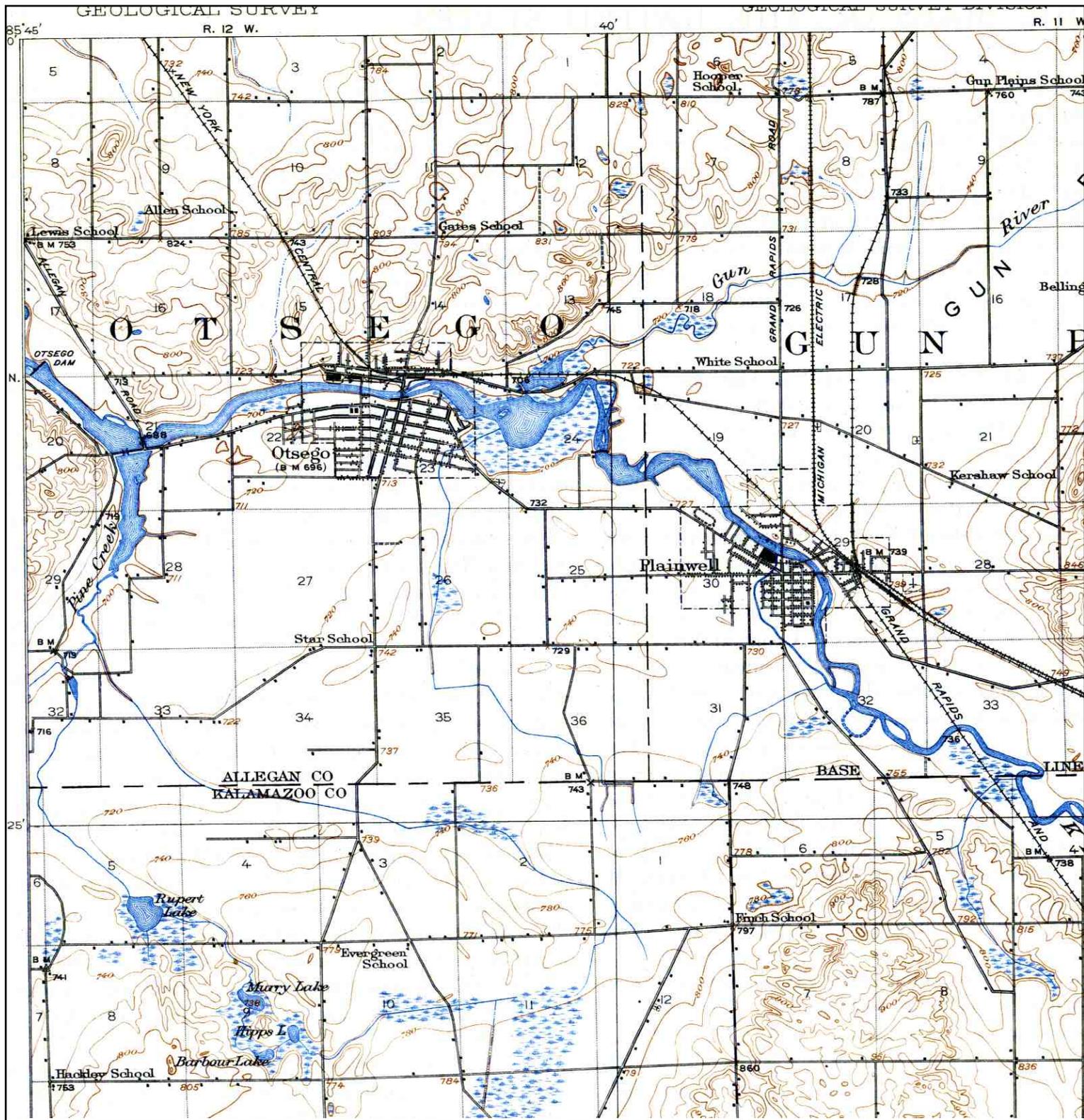
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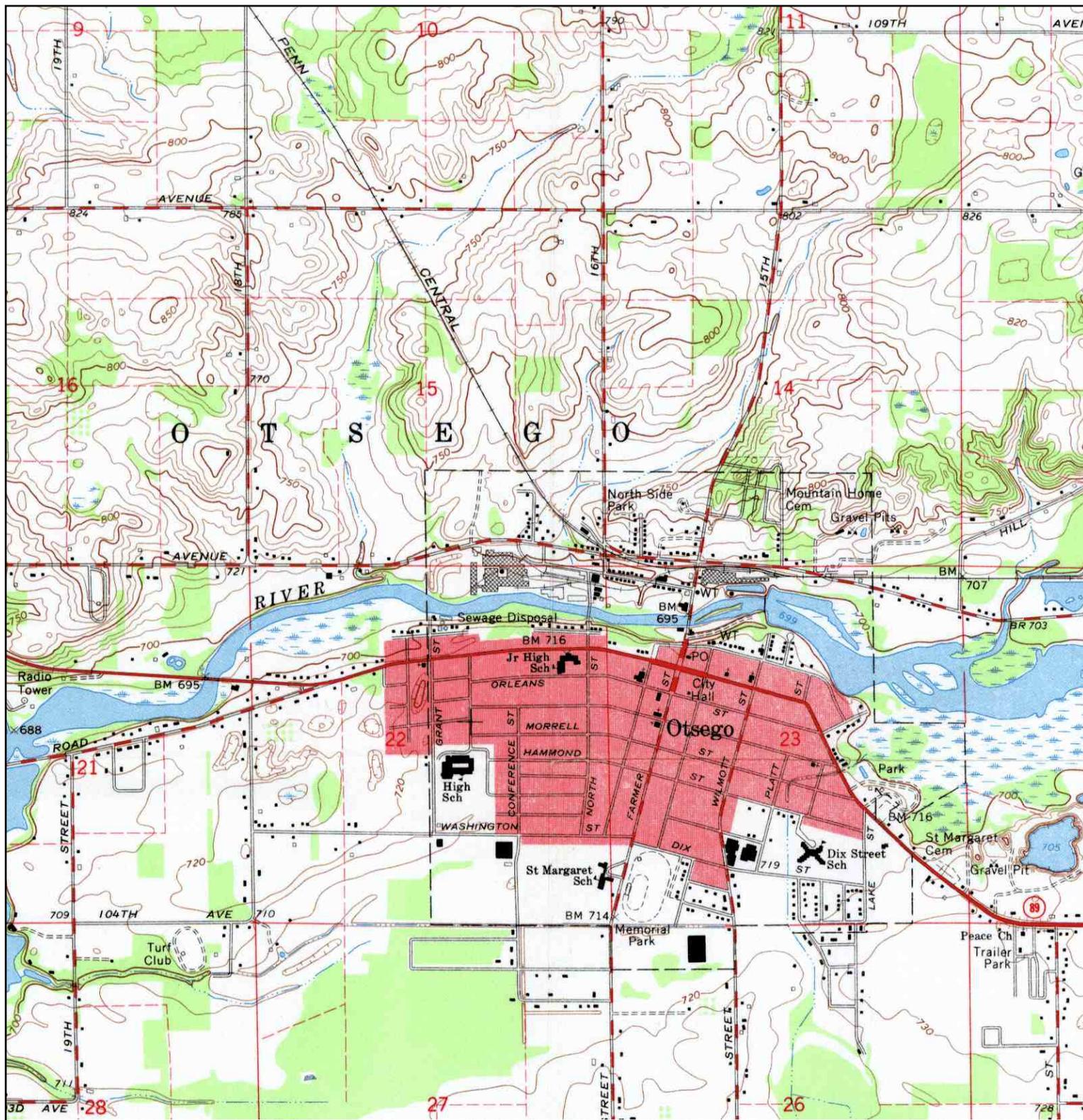
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# Historical Topographic Map



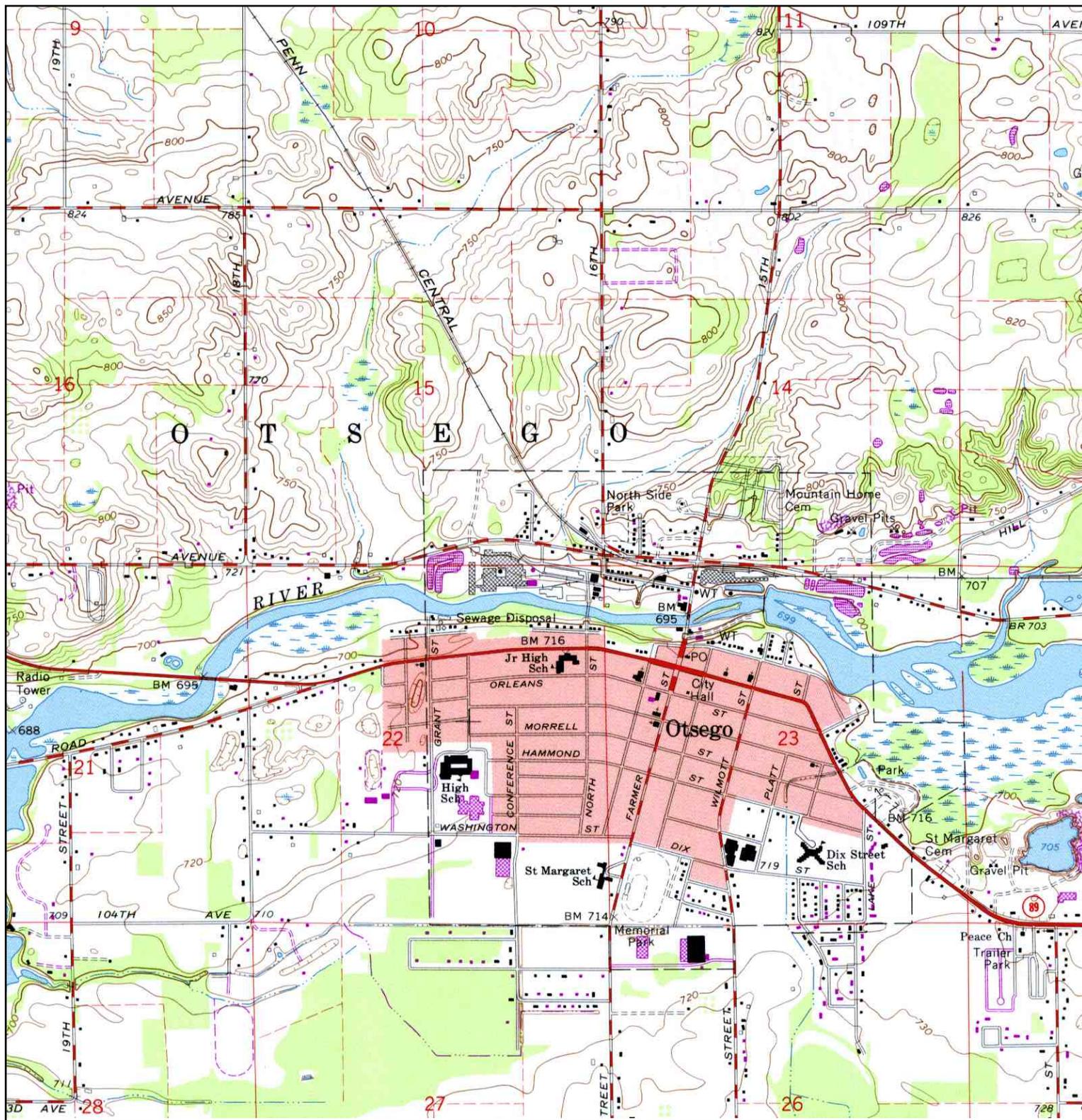
|  |                    |                                      |                           |
|--|--------------------|--------------------------------------|---------------------------|
|  | <b>TARGET QUAD</b> | <b>SITE NAME:</b> Rock Tenn Property | <b>CLIENT:</b> ECT        |
|  | NAME: KALAMAZOO    | ADDRESS: 431 Helen                   | CONTACT: Dirk Mammen      |
|  | MAP YEAR: 1918     | Otsego, MI 49078                     | INQUIRY#: 3199656.4       |
|  | SERIES: 15         | LAT/LONG: 42.4647 / -85.704          | RESEARCH DATE: 11/02/2011 |
|  | SCALE: 1:62500     |                                      |                           |

# Historical Topographic Map



|  |  |  |   |
|--|--|--|---|
|  | <b>TARGET QUAD</b><br>NAME: OTSEGO<br>MAP YEAR: 1967 | SITE NAME: Rock Tenn Property<br>ADDRESS: 431 Helen<br>Otsego, MI 49078<br>LAT/LONG: 42.4647 / -85.704 | CLIENT: ECT<br>CONTACT: Dirk Mammen<br>INQUIRY#: 3199656.4<br>RESEARCH DATE: 11/02/2011 |
|  | SERIES: 7.5<br>SCALE: 1:24000                        |  |   |

# Historical Topographic Map



|  |                    |                                      |                                  |
|--|--------------------|--------------------------------------|----------------------------------|
|  | <b>TARGET QUAD</b> | <b>SITE NAME:</b> Rock Tenn Property | <b>CLIENT:</b> ECT               |
|  | NAME: OTSEGO       | ADDRESS: 431 Helen                   | <b>CONTACT:</b> Dirk Mammen      |
|  | MAP YEAR: 1973     | Otsego, MI 49078                     | <b>INQUIRY#:</b> 3199656.4       |
|  | PHOTOREVISED: 1967 | LAT/LONG: 42.4647 / -85.704          | <b>RESEARCH DATE:</b> 11/02/2011 |
|  | SERIES: 7.5        |                                      |                                  |
|  | SCALE: 1:24000     |                                      |                                  |

## **APPENDIX D**

### **Aerial Photographs**



**Rock Tenn Property**

431 Helen

Otsego, MI 49078

Inquiry Number: 3199656.5

November 03, 2011

## The EDR Aerial Photo Decade Package

# EDR Aerial Photo Decade Package

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.

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**Date EDR Searched Historical Sources:**

Aerial Photography November 03, 2011

**Target Property:**

431 Helen

Otsego, MI 49078

| <u>Year</u> | <u>Scale</u>                      | <u>Details</u>                            | <u>Source</u> |
|-------------|-----------------------------------|---|---------------|
| 1938        | Aerial Photograph. Scale: 1"=500' | Flight Year: 1938                         | AAA           |
| 1950        | Aerial Photograph. Scale: 1"=500' | Flight Year: 1950                         | PMA           |
| 1955        | Aerial Photograph. Scale: 1"=500' | Flight Year: 1955                         | CSS           |
| 1960        | Aerial Photograph. Scale: 1"=500' | Flight Year: 1960                         | CSS           |
| 1967        | Aerial Photograph. Scale: 1"=500' | Flight Year: 1967                         | ASCS          |
| 1974        | Aerial Photograph. Scale: 1"=600' | Flight Year: 1974                         | ASCS          |
| 1981        | Aerial Photograph. Scale: 1"=600' | Flight Year: 1981                         | NHAP          |
| 1992        | Aerial Photograph. Scale: unknown | Flight Year: 1992                         | FSA           |
| 1999        | Aerial Photograph. Scale: 1"=500' | /Composite DOQQ - acquisition dates: 1999 | EDR           |
| 2005        | Aerial Photograph. Scale: 1"=500' | Flight Year: 2005                         | EDR           |
| 2006        | Aerial Photograph. Scale: 1"=500' | Flight Year: 2006                         | EDR           |

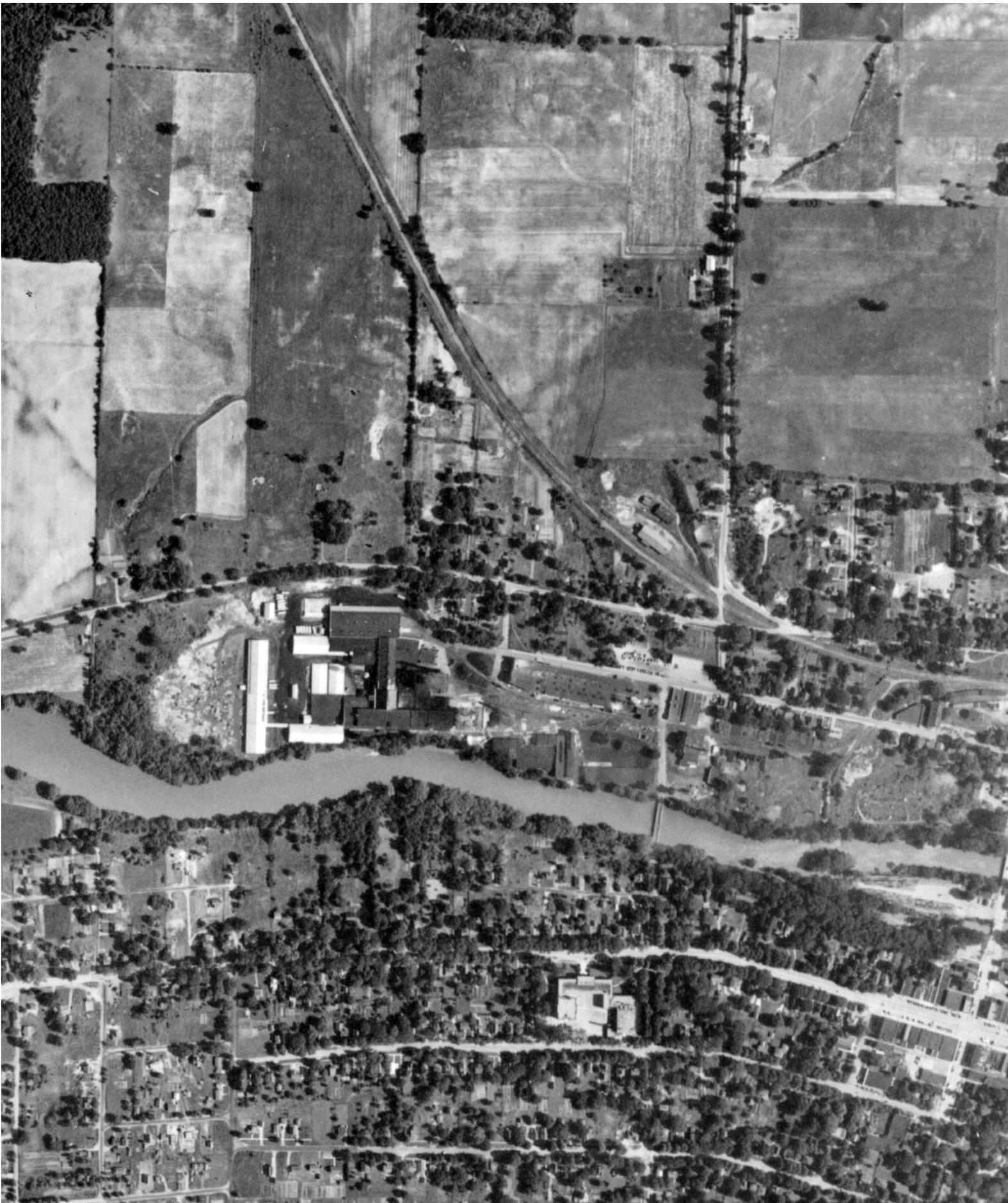


INQUIRY #: 3199656.5

YEAR: 1938

| = 500'





**INQUIRY #:** 3199656.5

**YEAR:** 1950

 = 500'



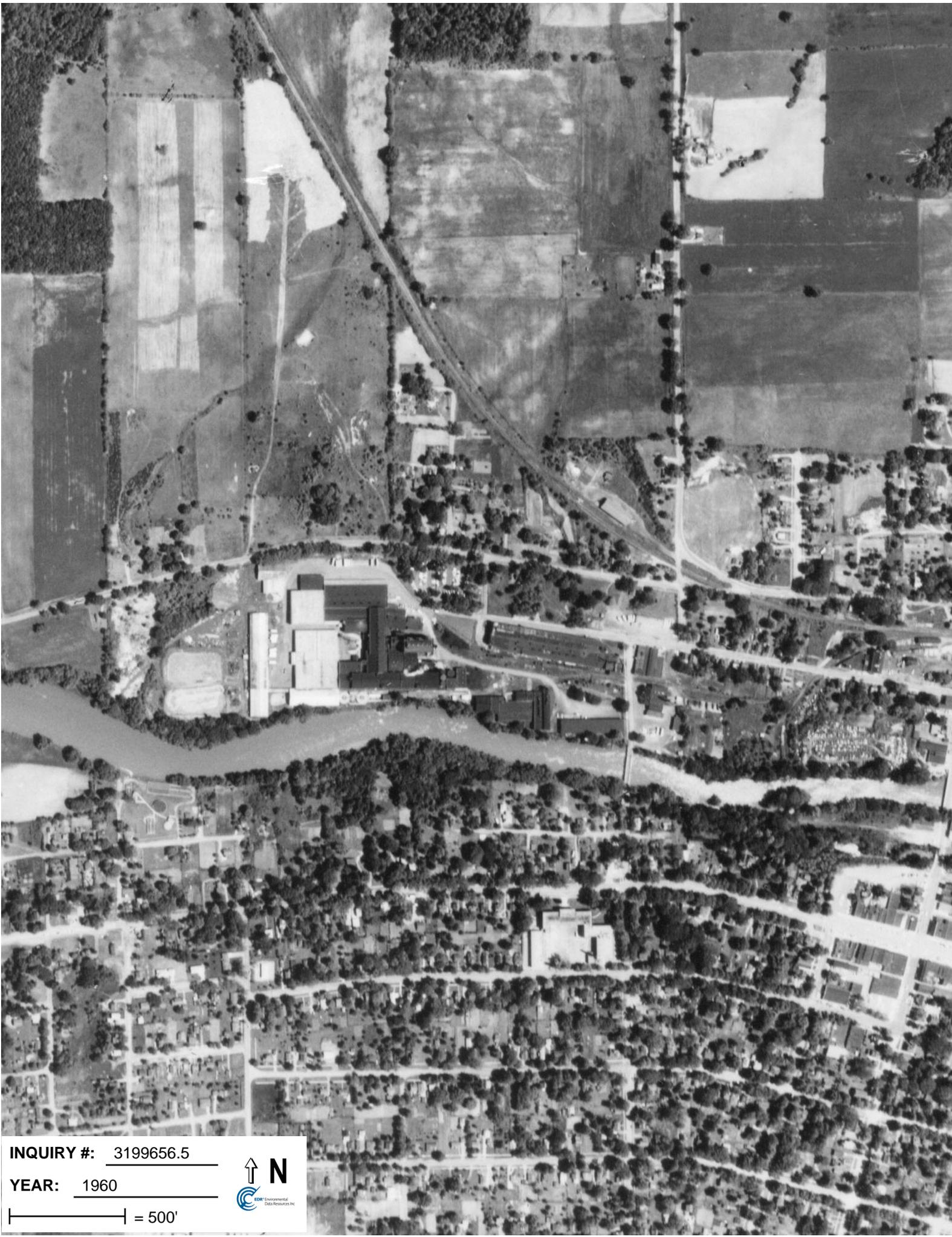


**INQUIRY #:** 3199656.5

**YEAR:** 1955

|—————| = 500'





**INQUIRY #:** 3199656.5

**YEAR:** 1960

**|—————| = 500'**





**INQUIRY #:** 3199656.5

**YEAR:** 1967

| = 500'





**INQUIRY #:** 3199656.5

**YEAR:** 1974

| = 600'





**INQUIRY #:** 3199656.5

**YEAR:** 1981

|—————| = 600'







**INQUIRY #:** 3199656.5

**YEAR:** 1999

| = 500'





**INQUIRY #:** 3199656.5

**YEAR:** 2005

| = 500'





**INQUIRY #:** 3199656.5

**YEAR:** 2006

| = 500'



## **APPENDIX E**

### **EDR-City Directory Abstract**

**Rock Tenn Property**

431 Helen  
Otsego, MI 49078

Inquiry Number: 3199656.6  
November 04, 2011

# The EDR-City Directory Abstract

## TABLE OF CONTENTS

### SECTION

Executive Summary

Findings

*Thank you for your business.*  
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## EXECUTIVE SUMMARY

### DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract 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 Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

### RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

| <u>Year</u> | <u>Source</u>                   | <u>TP</u> | <u>Adjoining</u> | <u>Text Abstract</u> | <u>Source Image</u> |
|-------------|---------------------------------|-----------|------------------|----------------------|---------------------|
| 2008        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 2003        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1998        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1993        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1988        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1983        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1978        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |
| 1973        | Bresser's Criss-Cross Directory | X         | X                | X                    | -                   |

# FINDINGS

## TARGET PROPERTY INFORMATION

### ADDRESS

431 Helen  
Otsego, MI 49078

### FINDINGS DETAIL

Target Property research detail.

| <u>Year</u> | <u>Uses</u>           | <u>Source</u>                   |
|-------------|-----------------------|---------------------------------|
| 2008        | Cogswell Property LLC | Bresser's Criss-Cross Directory |
| 2003        | Rock Tenn Co          | Bresser's Criss-Cross Directory |
| 1998        | Rock Tenn Co          | Bresser's Criss-Cross Directory |
| 1993        | Rock Tenn Co          | Bresser's Criss-Cross Directory |
| 1988        | Mead Paperbrd Prod    | Bresser's Criss-Cross Directory |
| 1983        | Mead Paperbrd Prod    | Bresser's Criss-Cross Directory |
| 1978        | Mead Paperbrd Prod    | Bresser's Criss-Cross Directory |
| 1973        | Mac Sim Bar Emplie    | Bresser's Criss-Cross Directory |
|             | Mead Paperbrd Prod    | Bresser's Criss-Cross Directory |
|             | Saunder Leasg Syst    | Bresser's Criss-Cross Directory |

## FINDINGS

### ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

#### Helen

##### **Helen**

| <u>Year</u> | <u>Uses</u>                         | <u>Source</u>                   |
|-------------|-------------------------------------|---------------------------------|
| 2008        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 2003        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1998        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1993        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1988        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1983        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1978        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |
| 1973        | No addresses listed after 431 Helen | Bresser's Criss-Cross Directory |

##### **241 Helen**

| <u>Year</u> | <u>Uses</u>                | <u>Source</u>                   |
|-------------|----------------------------|---------------------------------|
| 2008        | Jenny's & Ron's Market Inc | Bresser's Criss-Cross Directory |
| 2003        | Jenny's & Ron's Market Inc | Bresser's Criss-Cross Directory |
| 1998        | Jenny's & Ron's Market Inc | Bresser's Criss-Cross Directory |
| 1993        | Jenny's & Ron's Market Inc | Bresser's Criss-Cross Directory |
| 1988        | Mikes Market               | Bresser's Criss-Cross Directory |
| 1983        | B & E Food & Beverage      | Bresser's Criss-Cross Directory |
| 1978        | Warners Market             | Bresser's Criss-Cross Directory |
| 1973        | Warners Market             | Bresser's Criss-Cross Directory |

##### **250 Helen**

| <u>Year</u> | <u>Uses</u>        | <u>Source</u>                   |
|-------------|--------------------|---------------------------------|
| 1998        | Otsego Pub Schls   | Bresser's Criss-Cross Directory |
| 1993        | Otsego Alt Hi Schl | Bresser's Criss-Cross Directory |
| 1988        | Otsego Alt Hi Schl | Bresser's Criss-Cross Directory |
| 1983        | Otsego Alt Hi Schl | Bresser's Criss-Cross Directory |
| 1978        | Otsego Alt Hi Schl | Bresser's Criss-Cross Directory |
| 1973        | Otsego Alt Hi Sch  | Bresser's Criss-Cross Directory |

##### **255 Helen**

| <u>Year</u> | <u>Uses</u>    | <u>Source</u>                   |
|-------------|----------------|---------------------------------|
| 2008        | Adams Electric | Bresser's Criss-Cross Directory |

## FINDINGS

| <u>Year</u> | <u>Uses</u>      | <u>Source</u>                   |
|-------------|------------------|---------------------------------|
| 2003        | Adams Electric   | Bresser's Criss-Cross Directory |
| 1993        | Otsego Lumber Co | Bresser's Criss-Cross Directory |
| 1988        | Otsego Lumber Co | Bresser's Criss-Cross Directory |
| 1983        | Otsego Lumber Co | Bresser's Criss-Cross Directory |

### 301 Helen

| <u>Year</u> | <u>Uses</u>       | <u>Source</u>                   |
|-------------|-------------------|---------------------------------|
| 1983        | Sunrise Comm Food | Bresser's Criss-Cross Directory |

### 310 Helen

| <u>Year</u> | <u>Uses</u>                  | <u>Source</u>                   |
|-------------|------------------------------|---------------------------------|
| 2008        | Mainline Fire Sprinkler Corp | Bresser's Criss-Cross Directory |
| 2003        | Mainline Fire Sprinkler Corp | Bresser's Criss-Cross Directory |

## FINDINGS

### **ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE**

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

#### **Address Researched**

#### **Address Not Identified in Research Source**

|           |                                    |
|-----------|------------------------------------|
| Helen     | No Years Found                     |
| 241 Helen | No Years Found                     |
| 250 Helen | No Years Found                     |
| 255 Helen | 1998, 1978, 1973                   |
| 301 Helen | 1978, 1973                         |
| 310 Helen | 1998, 1993, 1988, 1983, 1978, 1973 |

**APPENDIX F**

**EDR-Certified Sanborn Map Report**



**Rock Tenn Property**

431 Helen

Otsego, MI 49078

Inquiry Number: 3199656.3

November 02, 2011

# Certified Sanborn® Map Report

# Certified Sanborn® Map Report

11/02/11

**Site Name:**

Rock Tenn Property  
431 Helen  
Otsego, MI 49078

**Client Name:**

ECT  
33900 Harper Avenue  
Clinton Township, MI 48035

EDR Inquiry # 3199656.3

Contact: Dirk Mammen



The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by ECT were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn) and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

## Certified Sanborn Results:

**Site Name:** Rock Tenn Property  
**Address:** 431 Helen  
**City, State, Zip:** Otsego, MI 49078  
**Cross Street:**  
**P.O. #** NA  
**Project:** NA  
**Certification #** B733-46EB-9822



Sanborn® Library search results  
Certification # B733-46EB-9822

**Maps Provided:**

1950  
1936  
1928  
1918  
1911

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, 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

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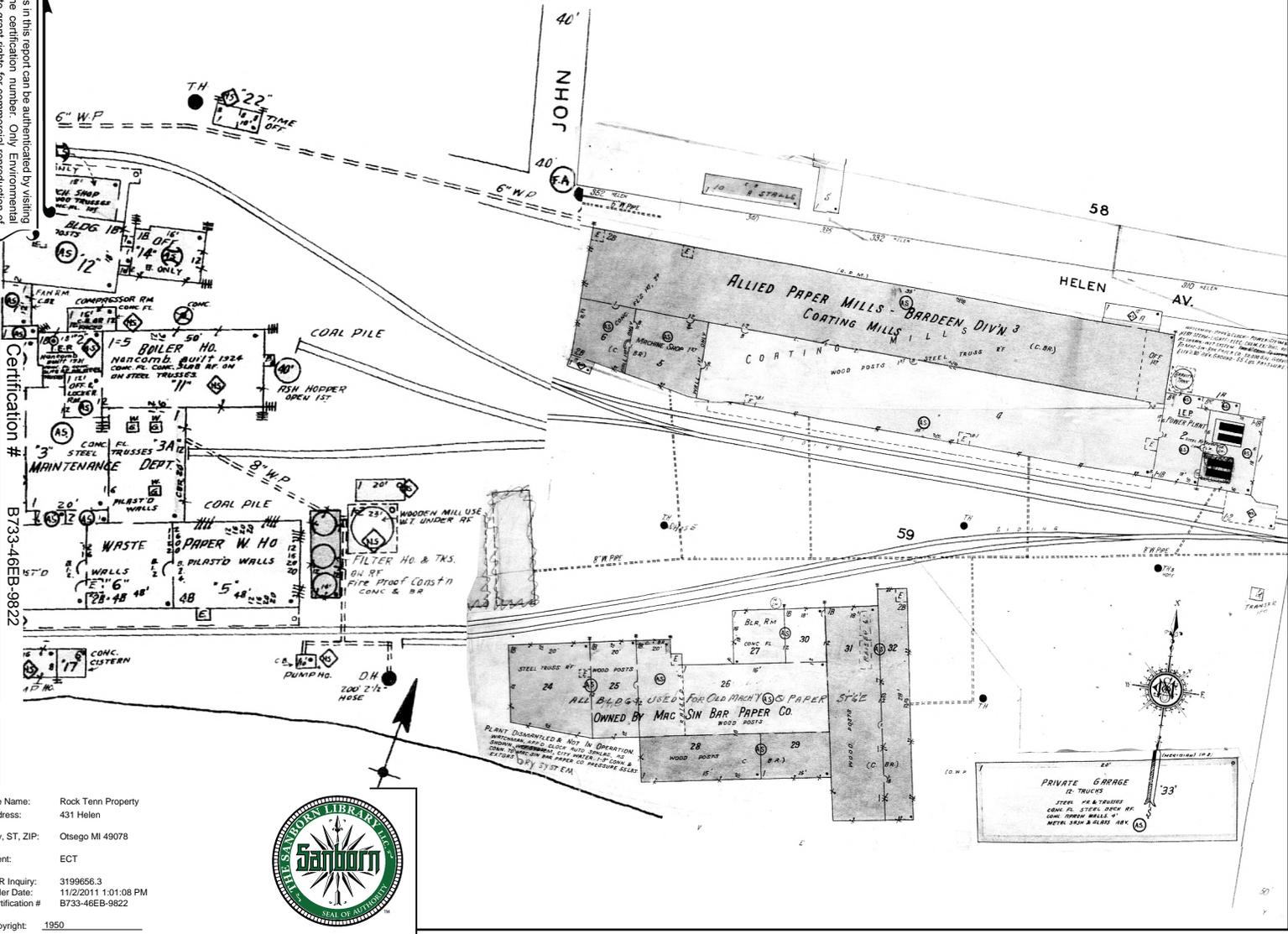
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# 1950 Certified Sanborn Map

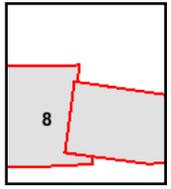
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Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/2/2011 1:01:08 PM  
 Certification #: B733-4EB-9822  
 Copyright: 1950



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Volume 1, Sheet 8



# 1928 Certified Sanborn Map

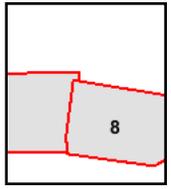
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Certification # B733-4EB-9822

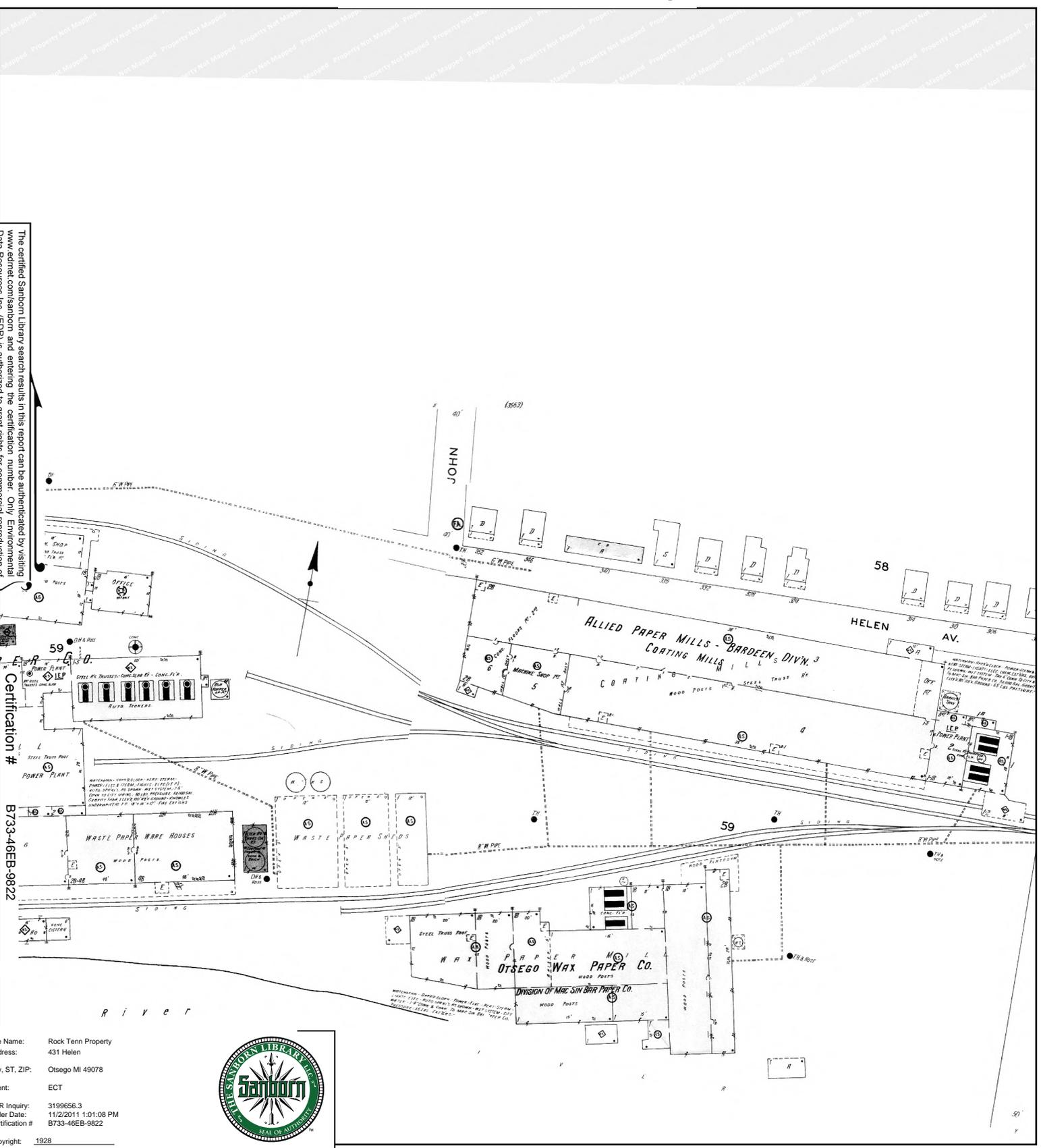
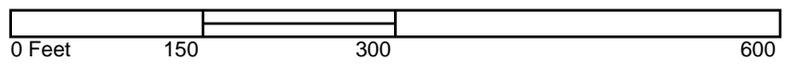
Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/2/2011 1:01:08 PM  
 Certification # B733-4EB-9822



Volume 1, Sheet 8

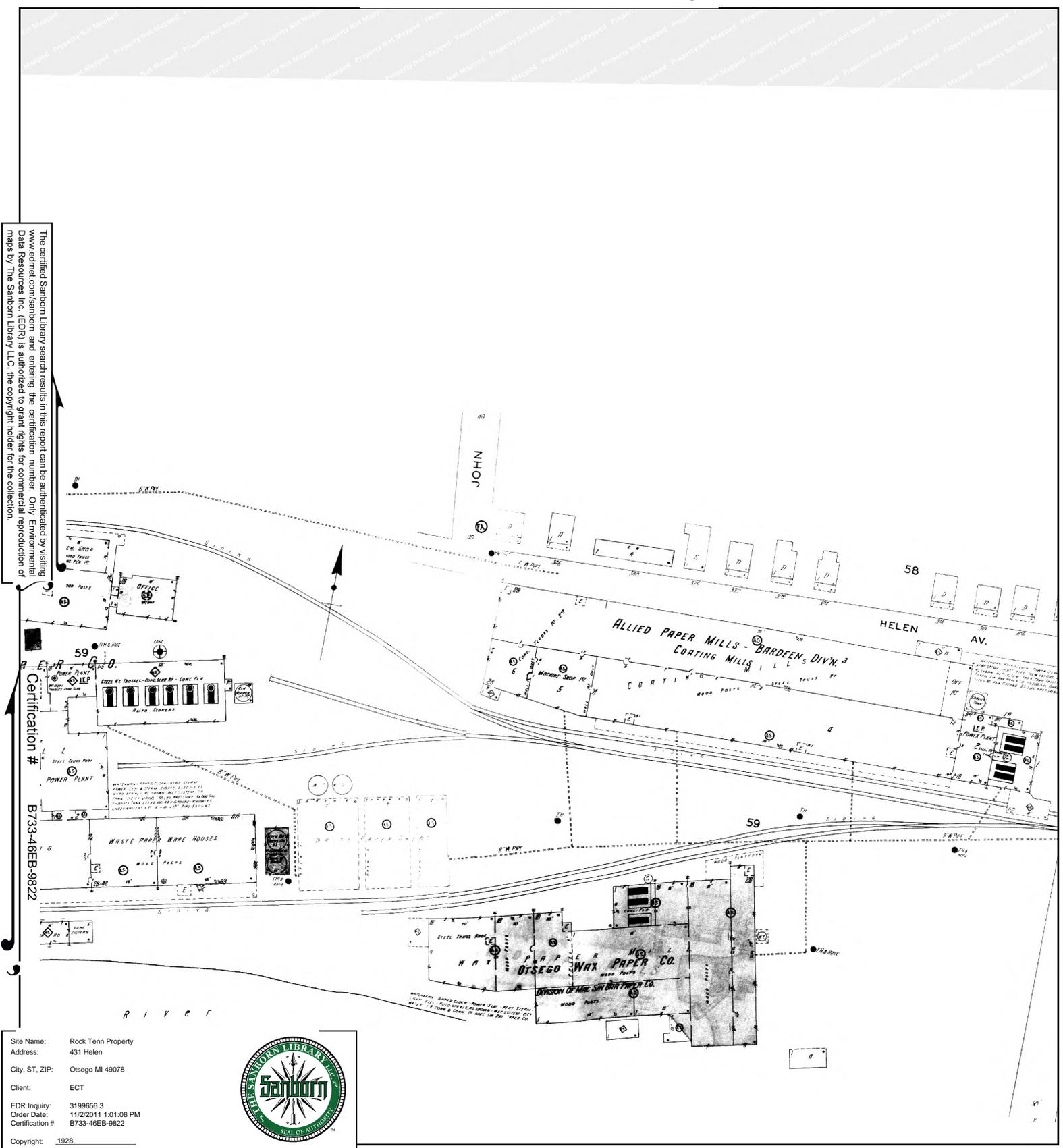


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# 1928 Certified Sanborn Map

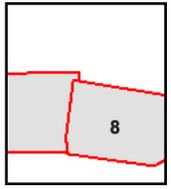
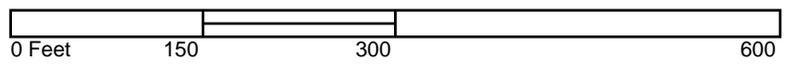
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Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/2/2011 1:01:08 PM  
 Certification #: B733-4EB-9822  
 Copyright: 1928



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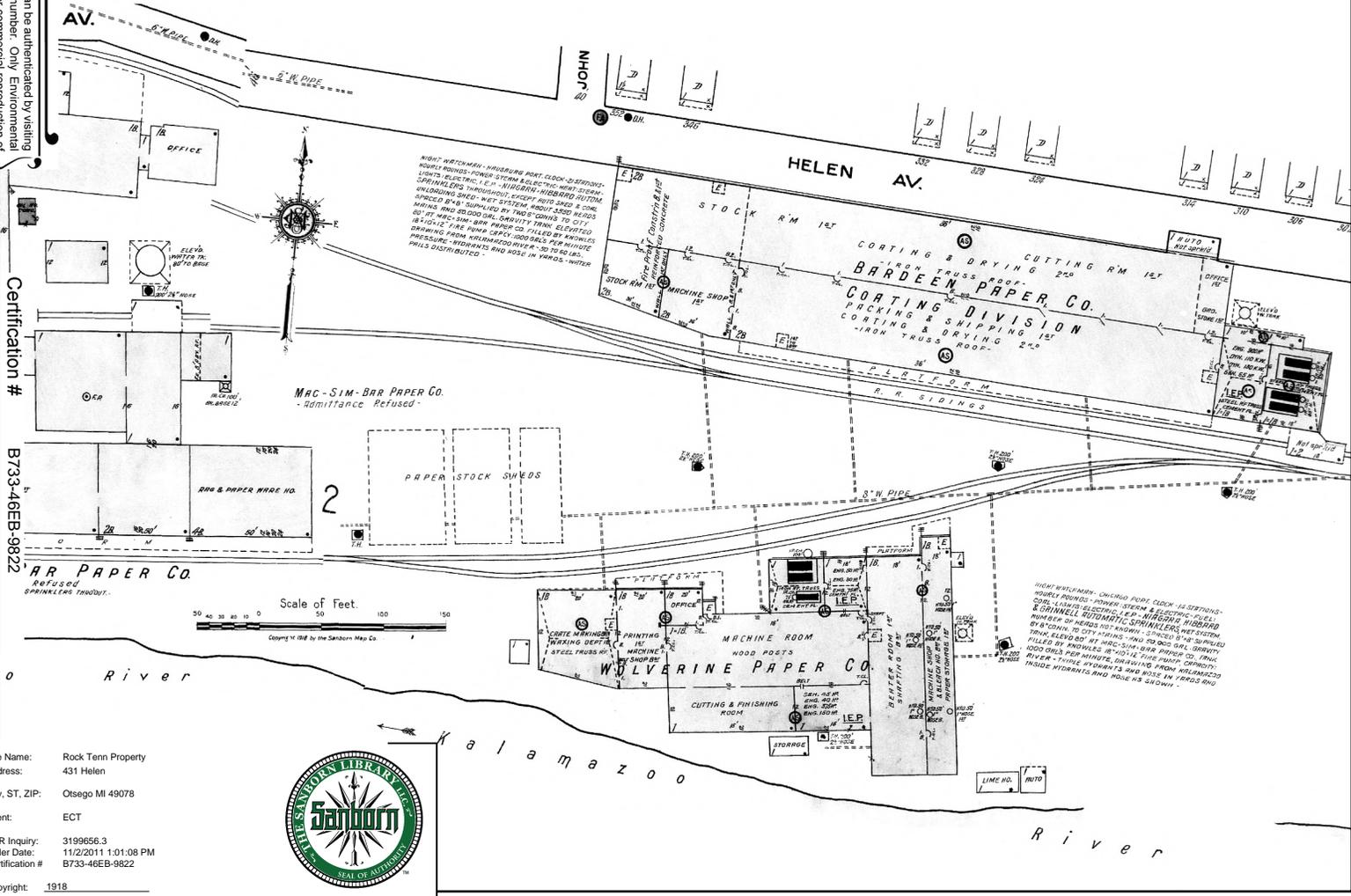


Volume 1, Sheet 8



# 1918 Certified Sanborn Map

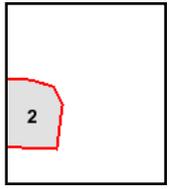
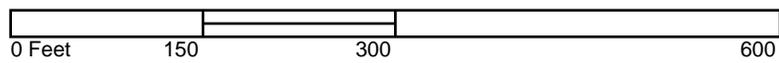
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Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/2/2011 1:01:08 PM  
 Certification #: B733-4EB-9822  
 Copyright: 1918



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Volume 1, Sheet 2



# 1911 Certified Sanborn Map

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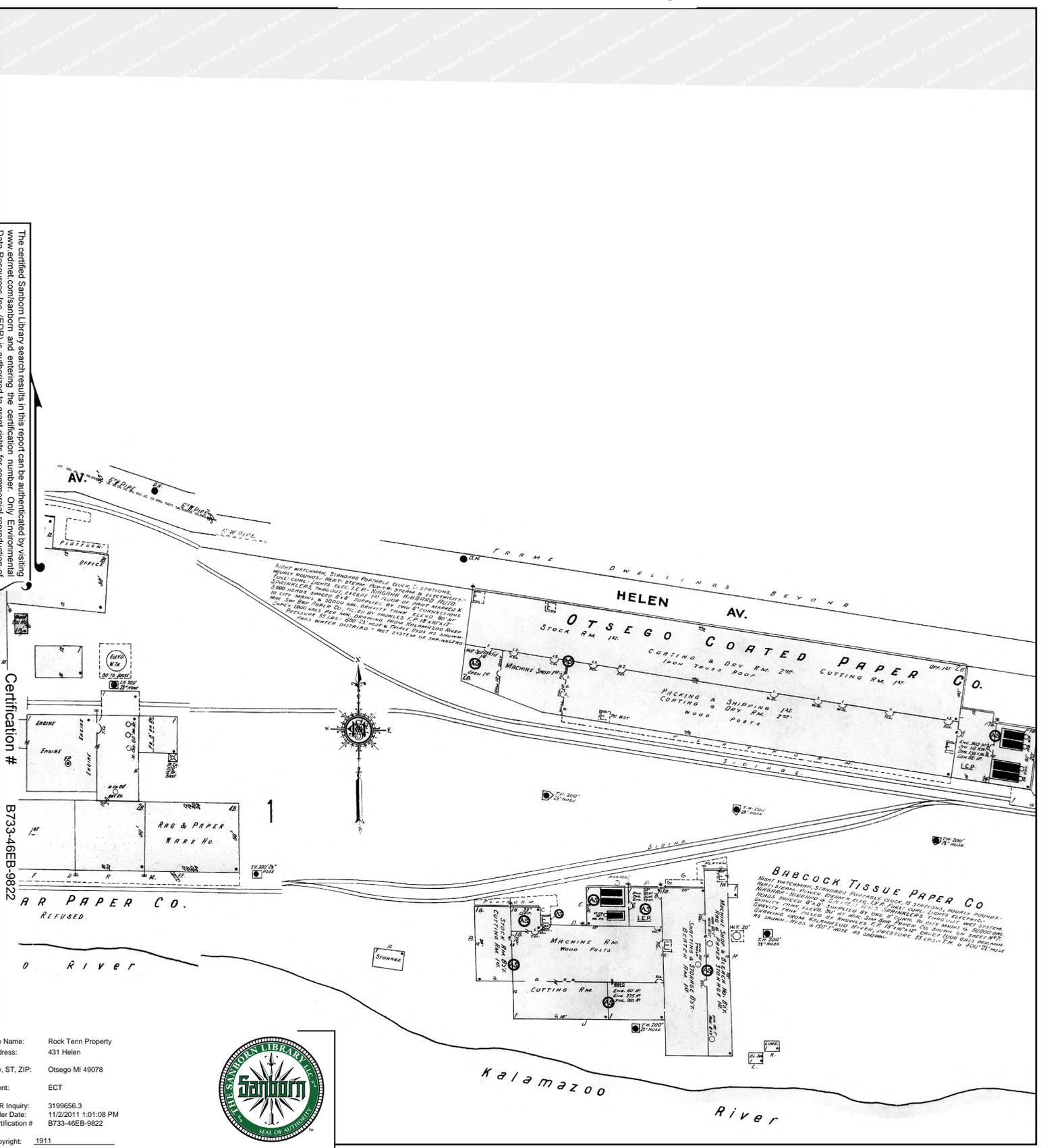
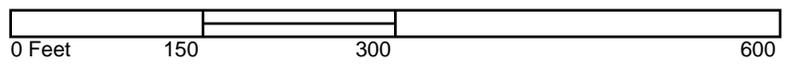
Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/2/2011 1:01:08 PM  
 Certification # B733-46EB-9822  
 Copyright: 1911



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Volume 1, Sheet Keymap/Sheet1  
 Volume 1, Sheet 7





**Rock Tenn Property**

431 Helen

Otsego, MI 49078

Inquiry Number: 3199656.3

November 08, 2011

# Certified Sanborn® Map Report

# Certified Sanborn® Map Report

11/08/11

**Site Name:**

Rock Tenn Property  
431 Helen  
Otsego, MI 49078

**Client Name:**

ECT  
33900 Harper Avenue  
Clinton Township, MI 48035



EDR Inquiry # 3199656.3

Contact: Dirk Mammen

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**Site Name:** Rock Tenn Property  
**Address:** 431 Helen  
**City, State, Zip:** Otsego, MI 49078  
**Cross Street:**  
**P.O. #** NA  
**Project:** NA  
**Certification #** B733-46EB-9822



Sanborn® Library search results  
Certification # B733-46EB-9822

**Maps Provided:**

1950  
1936  
1928  
1918  
1911

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- Library of Congress
- University Publications of America
- EDR Private Collection

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# 1950 Certified Sanborn Map

## MAC-SIM-BAR PAPER CO.

WATCHMAN WITH CLOCK HEAT STEAM POWER: ELEC. & STEAM LIGHTS ELEC (L.E.P.) 4 TRIPLE HYDOS & 9 DOUBLE HYDOS 2000' 2 1/2" HOSE 1-50,000 GAL STEEL GRAVITY TANK ELEV 100' ABV GROUND. 1-KNOWLES STEAM PUMP CAPY: 1000 GPM. CITY WATER CHEM EXTGRS

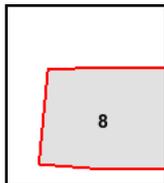
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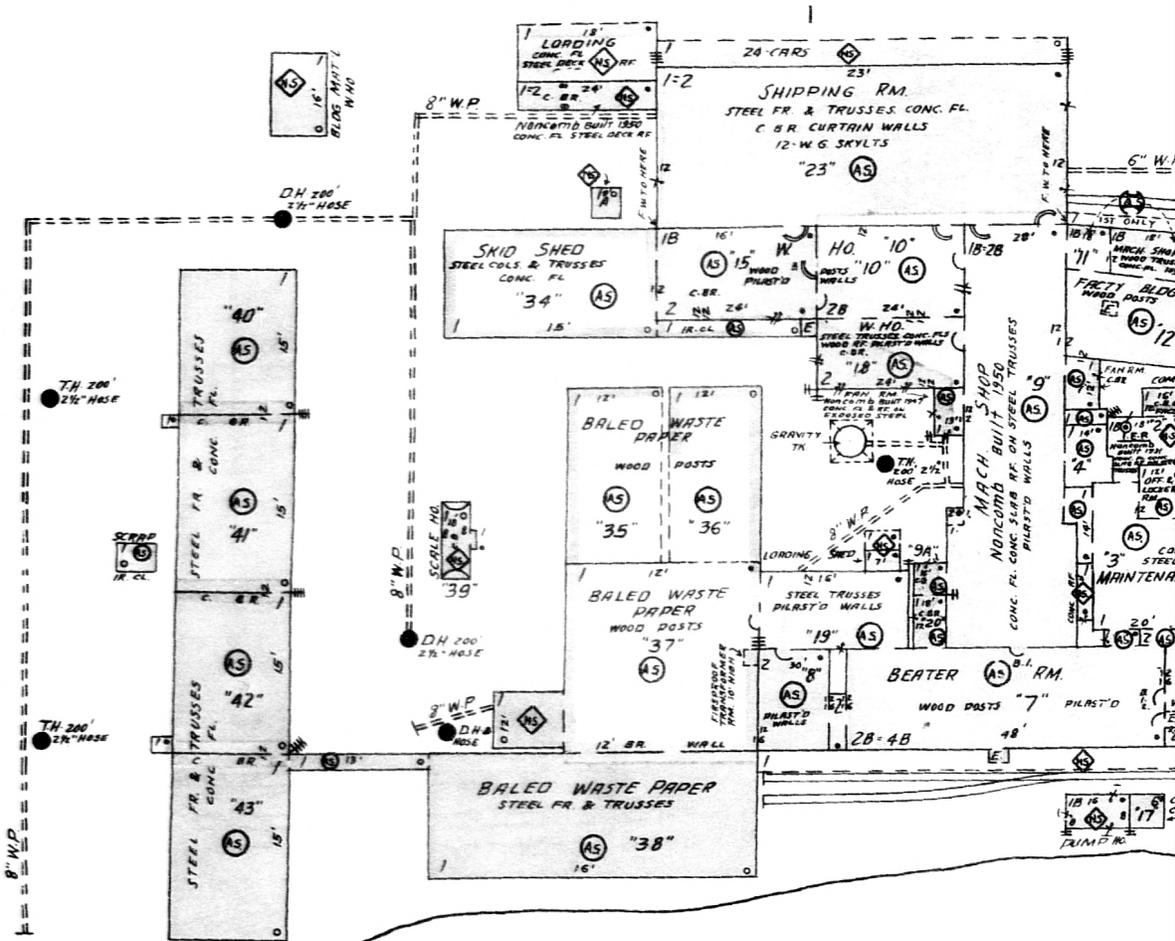
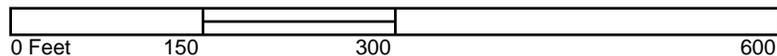
Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/8/2011 11:41:02 AM  
 Certification #: B733-46EB-9822



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Volume 1, Sheet 8

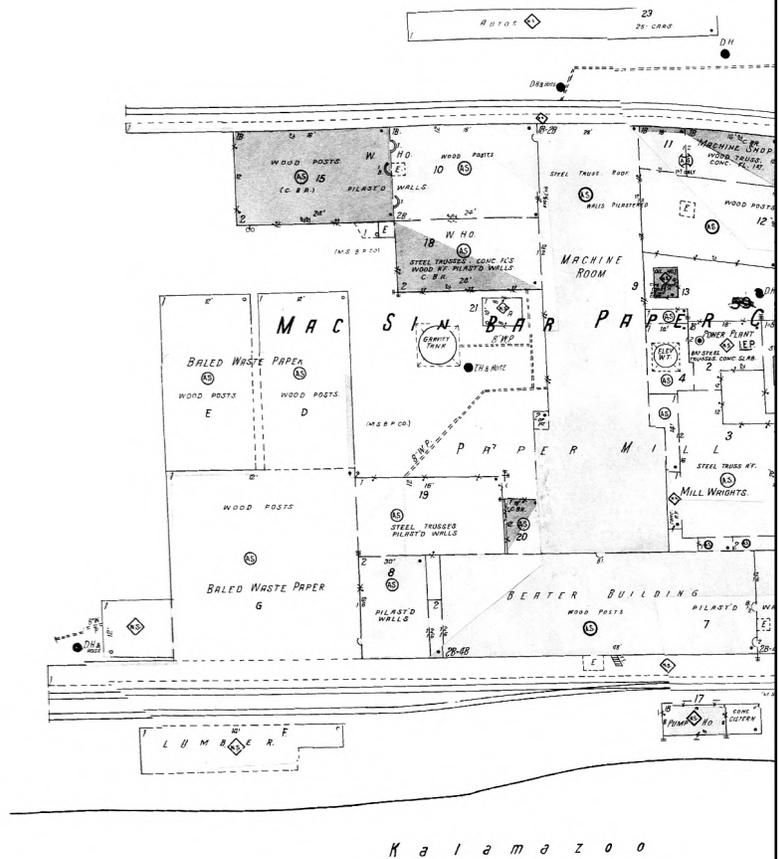


k a i a m a z o o

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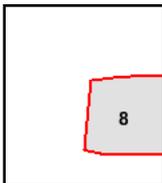
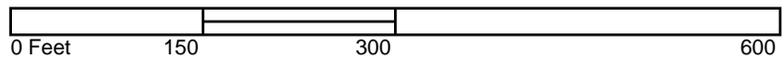


Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/8/2011 11:41:02 AM  
 Certification #: B733-46EB-9822



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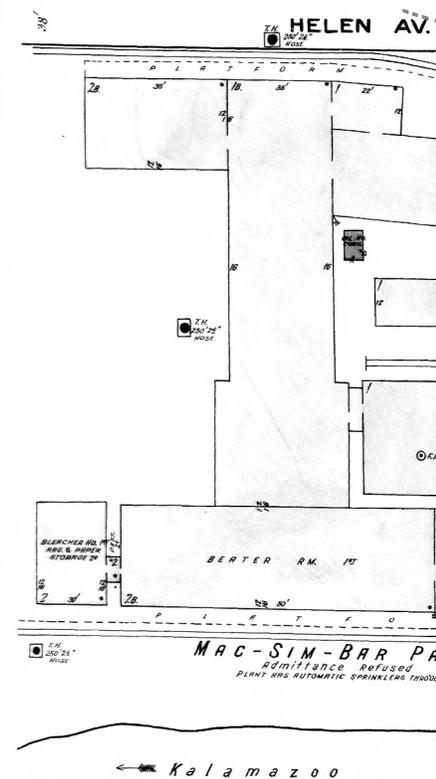




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Certification # B733-46EB-9822

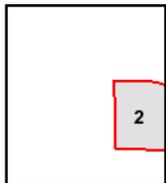
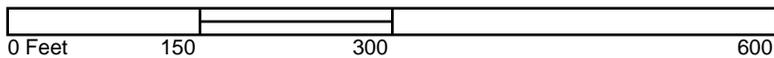


Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/8/2011 11:41:02 AM  
 Certification # B733-46EB-9822



Copyright: 1918

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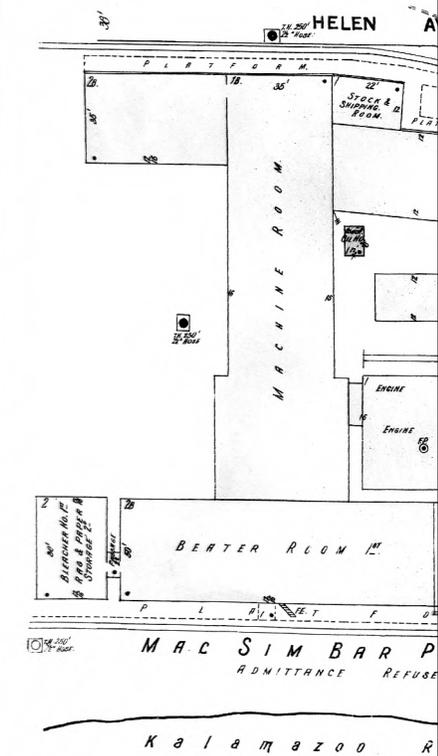
Volume 1, Sheet 2



# 1911 Certified Sanborn Map

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Certification # B733-46EB-9822

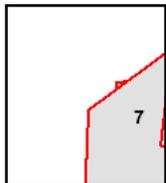
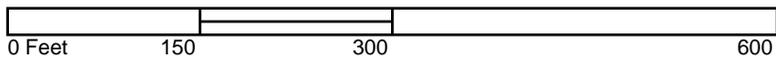


Site Name: Rock Tenn Property  
 Address: 431 Helen  
 City, ST, ZIP: Otsego MI 49078  
 Client: ECT  
 EDR Inquiry: 3199656.3  
 Order Date: 11/8/2011 11:41:02 AM  
 Certification #: B733-46EB-9822



Copyright: 1911

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Volume 1, Sheet 7





**Rock Tenn Property**

431 Helen

Otsego, MI 49078

Inquiry Number: 3199656.3

November 08, 2011

# Certified Sanborn® Map Report

# Certified Sanborn® Map Report

11/08/11

**Site Name:**

Rock Tenn Property  
431 Helen  
Otsego, MI 49078

**Client Name:**

ECT  
33900 Harper Avenue  
Clinton Township, MI 48035



EDR Inquiry # 3199656.3

Contact: Dirk Mammen

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by ECT were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn) and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

## Certified Sanborn Results:

**Site Name:** Rock Tenn Property  
**Address:** 431 Helen  
**City, State, Zip:** Otsego, MI 49078  
**Cross Street:**  
**P.O. #** NA  
**Project:** NA  
**Certification #** B733-46EB-9822



Sanborn® Library search results  
Certification # B733-46EB-9822

**Maps Provided:**

1950  
1936  
1928  
1918  
1911

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
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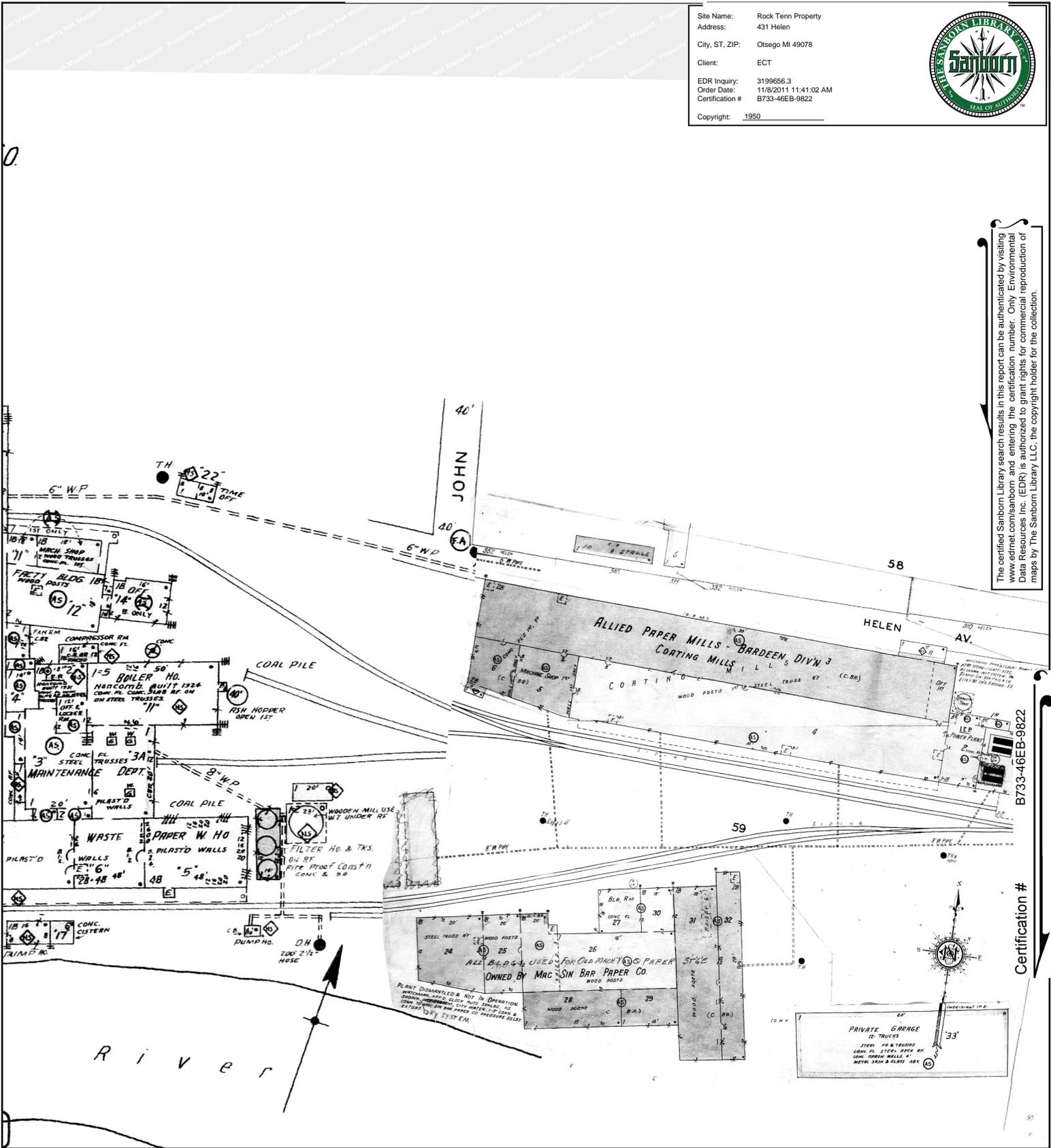
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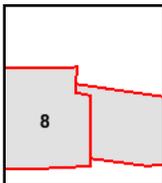
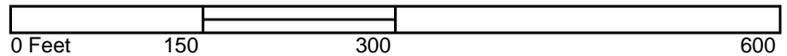


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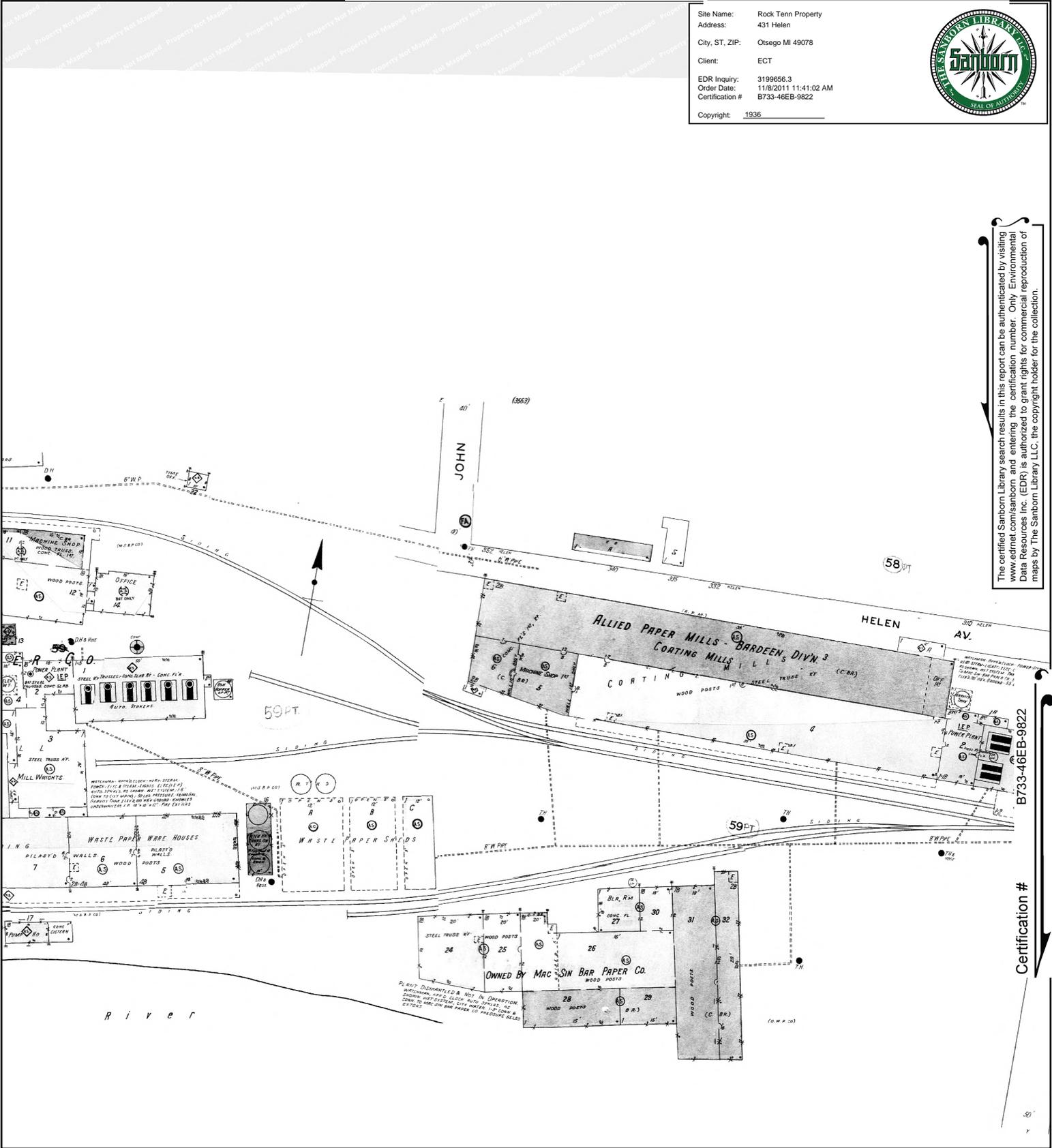


# 1936 Certified Sanborn Map

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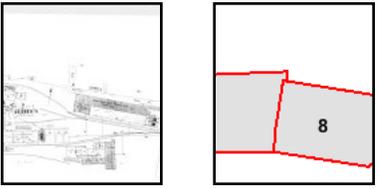


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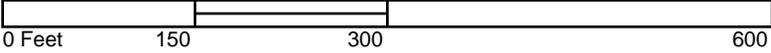


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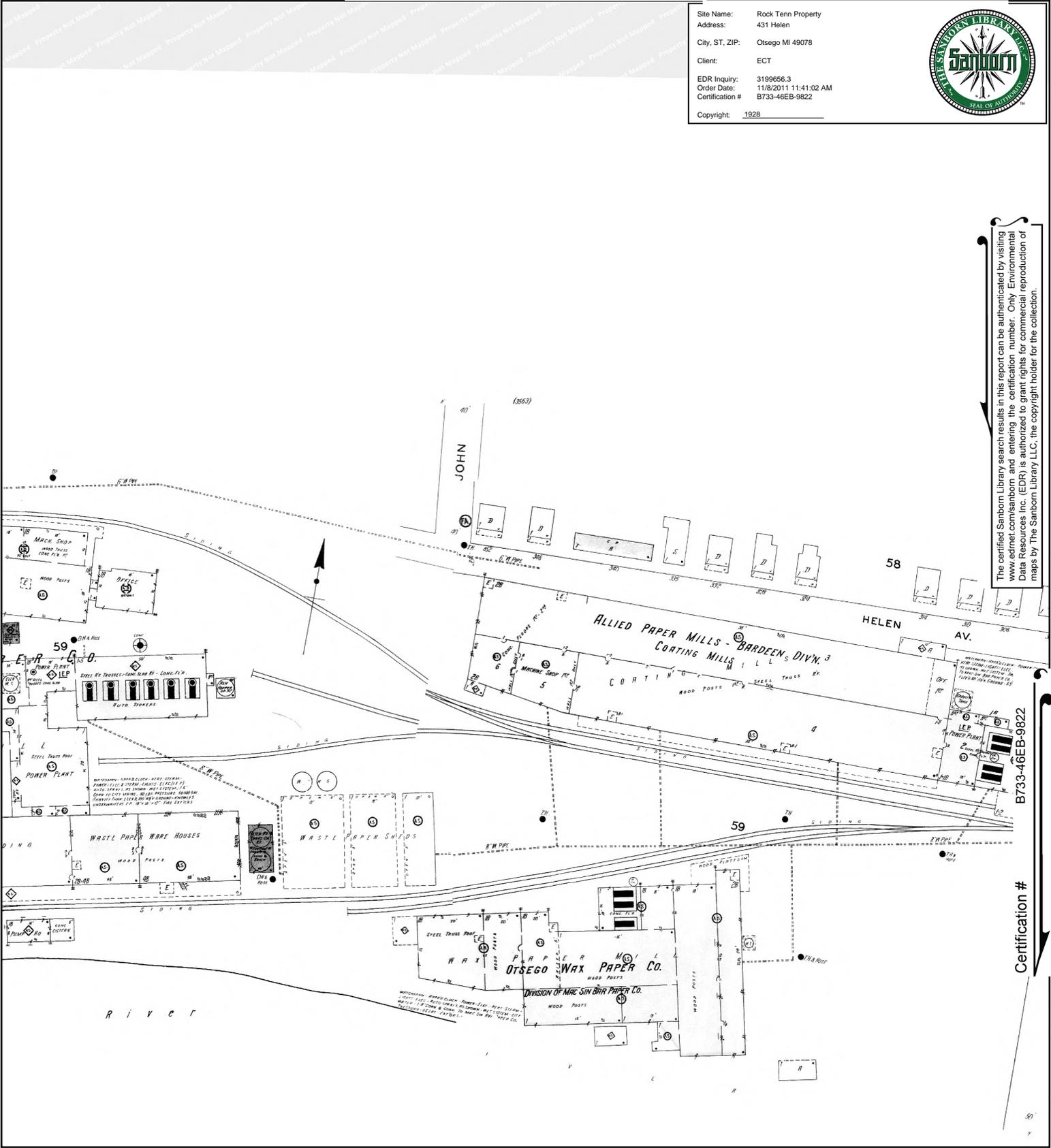


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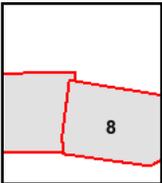
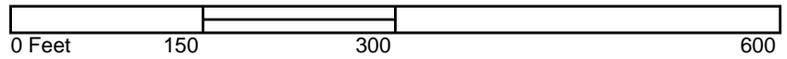
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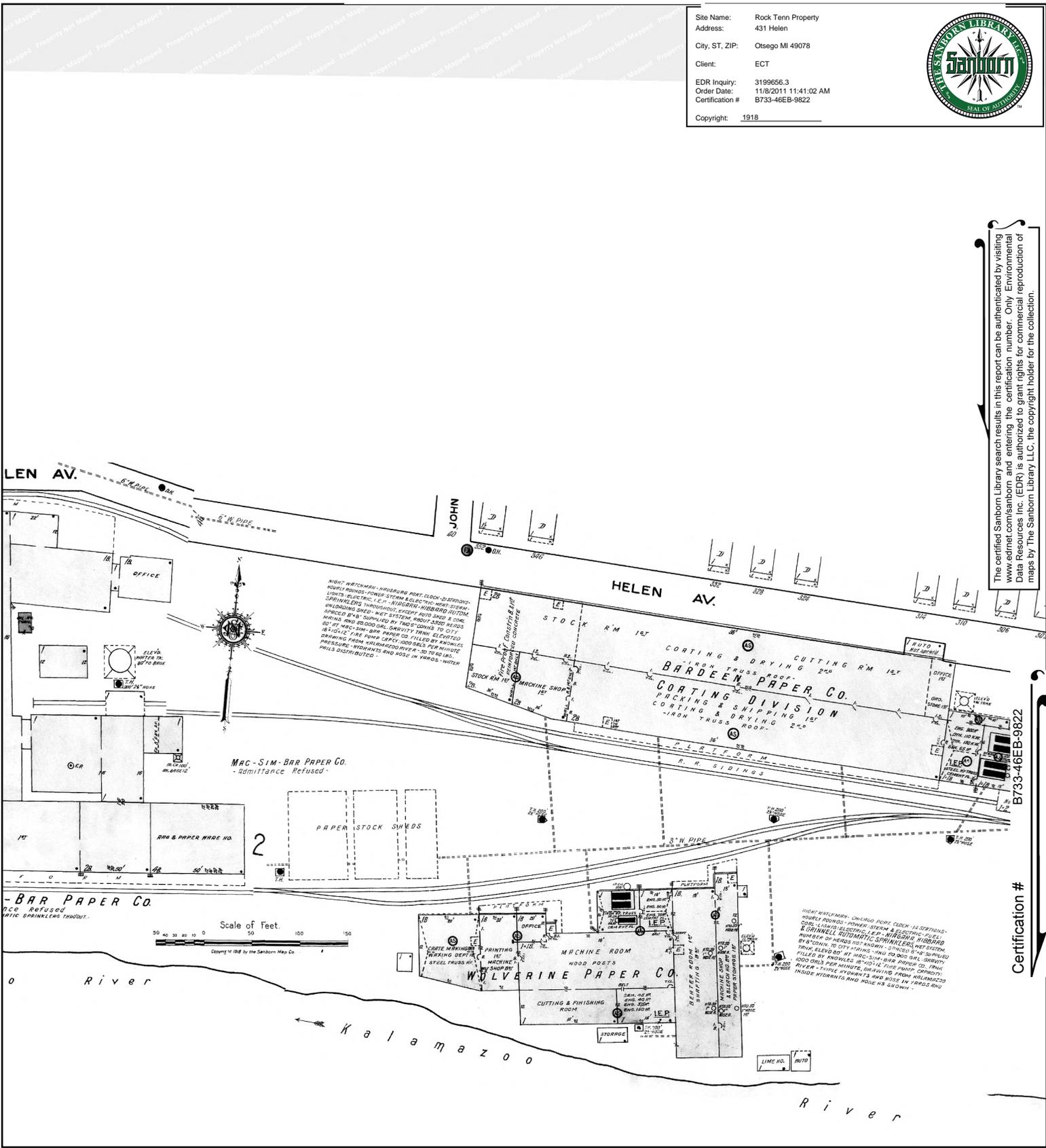


# 1918 Certified Sanborn Map

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 Certification #: B733-46EB-9822  
 Copyright: 1918

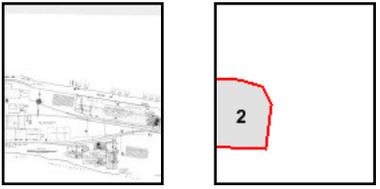
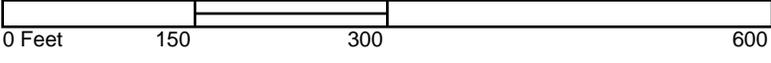


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Volume 1, Sheet 2

## **APPENDIX G**

### **Site Photographs**



Office entrance area, NE side of structures.



NE corner of structure.



NE area of facility.



Entrance drive from the E.



Utility area along NE side of property.



Utility area along NE side of property.



E side entrance gate, facing E.



Typical abandoned containers, N exterior wall.



AST for roof tar storage, abandoned.



Ground staining in containment area, N exterior side.



NE side of exterior grounds.



N side wall, central area.



N side of exterior, central area.



View to the NW of property from N central area.



Loading area, NW corner area.



Loading area, NW corner area.



Loading area, NW corner area.



Ground staining outside of propane house, NW side of property.



View from NW to SE of W side of structures.



Ground surface staining outside of W side warehouses, compressor room.



Abandoned containers.



SW corner of property, fuel house.



W side of warehouse structures.



SW corner of property, fuel house.



AST located within fuel house building.



Floor staining and odor within fuel house building.



Metal and waste debris within berms along rivers edge.



Rivers edge and waste debris.



Ground surface staining along rivers edge.



Heavy underbrush to the W of warehouse units, W side of property.



Abandoned materials, exterior.



Significant deterioration within power house.



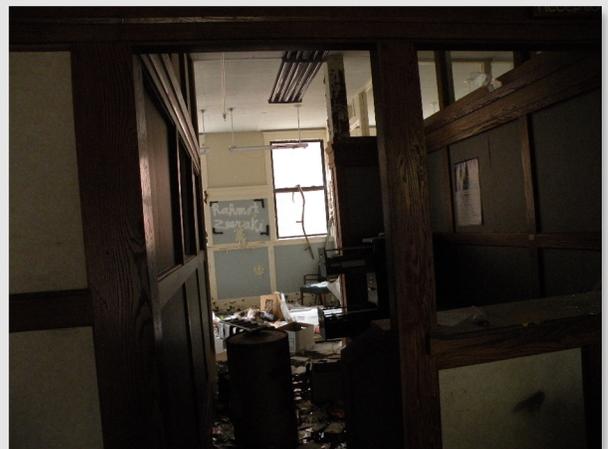
Abandoned containers, exterior.



Abandoned paint containers within office area.



Abandoned containers.



Office area deterioration.



Warehouse interior, W end of property.



Drum storage within warehouse units.



Typical deterioration within structures.



Abandoned drum storage within loading areas



Abandoned materials.



Abandoned materials.



View to the SW of W end warehouse units.



View to the W of W end warehouse units.



View to the W of former pond and fill area.



Abandoned materials, interior.



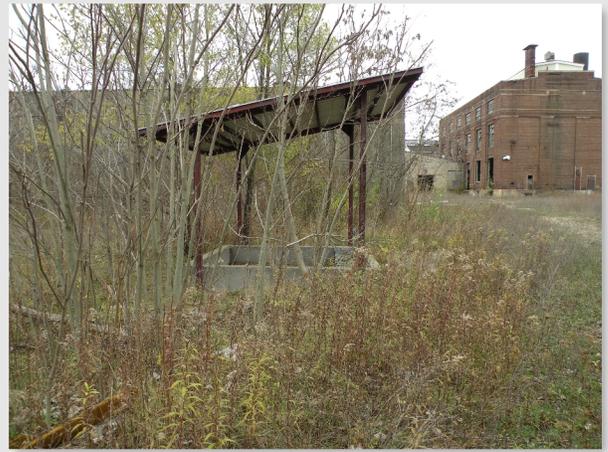
Abandoned materials, interior.



Propane units within propane house.



Nearby commercial operations, to the E.



Former fuel dispenser containment, E side of property.



Power house structure, E side of property.



NE and E central area.



E end of property, former AST pad.



Access point to facility interior.



Water treatment area and S side of building.



Water treatment equipment.



View from E to W along S side of building.



SE corner of main structure.



S side of treatment area.



Debris piles along E end of property, rivers edge.



View from SW to NE of S side of structure and water treatment area.



View from SW to NE along S side of structure.



View from river to the N of S side of structure, water treatment.



Typical water intake/outlet, S side of property.



Typical water intake/outlet, S side of property.



Underground utilities and water corridors, S side of property.



Basement area deterioration.



Abandoned containers in basement areas.



Used oil AST remaining in basement area.



Abandoned containers within basement area.



Lubricant materials drums in basement area.



Abandoned materials in basement areas.

## **APPENDIX H**

### **Resumes**

**Education**

B.S., Geology—West Virginia University,  
1996

**Registrations**

OSHA HAZWOPER 40-hour and 8-hour  
refresher training

**Affiliations**

Member, Michigan Association of  
Environmental Professionals

**Areas of Specialization**

Project Management, Remedial  
Investigations/Feasibility Studies,  
Remedial and Corrective Action  
Implementation, Brownfield  
Redevelopment, Demolition and  
Remediation Oversight, Regulatory  
Liaison, Community Outreach

**Project Manager; Inergy Automotive Systems**—Managed the assessment of a large manufacturing facility as part of a lease and equipment buyout from a large automotive manufacturer in Milan, Michigan. Conducted numerous site inspections to determine waste sources, potential release areas, and areas of concern based on the proposed use of the site for 3 years during construction of a new facility. Developed and implemented a suitable inspection regime of existing large hydraulically operated machinery and trench drain systems in lieu of a Category S baseline environmental assessment (BEA) as part of an indemnification agreement with the property owner. Reviewed and inspected the onsite wastewater treatment facility and determined illicit flow and other discharges that needed correction.

**Project Manager; TIF Analysis, L'Anse Warden Electric Company LLC**—Prepared updated TIF tables and worked with company staff to classify and submit invoices for reimbursement under a brownfield plan. The original TIF tables did not accurately reflect appropriate millages or capture timelines and neither the City or County were able to determine the correct capture as it related to specific taxes between the two jurisdictions in Michigan. Consulted with the company staff to organize and classify invoices by eligible activities to maximize the return based on the categories outline in a reimbursement agreement. Identified interest owed on the unreimbursed amount and was able to obtain a significant return to the client.

**Project Manager; EZ Mini Storage Facility, City of Ferndale**—Managed a \$5 million brownfield redevelopment of a former manufacturing facility in a “Core Community” in Ferndale, Michigan. Activities included Phase I/II environmental site assessment (ESA), BEA, and Act 381 brownfield work plan. Approved activities included building demolition, removal of six abandoned underground storage tanks (USTs) containing hazardous waste, removal and disposal of hazardous and nonhazardous contaminated soil, and a Single Business Tax brownfield credit application.

**Project Manager; Landfill Redevelopment, Confidential Client**—Managed Phase I/II ESA activities associated with the planned \$250 million redevelopment of an 80-acre abandoned landfill in Rochester Hills, Michigan. Project funding was provided by the developer and the city using Community Development Block Grant (CDBG) funds for work in the city right-of-way. Over 40 borings and methane test wells were installed through 40 feet of waste to characterize the fill material, assess methane migration, and determine the underlying geology. Prepared an Act 381 Brownfield Plan including \$30 million in Tax Increment Financing for eligible activities that were approved by City Council. Prepared a comprehensive Act 381 work plan and entered into negotiations with the Michigan Department of Environmental Quality (MDEQ) and the Attorney General's office.

**Project Manager; Landfill Redevelopment, Confidential Client**—

Managed brownfield activities including preparation and eventual approval by City Council of a \$15 million landfill redevelopment project in Rochester Hills, Michigan. The project included preparation of two Act 381 work plans for additional assessment and for remediation. The project included isolation of PCB-contaminated soil, methane assessment, and passive methane venting systems for proposed buildings.

**Project Manager; Former Stanley Door Redevelopment Project (Clean Michigan Initiative Project and Brownfield Project), City of Birmingham**—Project manager for a major downtown brownfield redevelopment site in Birmingham, Michigan. Project tasks included Phase I/II ESAs; BEAs; due care investigation/plan; asbestos survey and abatement; remedial design; plans/specifications; contractor evaluation and selection; demolition; methane assess-

ment and removal of abandoned landfill material; contaminated soil excavation; contaminated groundwater removal, transport, and disposal; brownfield facilitation; and community outreach.

**Project Manager; Former Ashmore Truck Facility, Kirco Development**—Managed environmental project activities associated with the planned \$150 million brownfield redevelopment of a former gasoline station and truck repair facility comprising 6 parcels of land in Ferndale, Michigan. Activities included Phase I/II ESA, BEA, and Act 381 brownfield work plan preparation. Approved activities included building demolition, site preparation, removal of two abandoned USTs, removal and disposal of contaminated soil, and a Michigan Business Tax brownfield credit application.

**Project Manager; Site Assessments, Washtenaw County**—Managed two EPA site assessment grants involving Phase I and II ESAs, BEAs, due care plans, brownfield plans, site identification, and community outreach.

**Project Manager; Abandoned Landfill Site, City of Madison Heights**—Managed a site assessment investigation and methane assessment of an abandoned landfill in Madison Heights, Michigan, using an EPA Hazardous Substance Assessment Grant awarded Macomb County.

**Project Manager; Site Assessments, Confidential Clients**—Managed Phase II ESA, BEA, and due care activities for multiple sites and clients in the City of Detroit and Wayne County using EPA Petroleum and Hazardous Substance Assessment Grants on behalf of the Detroit Wayne County Port Authority.

**Project Manager; Site Assessments, Confidential Clients**—Managed Phase II ESA, BEA, and due care activities for multiple sites and clients in the Cities of Detroit, Taylor, Melvindale, and Ecorse, and Romulus using EPA Petroleum and Hazardous Substance Assessment Grants on behalf of the Downriver Area Brownfield Consortium.

### **Education**

J.D., Law—Wayne State University, 1996  
B.S., Geological Sciences—Michigan State University, 1984

### **Registrations**

State Bar of Michigan (P51219)  
OSHA HAZWOPER 40-hour and 8-hour refresher training  
Hazardous Waste Operations Supervisors and Managers Certificate  
Sanitary Landfill Design Certificate  
Asbestos Awareness Program Certificate No. 189-2

### **Affiliations**

Commissioner—Oakland Township Parks & Recreation  
Member—City of Rochester Brownfield Redevelopment Authority  
Michigan Association of Environmental Professionals  
American Bar Association  
Michigan Bar Association  
Oakland County Bar Association

### **Areas of Specialization**

Geology, Hydrogeology, Soils  
Contamination Assessments, Groundwater Monitoring and Contaminant Assessments, Environmental Site Assessments, Property Acquisition/Transfer Environmental Management and Risk Management, Underground Storage Tank Closure and Remediation Investigations, Project Management

**Project Director; Environmental Site Assessments (ESAs), Various Clients**—Coordinated, managed, or performed over 1,200 ESAs for lending institutions, law firms, private industry, municipal organizations, construction developers, and private interests. Sites include vacant properties, manufacturing and industrial facilities, small to very large commercial buildings, landfill and dump sites, municipal garages, and other underground storage tank (UST) and hazardous material sites. Sites located throughout the United States, primarily the Midwest, Upper Midwest, and Rocky Mountain regions.

**Project Scientist; 10 Mile Drain PCB Investigation & Remediation, Macomb County Public Works Office**—Completed detailed environmental assessment activity and in-depth historical research investigation in an effort to evaluate historical and current sources of PCB materials impacting the drain system. Performed an investigation of the 10 Mile Drain storm sewer to characterize the nature and extent of PCB contamination. The investigation consisted of soil boring placement and soil sample collection in areas immediately adjacent to the drain system, as well as stormwater and sediment monitoring within the sewer, a corridor survey (aerial photograph, interviews of local residents and historic land use review) to determine the potential source of the contamination, and an inspection of the sewer condition using closed circuit televising.

**Project Scientist; Environmental Services, Wayne County Airport Authority**—Performed, coordinated, and/or managed numerous environmental assessment or environmental compliance projects at both Detroit Metro Airport and Willow Run Airport, including UST removal, spill response, assessment or compliance evaluations and miscellaneous drum identification and removal actions. Performed remediation activity associated with surface fuel spills and subsurface release during new terminal construction activity resulting from historical hydrant fuel system.

**Project Manager; Bulk Oil Terminal Release and Site Reconstruction, Knight Enterprises/Delta Fuels**—Managed all environmental assessment, remediation, and compliance issues resulting from a 100,000-gallon gasoline overflow event, impacting both onsite and offsite area in Toledo, Ohio. Site involved federal and state regulatory action. The secondary containment system was replaced with approximately 3,000 linear feet of HDPE liner. Managed and designed the construction and permitting for an onsite water treatment and remediation system. Provided regulatory compliance assistance, including the preparation and implementation of treatment, storage, and disposal facility closure plan; spill prevention, control, and countermeasure plan; and facility response plan.

**Project Scientist; Due Diligence Manager, ITC (International Transmission)**—Managed and completed all land acquisition projects related to electric utility expansion throughout the Midwest (Michigan, Iowa, Kansas, and Minnesota), including Phase I/II ESAs, BEAs, and TSPs on a variety of sites, both active electrical

utility sites and undeveloped acreage. Included corridor study assessment activity, detailed title work review, and significant area wide impact investigations.

**Project Scientist; Manufactured Gas Plant (MGP) Site Assessment and Risk Evaluation, Michigan Consolidated Gas Company**—Performed site investigations, exposure evaluations, and risk assessments at former MGPs as part of a complex effort to implement a plan for the investigation of 23 sites located throughout Michigan. The plan is designed to meet the company's obligations under Michigan's requirements to diligently pursue response activities. Conducted records searches and other information gathering; prepared site summary reports; prioritized all 23 for

further investigation; provided oversight of a Geoprobe investigation at 9 of the 23 sites; and formulated a plan, including a budget and schedule, for response activities at all 23 sites.

**Project Director; Large-Scale Area Wide Phase I ESAs, Various Clients**—Completed six large-scale area wide Phase I ESAs on specific residential housing redevelopment areas in the City of Detroit, Michigan. Each area wide assessment involved the potential acquisition of from 80 to 230 vacated residential lots within certain redevelopment neighborhoods. The area wide assessment approach involved the historical and regulatory evaluation of all properties located within a specific grid or block area, followed by an individual assessment of each acquisition parcel in relation to the environmental conditions of the area. A review of all available historical documentation was performed, including Sanborn fire insurance maps, historical aerial photographs, street index directories, FEMA flood zone maps, zoning documentation, building, assessment, and fire department records, and specific title documentation. Assisted with parcel identification and quality of title issues, with all parcels having been or slated to be reverted to City of Detroit ownership. Compiled comprehensive assessment reports for each assessment area, including detailed maps and parcel summaries. Prepared all applicable Michigan State Housing Development Authority (MSHDA) applications and environmental documentation for submittal. The projects were completed on time to conform to MSHDA deadlines and within budget.

**Project Director/Manager; Phase II ESA Activity, Various Clients**—Coordinated, managed, or performed over 600 Phase II ESAs onsite throughout the Midwest, including industrial and commercial properties, residential properties, and rails-to-trails corridors. Sites ranged in size from very small lots to large acreage developments. Chemical impacts evaluated include petroleum products, solvents and various DNAPLs, PCBs, and various metals. Completed baseline environmental assessments on numerous Michigan sites.

**Project Manager; Site Characterization and Investigation, Remedial Investigation/Feasibility Study (RI/FS); Confidential Client**—Managed and performed site investigation, RI/FS, and remedial design activities on a former solvent recycling and treatment, storage and disposal RCRA facility. Soil and groundwater impacts evaluated, with onsite and offsite risk assessment.

**Project Director; Site Characterization and Investigation, Remediation and Site Closure; Ryder Truck Rental, Inc.**—Managed or performed all phases of site investigation activities for petroleum-related contamination at numerous Midwest locations. Activities included feasibility analysis, and remedial design and implementation primarily pertaining to onsite and offsite low temperature thermal desorption and groundwater treatment.

**Project Manager; Landfill Condition and Design Assessment, Allstate Insurance Company**—Performed a landfill inspection in Weld County, Colorado, regarding condition, operations, and management and future cell design review for new bond issue considerations and liability limitations.

**Project Manager; Site Assessment and Property Transfer Management**—Performed all phases of site assessment activities on site in Detroit, Michigan, with numerous historical industrial uses in order to facilitate plant demolition, remediation, and redevelopment. Strong legal and financial influence and regulatory agency involvement, including covenant-not-to-sue negotiations and property risk management settlements.

**Project Manager; Site Investigation, Remedial Design, and Risk Management; Bulk Oil Storage Facility**—Performed site assessment activities of a large bulk oil storage terminal in Michigan with significant legal and financial institution involvement. Provided remedial design alternatives, with an emphasis on *in situ* bioremediation enhanced groundwater and soil treatment using a variety of horizontal boring techniques and reapplication of the bioenhanced medium.

**Project Manager; ESA, Confidential Client**—Performed an ESA on over 4,000 acres of land for future development in eastern Colorado. Assessment included site investigation, historical review, regulatory review, and recommendations.

**Project Manager; Surface Water and River Sediment Investigation-Detroit River, Confidential Client**—Performed all phases of field and reporting investigation for a section of river reportedly impacted by numerous chemical contaminants from nearby and upstream industries. Investigation included sample location plan, sediment and water collection and analysis, data interpretation, and environmental impact and assessment recommendations.

**Project Manager; Hydrocarbon Remediation Investigation, Kubat Equipment and Service Company**—Performed functions related to UST removal, closure soil sampling, contaminant assessment and reporting, monitoring well placement, hydrogeologic investigation, and remedial action design and implementation for large county UST facility in Jefferson County, Colorado.

**Expert Witness; Soil and Groundwater Conditions, Risk Management; Confidential Client**—Provided expert testimony relating to subsurface petroleum and solvent contamination impacts on neighboring properties, allegedly resulting from a number of potential offsite and former onsite sources.

**Expert Witness; Groundwater Conditions, D & T Construction Company**—Provided expert testimony and consulting regarding alleged groundwater mounding and depletion impacts during construction activities, specifically related to the diminished capability of nearby drinking water wells.

**Quality Control Technician; Landfill Construction at Various Disposal Sites**—Provided onsite quality control activities during the construction of landfill lines and berms on numerous disposal facilities throughout southeast Michigan and northern Ohio.

**Project Manager; Site Investigations and Regulatory Compliance Assessments, Confidential Client**—Performed numerous site investigations and regulatory compliance assessments of dairy product storage and production facilities in Wisconsin, with particular emphasis on corporate operations transfer, worker safety issues, and waste water treatment difficulties.

**Project Manager; Site Characterization and Remediation Investigation and Design, Confidential Client**—Performed site characterization and remedial investigation on property prior to high-rise tower construction in southeast Michigan. Completed soil and groundwater sampling for past contamination resulting from large volumes of TCE (trichloroethylene) spilling and leaking. Prepared remedial design of contaminated groundwater collection and treatment system.

**Project Manager; UST Site Characterization Investigations, Shell Oil Company**—Performed site characterization studies at numerous Shell service station facilities in southeast Michigan, including utility locate diagrams, soil borings and sampling, field analysis, and reporting and recommendations.

**Project Manager; Hydrogeologic Investigations, Mobil Oil Company**—Performed hydrogeologic investigations of Mobil facilities in southeast Michigan related to groundwater contamination resulting from UST impairment. Investigations included monitoring well placement, groundwater characteristic determination, water sampling and analysis, reporting, and recommendations.

**Project Manager; UST Closure and Contaminant Assessments, Venta and Conoca Oil Companies**—Performed numerous site closure assessments in Colorado, including soil boring studies, hydrogeologic investigations, remedial design and remediation, soil venting system design and placement, regulatory agency interfacing, reporting, and recommendations.

## ***Presentations***

Mammen, D.S. 1990. Environmental Issues, Financial Risks, and Lender Liability. Presented at FDIC (Federal Deposit Insurance Corporation), Denver, Colorado; September 1990.

Mammen, D.S. 1990. Environmental Site Assessments. Presented at National Association of Industrial and Office Parks (NAIOP - Michigan); March 1990.

Mammen, D.S. and Mosher, R.E. 1989. Environmental Impact of Road Salt Usage as a Winter Street De-Icer - Case Study: Buckhorn Lake, Orion Township, Oakland County, MI. Presented and Published at Conference and Exhibition on Pollution Control Technologies, Detroit, Michigan; October 27, 1989.

## **APPENDIX I**

### **Previous Environmental Reports**

# PCB EVALUATION

Phase I

Rock-Tenn Company Otsego Mill  
Otsego, Michigan

Lead Fill

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## 1.0 INTRODUCTION

Conestoga-Rovers and Associates (CRA) was retained by Long Aldridge & Norman (LA & N) to conduct an evaluation of areas and materials potentially impacted with polychlorinated biphenyls (PCBs) at the Rock-Tenn Company (RTC) Otsego Mill based on current operations and past disposal practices by previous mill owners.

## 1.1 BACKGROUND

From the 1950's thru the 1970's, PCBs were utilized extensively in applications requiring heat and chemical stability. The vast majority of PCBs were utilized as dielectric fluids, heat transfer oils, high temperature hydraulic oil and plasticizers/resins. PCBs were also used in the specialty paper and printing industries. The single largest use in that industry was the use of Aroclor 1242 by NCR in the manufacture of carbonless paper. Aroclor 1254 was also utilized in inks and other paper additives. The presence of PCBs in paper products resulted in PCBs becoming a contaminant of recycled paper products as well as wastewater discharges and wastewater treatment sludges from recycled paper mills.

PCBs have been detected in sediments in the Kalamazoo River and three paper companies with mills on the river (HM Holdings, Inc./Allied Paper, Inc., Georgia Pacific Corporation and Simpson Plainwell Paper Company (PRPs) have entered into an administrative consent order with the Michigan Department of Natural Resources (MDNR). Based on the

data provided to RTC, both Aroclors 1242 and 1254 have been detected in the discharge and wastewater sludge at the Otsego Mill when it was owned and operated by Mead and are also potentially present in on-site landfills formerly operated by Mead.

PCBs have been controlled since 1979. It is therefore unlikely that current operations would be a source of any PCBs identified at the plant.

## 1.2 SCOPE

The purpose of the present study was to develop information for LA & N to assess potential claims relating to the Otsego Mill. Based on the presence of PCBs in the scrap paper, effluent and wastewater sludge during past operations, any materials remaining at the mill from these sources could be impacted with PCBs. The first phase of the PCB evaluation was designed to determine whether current operations are acting as a source of PCBs and whether wastes remaining from previous operations by former owners are impacted with PCBs. The second phase, if necessary, would delineate the extent of PCB impacts at the mill, had PCBs been identified.

## 2.0 FIELD PROGRAM

### 2.1 PHASE I SUMMARY

Phase I consisted of a review of technical information provided to RTC, which was provided by the PRP's to RTC, as well as a review of processes to determine what products and by-products at the mill could have become impacted with PCBs. Random grab samples were collected from raw materials, products, discharges, lagoon sediments and clarifier sludge and were analyzed for PCBs. Soil borings were installed in the former sludge dewatering lagoon and the former landfill. Samples from each boring were submitted for PCB analysis.

### 2.2 FACILITY REVIEW

Manufacturing practices and products at the mill have been similar since RTC purchased the mill in 1987. The primary difference has been the capital improvements made by RTC to upgrade production at the facility. Due to the rapid inventory turnover and the large volumes of raw materials and products processed by RTC on a daily basis, it is very unlikely that PCB contaminated feedstock, product or wastewater sludge would still be present in the mill. The only other known presence of PCBs at the mill since RTC purchased the plant were PCB transformers that have been replaced or retrofilled by non-PCB transformers in 1987 and 1992. There reportedly was no evidence of spillage at the transformer locations.

The areas with a high probability of PCB impact, therefore, are areas containing wastes or process materials from periods of mill operation when PCBs were widely used (1950's thru 1979). CRA's sampling program was designed to evaluate the high probability areas of previous sludge and waste disposal, areas of mixed Mead and RTC use, and current process areas to verify that there are no on-going sources of PCBs being released to the environment.

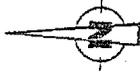
### 2.3 SOIL SAMPLING PROGRAM

The soil sampling program was conducted on May 5 and May 6, 1993 at the wastewater treatment sludge disposal fill area at the former landfill and at the former sludge dewatering area near the southwestern corner of the mill. The borings were advanced using hollow stem augers with continuous split spoon sampling. Samples retained for chemical analysis were based on visual inspection of the samples. Samples were selected which contained materials that resembled wastewater treatment sludge from the mill based on the fibrous texture and gray to brown color. Auger sections and other downhole equipment were steam cleaned prior to drilling and between boreholes. Stainless-steel split spoons were washed with water and a non-phosphate detergent using a brush and were rinsed thoroughly with distilled water. Sampling equipment was allowed to air dry prior to each use. Fluids used for cleaning were stored in containers on-Site pending analytical results.

Three boreholes were completed in the former landfill at the locations shown in Figure 2.1. SB-1 was completed at the north end of the estimated fill area to a depth of 18 feet below ground surface. SB-2 was completed in the southeast corner of the estimated fill area and SB-3 in the southwest corner of the fill area to a depth of 16 feet bgs. All three borings contained wastewater treatment sludge, poly waste and miscellaneous waste at varying depths. Two samples from each boring were submitted for PCB analysis. A third sample from SB-1 was submitted as a duplicate for quality control purposes.

Three boreholes were also drilled in the former sludge dewatering area as shown on Figure 2.2. According to plant personnel, this area was previously used by Mead and has not been used by RTC. SB-4 was completed to a depth of 11 feet bgs while SB-5 and SB-6 were completed to a depth of nine feet bgs. SB-4 was the only boring in the dewatering area that contained wastewater treatment sludge. SB-4 and SB-5 both contained cinders, which were apparently remaining from when the mill used coal to fuel its boilers. The sample from SB-4 containing wastewater sludge was submitted for PCB analysis, as were samples of native soil from both SB-4 and SB-6. No samples from SB-5 were submitted for PCB analysis because the boring contained only soil, paper stock and cinders and did not contain any material resembling the wastewater treatment sludge. Logs for the soil borings are contained in Appendix A.

All samples for PCB analysis were placed into laboratory pre-cleaned glass sample containers, were labeled and were shipped in iced coolers via overnight courier to Wadsworth Alert Laboratories (WAL) in



NOT TO SCALE

LEGEND

● SOIL BORING LOCATION

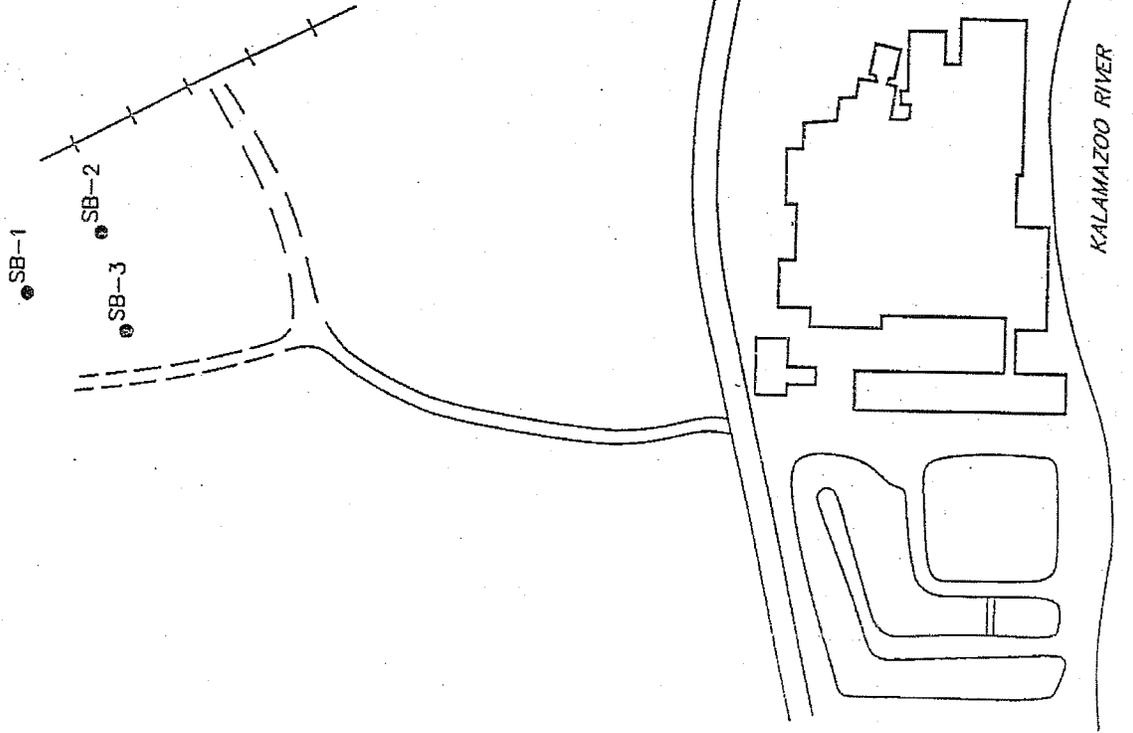
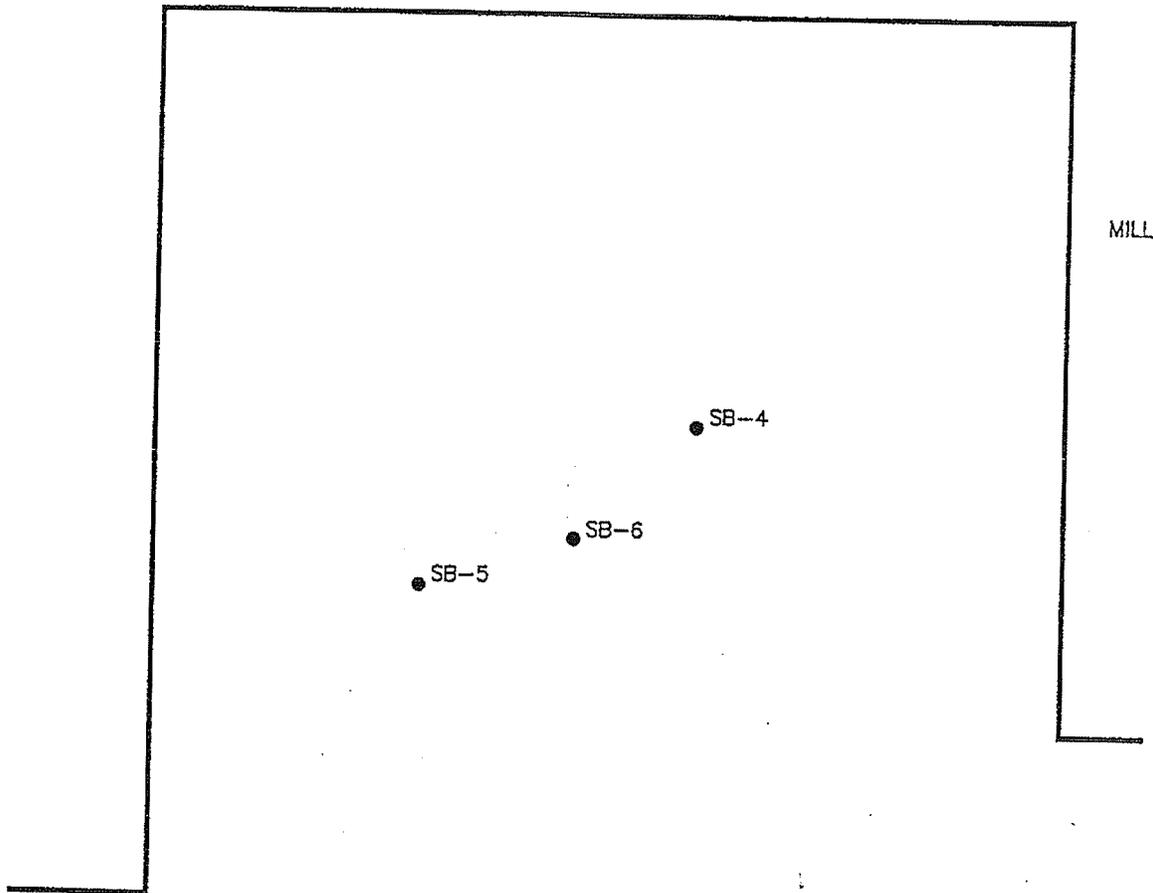


figure 2.1  
MEAD SLUDGE DISPOSAL LANDFILL  
SOIL BORING LOCATIONS  
OTSEGO MILL  
*Rock-Tenn Company*



LEGEND

● SOIL BORING LOCATION



NOT TO SCALE

figure 2.2  
FORMER SLUDGE DEWATERING LAGOON  
SOIL BORING LOCATIONS  
OTSEGO MILL  
*Rock-Tenn Company*

**CRA**

North Canton, Ohio following standard Chain-of-Custody procedures. Samples were collected from the inner portion of the split-spoon sampler after discarding the outer portions of the sample that may have come in contact with other soils or drilling equipment. This practice is followed to minimize the potential for cross contamination of samples.

#### 2.4 SLUDGE SAMPLING

Wastewater sludge grab samples were collected from the clarifier return feeding the mill and from ten locations in the wastewater treatment ponds number two and three as shown on Figure 2.3. The clarifier sludge return was sampled at two separate times on May 5, 1993 using the mills' sample scoop and transferring the samples into laboratory pre-cleaned glass sample containers. Pond sediment samples were collected directly into laboratory pre-cleaned glass sample containers by taping sample jars to a polyethylene pole and extending the pole below the pond surface until the sample container reached the sediments. The sample jars were positioned such that the sediments entering the jar did not contact any other part of the sampling equipment.

Sample containers were labeled and shipped in iced coolers via overnight courier to WAL following standard Chain-of-Custody procedures. Samples were analyzed for PCBs.

## 2.5 PRODUCT/FEEDSTOCK SAMPLING

In order to evaluate the potential for PCBs in current operations, samples were collected from the mill product and from the various individual feedstocks as well as a mixture of feedstocks used in the recycled products. Samples were collected by randomly placing product or feedstock items, by category, into sealable plastic bags. Samples were labeled and were shipped via overnight courier to WAL using standard Chain-of-Custody procedures.

## 2.6 WASTEWATER/OUTFALL SAMPLING

The other potential source areas of PCBs, based on current operations, were the current plant outfalls from both process discharge and from stormwater/cooling water discharge. Samples were collected from the mill effluent, the wastewater treatment pond effluent to the Kalamazoo River and from the stormwater/cooling water outfall also discharging to the River. Samples were collected directly into the laboratory pre-cleaned glass sampling bottles for the pond effluent and stormwater outfall. The mill effluent samples were collected in the sampling scoop used by the plant specifically for that discharge. Sample containers were properly labeled and were shipped in iced coolers via overnight courier to WAL following standard Chain-of-Custody procedures.

## 2.7 CHEMICAL ANALYSIS

All samples were analyzed for PCBs using method 8080 as described in USEPA SW846 entitled "Test Methods for Evaluating Solid Waste, Physical Chemical Methods" (3rd Edition), September 1986. Quality control samples consisted of duplicates of soil samples from SB-1 and wastewater samples from the wastewater pond effluent. A rinsate blank was also analyzed to evaluate the potential cross-contamination from sampling equipment.

### 3.0 ANALYTICAL RESULTS

Chemical analyses provided results supporting the concept of past versus current sources of PCBs at recycled paper mills. Analytical results from the wastewater treatment sludges during previous mill operations show low level PCB concentrations in both sludges in the landfill and the sludge dewatering area operated by Mead. Concentrations of PCBs in the landfill ranged from non-detect to 2.9 parts per million (ppm). The sludge sample from the dewatering "lagoon" contained 3.8 ppm. All PCBs detected during this investigation were Aroclor 1242. No other raw material, product, wastewater, stormwater or sediment sample contained detectable concentrations of PCBs. Tables 3.1 thru 3.3 present the analytical results from the samples collected during the Otsego Mill PCB evaluation. The chemical data validation summary and copies of laboratory reports are contained in Appendix B.

TABLE 3.1  
ANALYTICAL RESULT SUMMARY  
ROCK-TENN COMPANY, OTSEGO MILL  
PCB EVALUATION

Soil Boring Samples  
Concentration (mg/kg)

| <u>Sample No.</u> | <u>Boring Location</u> | <u>Depth (ft)</u> | <u>Arochlor 1242</u> | <u>Qualifier</u> |
|-------------------|------------------------|-------------------|----------------------|------------------|
| S001              | SB-1                   | 6 - 8             | 2.9                  | -                |
| S002              | SB-1                   | 16 - 18           | 2.6                  | J                |
| S003 (Dup.)       | SB-1                   | 16 - 18           | 1.5                  | J                |
| S004              | SB-2                   | 8 - 10            | ND                   | -                |
| S005              | SB-2                   | 12 - 14           | ND                   | -                |
| S006              | SB-3                   | 8 - 10            | 1.4                  | -                |
| S007              | SB-3                   | 14 - 16           | ND                   | -                |
| S008              | Rinsate Blank          | (See Table 3.3)   |                      |                  |
| S009              | SB-4                   | 1 - 3             | 3.8                  | -                |
| S010              | SB-4                   | 9 - 11            | ND                   | -                |
| S011              | SB-6                   | 7 - 9             | ND                   | -                |

Note:

ND - Not detected at method detection limit of 1 mg/kg  
J - The associated value is an estimated quantity for detected analytes.

TABLE 3.2  
ANALYTICAL RESULT SUMMARY  
ROCK-TENN COMPANY, OTSEGO MILL  
PCB EVALUATION

Solids/Sediment Samples  
Concentration (mg/kg)

| <u>Sample No.</u> | <u>Location</u>     | <u>PCBs</u> |
|-------------------|---------------------|-------------|
| SO20              | Clairifier Sludge   | ND          |
| SO21              | Product Mix         | ND          |
| SO22              | Scrap Feedstock Mix | ND          |
| SO23              | Scrap Newstock      | ND          |
| SO24              | Scrap Corrugated    | ND          |
| SO25              | Scrap Magazines     | ND          |
| SO26              | Pond #2 Sediment    | ND          |
| SO27              | Pond #2 Sediment    | ND          |
| SO28              | Pond #2 Sediment    | ND          |
| SO29              | Pond #2 Sediment    | ND          |
| SO30              | Pond #2 Sediment    | ND          |
| SO31              | Pond #2 Sediment    | ND          |
| SO32              | Pond #2 Sediment    | ND          |
| SO33              | Pond #3 Sediment    | ND          |
| SO34              | Pond #3 Sediment    | ND          |
| SO35              | Pond #3 Sediment    | ND          |
| SO36              | Clairifier Sludge   | ND          |

Note:

ND - Not detected at method detection limit of 1 mg/kg

TABLE 3.3  
ANALYTICAL RESULT SUMMARY  
ROCK-TENN COMPANY, OTSEGO MILL  
PCB EVALUATION

Water Samples  
Concentration ( $\mu\text{g/l}$ )

| <u>Sample No.</u> | <u>Location</u>                                       | <u>PCBs</u> |
|-------------------|---|-------------|
| W001              | Cooling Water/Storm Outfall                           | ND          |
| W002              | Wastewater Discharge from<br>Polishing Pond (Outfall) | ND          |
| W003              | Wastewater Discharge from<br>Polishing Pond (Outfall) | ND          |
| W004              | Plant Effluent  | ND          |
| W008              | Rinsate Blank   | ND          |

Note:

ND - Not detected at method detection limit of 0.5  $\mu\text{g/l}$

4.0 CONCLUSIONS

Based on the information collected and the analytical data developed at the Otsego Mill, there is no evidence that current RTC mill operations are contributing to PCB contamination identified in the Kalamazoo River. PCBs were not present in the plant feedstock, wastewater discharge or wastewater treatment sludge associated with current operations. Surficial sediments in the wastewater treatment ponds, which resulted from current RTC operations, also did not contain PCBs.

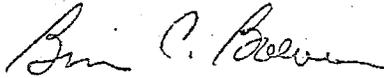
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p. 7?

Results from this study indicated that past mill operations produced by-products that were contaminated with low levels of PCBs. Wastewater sludges present in the on-Site landfill and the former sludge dewatering area used by Mead contained low levels of PCBs. However, based on the physical and chemical properties of PCBs, the low concentrations of PCBs identified in past waste materials and the fact that contaminated materials are isolated from potential transport or exposure routes, these areas are not currently contributing to PCB contamination identified in the vicinity of the mill.

true?

All of Which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in cursive script, appearing to read "Brian C. Boevers".

Brian C. Boevers

*APPENDIX A*

*SOIL BORING LOGS*

# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-01)

PROJECT NAME: OTSEGO MILL  
 PROJECT NO.: 5375  
 CLIENT: ROCK-TENN  
 LOCATION: CENTER OF LANDFILL

HOLE DESIGNATION: SB-1  
 DATE COMPLETED: MAY 5, 1993  
 DRILLING METHOD: 4 1/4" ID HSA  
 CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft. BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                             | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION | SAMPLE |       |       |              |
|------------------|---|----------------------|-------------------------|--------|-------|-------|--------------|
|                  |   |                      |                         | NUMBER | STATE | VALUE | HNU<br>(ppm) |
|                  | CL-CLAY(FILL), some silt, gray brown                            |                      |                         |        |       |       |              |
| -2.5             | SW-SAND(FILL), medium grained, brown                            | -2.5                 |                         | 1SS    | X     | 9     | 1.1          |
| -5.0             | PAPER SLUDGE(FILL), some sand and clay, contains plastic, paper | -5.0                 |                         | 2SS    | X     | 5     | 18           |
| -7.5             |   |                      |                         | 3SS    | X     | 9     | 16.9         |
| -10.0            |   |                      |                         | 4SS    | X     | 5     | 8.5          |
| -12.5            |   |                      |                         | 5SS    | X     | 10    | 9            |
| -15.0            |   |                      |                         | 6SS    | X     | 4     | 5.7          |
| -17.5            | CL-CLAY, some paper fiber, gray, dry                            | -16.5                |                         | 7SS    | X     | 15    | 5.1          |
| -18.0            | END OF HOLE @ 18.0 FT. BGS                                      | -18.0                |                         | 8SS    | X     | 9     | 6.6          |
| -20.0            |   |                      |                         |        |       |       |              |
| -22.5            |   |                      |                         |        |       |       |              |
| -25.0            |   |                      |                         |        |       |       |              |
| -27.5            |   |                      |                         |        |       |       |              |
| -30.0            |   |                      |                         |        |       |       |              |
| -32.5            |   |                      |                         |        |       |       |              |

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
 CHEMICAL ANALYSIS ○ WATER FOUND ∇ STATIC WATER LEVEL ▼

# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-02)

PROJECT NAME: OTSEGO MILL

HOLE DESIGNATION: SB-2

PROJECT NO.: 5375

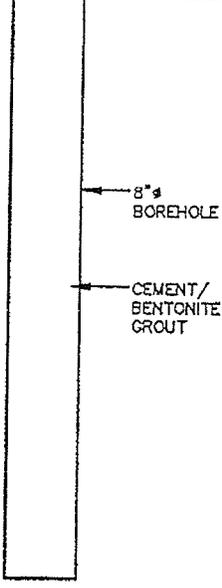
DATE COMPLETED: MAY 5, 1993

CLIENT: ROCK-TENN

DRILLING METHOD: 4 1/4" ID HSA

LOCATION: SOUTHEAST CORNER OF LANDFILL

CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                    | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION   | SAMPLE |       |       |                      |
|-----------------|--|----------------------|---|--------|-------|-------|----------------------|
|                 |  |                      |   | NUMBER | STATE | VALUE | H<br>N<br>U<br>(ppm) |
|                 | CL-CLAY(FILL), some silt, brown                        |                      |   |        |       |       |                      |
| 2.5             | SW-SAND(FILL), medium grained, brown                   | -2.5                 |  <p style="text-align: center;">8" BOREHOLE</p> <p style="text-align: center;">CEMENT/<br/>BENTONITE<br/>GROUT</p> | 1SS    | X     | 5     | 1                    |
| 5.0             | PAPER SLUDGE(FILL), some clay, contains plastic, paper | -4.5                 |   | 2SS    | X     | 9     | 0.1                  |
| 7.5             |  |                      |   | 3SS    | X     | 3     | 0.2                  |
| 10.0            |  |                      |   | 4SS    | ○     | 9     | 8.3                  |
| 12.5            |  |                      |   | 5SS    | X     | 15    | 13.3                 |
| 15.0            | SW-SAND, medium to coarse grained, brown, dry          | -15.0                |   | 6SS    | ○     | 2     | 32.3                 |
| 17.5            | END OF HOLE @ 16.0 FT. BGS                             | -16.0                |   | 7SS    | X     | 8     | 10.1                 |
| 20.0            |  |                      |   |        |       |       |                      |
| 22.5            |  |                      |   |        |       |       |                      |
| 25.0            |  |                      |   |        |       |       |                      |
| 27.5            |  |                      |   |        |       |       |                      |
| 30.0            |  |                      |   |        |       |       |                      |
| 32.5            |  |                      |   |        |       |       |                      |

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ○ WATER FOUND ∇ STATIC WATER LEVEL ▼

# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-03)

PROJECT NAME: OTSEGO MILL

PROJECT NO.: 5375

CLIENT: ROCK-TENN

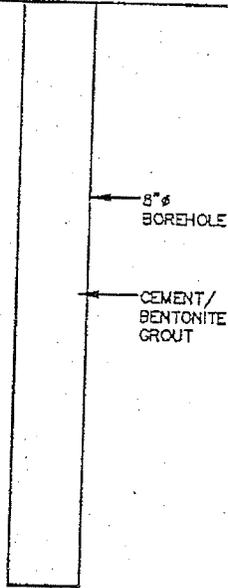
LOCATION: SOUTHWEST CORNER OF LANDFILL

HOLE DESIGNATION: SB-3

DATE COMPLETED: MAY 5, 1993

DRILLING METHOD: 4 1/4" ID HSA

CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS   | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION   | SAMPLE |       |       |      |
|-----------------|---------------------------------------|----------------------|---|--------|-------|-------|------|
|                 |                                       |                      |   | NUMBER | STATE | VALUE | UNIT |
|                 | CL-CLAY(FILL), some silt, brown       |                      |   |        |       |       |      |
| -2.5            | SW-SAND, medium grained, brown        | -2.5                 |  <p>8" BOREHOLE</p> <p>CEMENT/<br/>BENTONITE<br/>GROUT</p> | 1SS    | X     | 3     | 0.7  |
| -5.0            | PAPER SLUDGE, contains plastic, paper | -5.0                 |   | 2SS    | X     | 28    | 1.1  |
| -7.5            |                                       |                      |   | 3SS    | X     | 10    | 18.1 |
| -10.0           |                                       |                      |   | 4SS    | X     | 8     | 24   |
| -12.5           |                                       |                      |   | 5SS    | X     | >50   | 26.5 |
| -15.0           | FIBROUS MASS, gray                    | -14.5                |   | 6SS    | X     | 21    | 23.8 |
| -16.0           | END OF HOLE @ 16.0 FT. BGS            | -16.0                |   | 7SS    | X     | 5     | 21.9 |
| -17.5           |                                       |                      |   |        |       |       |      |
| -20.0           |                                       |                      |   |        |       |       |      |
| -22.5           |                                       |                      |   |        |       |       |      |
| -25.0           |                                       |                      |   |        |       |       |      |
| -27.5           |                                       |                      |   |        |       |       |      |
| -30.0           |                                       |                      |   |        |       |       |      |
| -32.5           |                                       |                      |   |        |       |       |      |

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
 CHEMICAL ANALYSIS ○ WATER FOUND ∇ STATIC WATER LEVEL ▼

# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-04)

PROJECT NAME: OTSEGO MILL

HOLE DESIGNATION: SB-4

PROJECT NO.: 5375

DATE COMPLETED: MAY 6, 1993

CLIENT: ROCK-TENN

DRILLING METHOD: 4 1/4" ID HSA

LOCATION: 45' FROM NORTH WALL,  
42' FROM EAST WALL

CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                             | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION |                               | SAMPLE |       |       |     |
|-----------------|---|----------------------|-------------------------|-------------------------------|--------|-------|-------|-----|
|                 |   |                      |                         |                               | NUMBER | STATE | VALUE | HNU |
|                 | SW-SAND(FILL), fine to medium grained, brown                    |                      |                         |                               | 1SS    | X     | 1     |     |
| -2.5            | PAPER SLUDGE(FILL), gray  | -1.5                 |                         |                               | 2SS    | X     | 2     | 0.7 |
| -5.0            |   | -5.0                 | ▽                       | 8" BOREHOLE                   | 3SS    | X     | 2     | 1.1 |
| -7.5            | CINDERS(FILL), black  | -7.0                 |                         | CEMENT/<br>BENTONITE<br>GROUT | 4SS    | X     | 10    | 1.5 |
| -10.0           | GW-GRAVEL(NATIVE), some medium to coarse<br>grained sand, brown | -9.5                 |                         |                               | 5SS    | X     | 26    | 3.1 |
| -11.0           | END OF HOLE @ 11.0 FT. BGS                                      | -11.0                |                         |                               | 6SS    | X     | 46    | 0.5 |
| -12.5           |   |                      |                         |                               |        |       |       |     |
| -15.0           |   |                      |                         |                               |        |       |       |     |
| -17.5           |   |                      |                         |                               |        |       |       |     |
| -20.0           |   |                      |                         |                               |        |       |       |     |
| -22.5           |   |                      |                         |                               |        |       |       |     |
| -25.0           |   |                      |                         |                               |        |       |       |     |
| -27.5           |   |                      |                         |                               |        |       |       |     |
| -30.0           |   |                      |                         |                               |        |       |       |     |
| -32.5           |   |                      |                         |                               |        |       |       |     |

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ○ WATER FOUND ▽ STATIC WATER LEVEL ▼

# STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(L-05)

PROJECT NAME: OTSEGO MILL

PROJECT NO.: 5375

CLIENT: ROCK-TENN

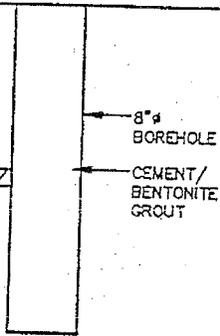
LOCATION: 62.4' FROM NORTH WALL

HOLE DESIGNATION: SB-5

DATE COMPLETED: MAY 6, 1993

DRILLING METHOD: 4 1/4" ID HSA

CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                          | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION   | SAMPLE |       |       |              |
|-----------------|--|----------------------|---|--------|-------|-------|--------------|
|                 |  |                      |   | NUMBER | STATE | VALUE | HNU<br>(ppm) |
| 2.5             | SW-SAND(FILL), medium grained, brown                         |                      |  <p style="font-size: small;">8" BOREHOLE<br/>CEMENT/<br/>BENTONITE<br/>GROUT</p> | 1SS    | X     | 9     | 1.2          |
|                 | - 1" layer of paper fiber                                    |                      |   | 2SS    | X     | 5     | 1.1          |
| 5.0             | CINDERS(FILL), black   | -4.0                 |   | 3SS    | X     | 17    | 1.9          |
|                 | GW-GRAVEL(NATIVE), some medium to coarse grained sand, brown | -5.0                 |   | 4SS    | X     | 28    | 1.7          |
| 7.5             |  |                      |   |        |       |       |              |
| 10.0            | END OF HOLE @ 9.0 FT. BGS                                    | -9.0                 |   |        |       |       |              |
| 12.5            |  |                      |   |        |       |       |              |
| 15.0            |  |                      |   |        |       |       |              |
| 17.5            |  |                      |   |        |       |       |              |
| 20.0            |  |                      |   |        |       |       |              |
| 22.5            |  |                      |   |        |       |       |              |
| 25.0            |  |                      |   |        |       |       |              |
| 27.5            |  |                      |   |        |       |       |              |
| 30.0            |  |                      |   |        |       |       |              |
| 32.5            |  |                      |   |        |       |       |              |

**NOTES:**

MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ○

WATER FOUND ∇

STATIC WATER LEVEL ▽

**STRATIGRAPHIC AND INSTRUMENTATION LOG**  
(OVERBURDEN)

(L-06)

PROJECT NAME: OTSEGO MILL

HOLE DESIGNATION: SB-6

PROJECT NO.: 5375

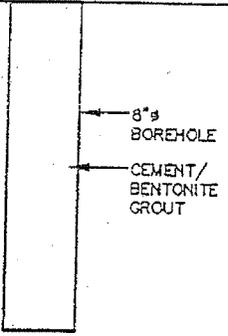
DATE COMPLETED: MAY 6, 1993

CLIENT: ROCK-TENN

DRILLING METHOD: 4 1/4" ID HSA

LOCATION: 62.4' FROM NORTH WALL  
31' FROM WEST WALL

CRA SUPERVISOR: J. HARGENS

| DEPTH<br>ft BGS | STRATIGRAPHIC DESCRIPTION & REMARKS                 | ELEVATION<br>ft AMSL | MONITOR<br>INSTALLATION   | SAMPLE |       |       |              |
|-----------------|---|----------------------|---|--------|-------|-------|--------------|
|                 |   |                      |   | NUMBER | STATE | VALUE | HNH<br>(ppm) |
| -2.5            | SW-SAND(FILL), medium grained, brown<br><br>- black |                      |  <p>8" BOREHOLE<br/>CEMENT/<br/>BENTONITE<br/>GROUT</p> | 1SS    | 3     | 2.4   |              |
| -5.0            | GW-GRAVEL(NATIVE), medium to coarse, gray black     | -4.7                 |   | 2SS    | 9     | 1.8   |              |
| -7.5            |   |                      |   | 3SS    | 2     | 2     |              |
| -10.0           | END OF HOLE @ 9.0 FT. BGS                           | -9.0                 |   | 4SS    | 16    | 1.9   |              |
| -12.5           |   |                      |   |        |       |       |              |
| -15.0           |   |                      |   |        |       |       |              |
| -17.5           |   |                      |   |        |       |       |              |
| -20.0           |   |                      |   |        |       |       |              |
| -22.5           |   |                      |   |        |       |       |              |
| -25.0           |   |                      |   |        |       |       |              |
| -27.5           |   |                      |   |        |       |       |              |
| -30.0           |   |                      |   |        |       |       |              |
| -32.5           |   |                      |   |        |       |       |              |

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE  
 CHEMICAL ANALYSIS ○ WATER FOUND ∇ STATIC WATER LEVEL ▼

PHASE II  
PCB EVALUATION

Rock-Tenn Company Otsego Mill  
Otsego, Michigan

JANUARY 1995

REF. NO. 5375 (2)

This report printed on recycled paper

CONESTOGA-ROVERS & ASSOCIATES

Landfill

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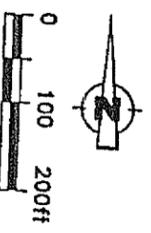
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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) was retained by Long Aldridge & Norman (LA&N) to conduct an evaluation of areas and materials potentially impacted with polychlorinated biphenyls (PCBs) at the Rock-Tenn Company (RTC) Otego Mill based on current operations and past disposal practices by previous mill owners. A Phase I Evaluation determined that no detectable quantities were present in material, products or wastewater discharges associated with current RTC operations. PCBs were identified at low concentrations in wastes that were disposed of by previous mill owners in on-site disposal areas. The areas of concern based on operations conducted by previous mill owners are:

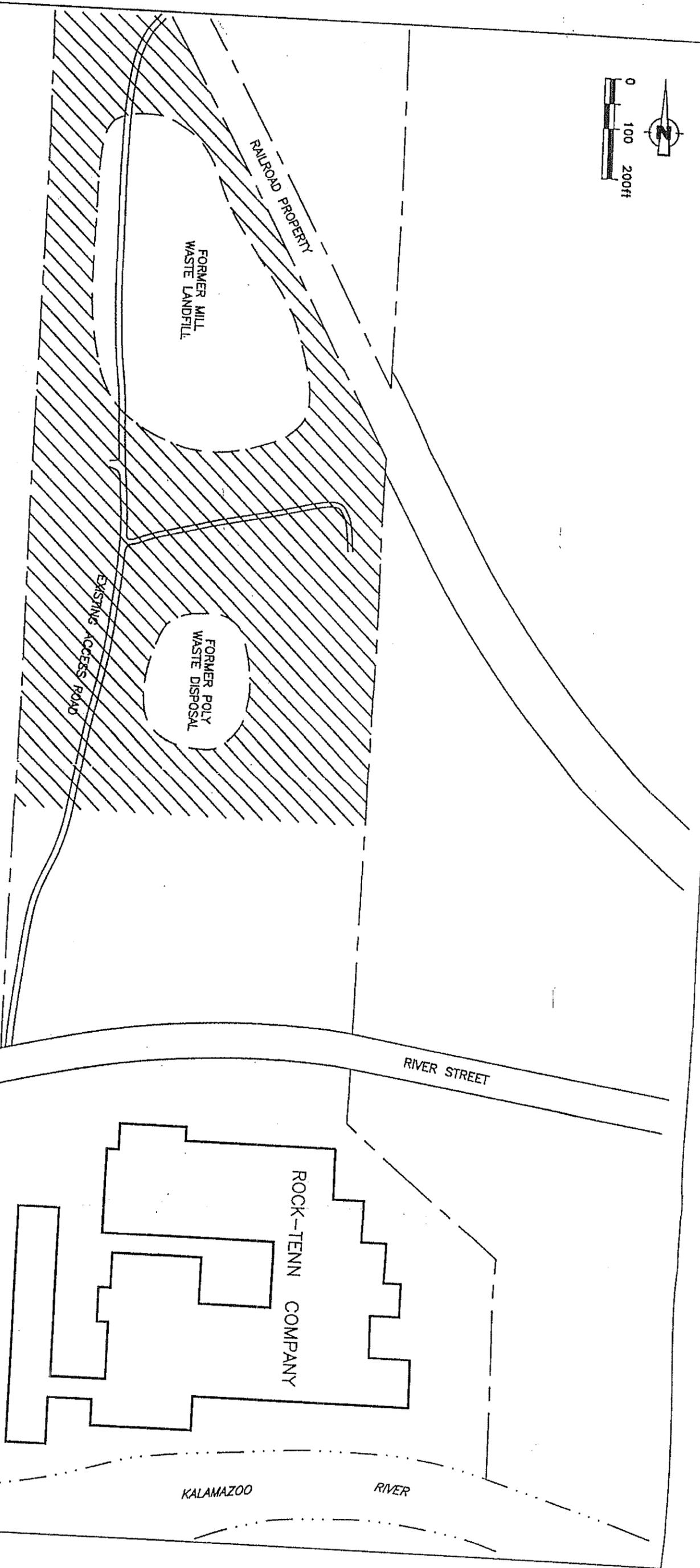
- i) the mill waste landfill;
- ii) the Poly Waste disposal area; and
- iii) adjacent areas potentially impacted by waste disposal operations.

Figure 1.1 presents the waste disposal areas operated by previous owners.



**LEGEND**

 AREA POTENTIALLY IMPACTED BY PAST WASTE DISPOSAL OPERATIONS



**CRA**

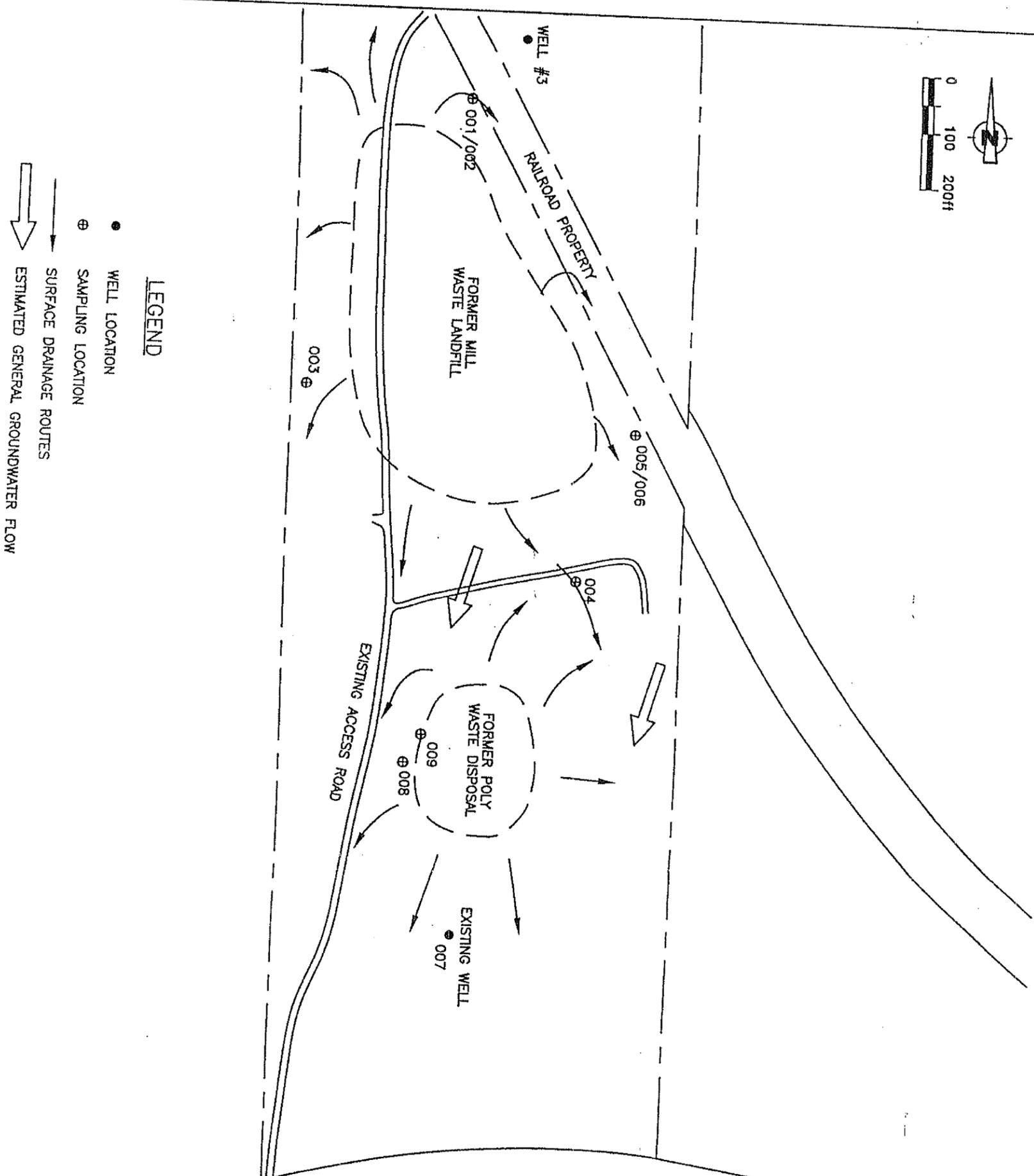
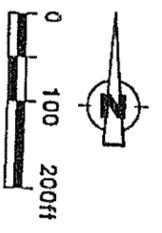
5375(2)-FEB. 3/94-REV.0 (P-05)(MN)

figure 1.1  
 FORMER WASTE DISPOSAL AREAS  
 PHASE II EVALUATION  
 ROCK-TENN COMPANY  
 Otsego, Michigan

## 2.0 SCOPE OF WORK

Based on the identification of PCBs in the former waste disposal areas, LA&N requested CRA to evaluate the potential for off-Site migration of PCBs from the disposal areas. CRA identified areas for sampling where PCBs, if present in surface water, sediments or groundwater, were most likely to be located. Figure 2.1 presents the surface and groundwater flow paths at the RTC Otsego Mill property in relation to the sampling locations. The investigative activities conducted during the Phase II Evaluation included:

- i) collection of soil/sediment samples from drainageways associated with the former waste disposal areas for chemical analyses;
- ii) collection of runoff or surface water samples from the same drainageway locations for chemical analyses;
- iii) collection of stormwater and sediment samples from the stormwater discharges from the RTC Mill to the Kalamazoo River for chemical analyses;
- iv) collection of waste samples from an additional former waste disposal area identified subsequent to the Phase I Evaluation for chemical analyses;
- v) collection of a soil sample from an area adjacent to the location of former waste disposal operations for chemical analyses; and
- vi) collection of a groundwater sample from a supply well downgradient of the former waste disposal area for chemical analyses.



- LEGEND**
- WELL LOCATION
  - ⊕ SAMPLING LOCATION
  - SURFACE DRAINAGE ROUTES
  - ⇨ ESTIMATED GENERAL GROUNDWATER FLOW

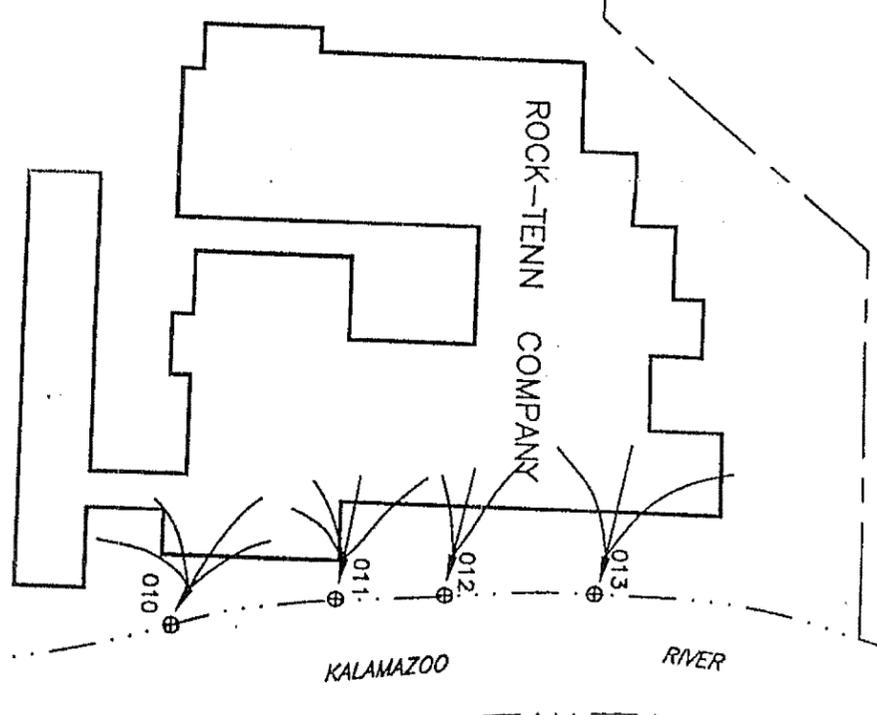


figure 2.1  
 SURFACE WATER AND  
 GROUNDWATER FLOW DIRECTION  
 PHASE II EVALUATION  
 ROCK-TENN COMPANY  
 Otsego, Michigan

### 3.0 FIELD PROGRAM

On October 6 and 7, 1993, field work was conducted by CRA to collect soil/sediment, groundwater and surface water samples at the RTC Otsego Mill property. The surface water run-off samples were collected by RTC environmental personnel on November 26, 1993, which was the first rainfall adequate to produce sufficient run-off for sampling.

#### 3.1 SOIL/SEDIMENT SAMPLING

"Grab" type samples were collected from eight surface drainageways or stormwater sewer outfalls as shown on Figure 3.1. Sample locations S002 and S006 were sediments collected in areas of shallow standing water. The remaining locations were dry soil/sediment collected from the surface of stormwater flow ditches. Sample locations were selected based on potential run-off routes near the former disposal areas and from stormwater discharge ditches near the mill. Samples were collected from the top six inches of soil/sediment present. Samples were collected using pre-cleaned steel trowels and were placed into laboratory pre-cleaned sample containers. All soil/sediment samples were submitted for PCB analyses. A summary of the samples collected and the requested analyses is provided in Table 3.1. Sample containers were labeled, packaged in iced coolers and were shipped to the laboratory via overnight courier under chain of custody.

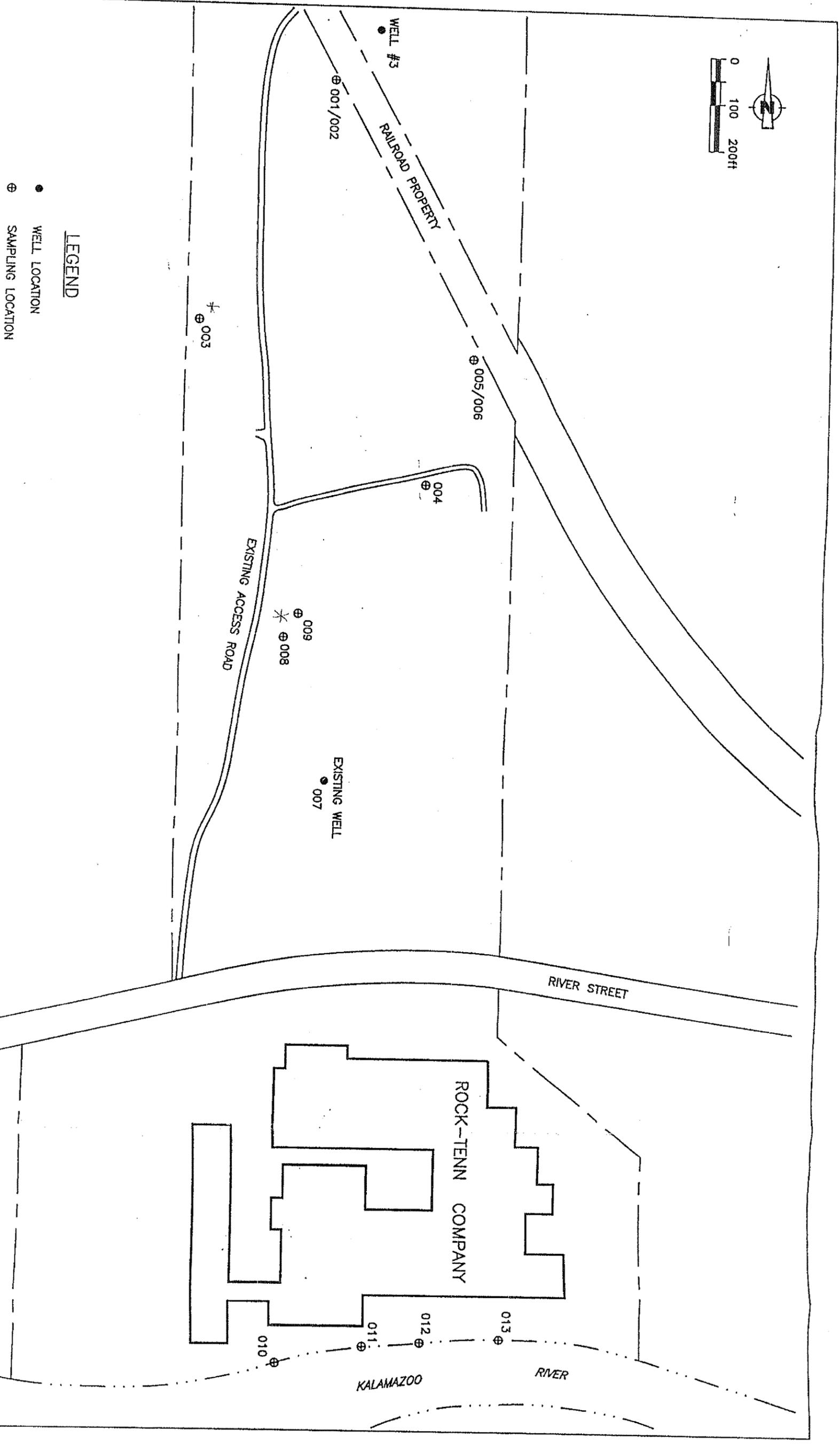
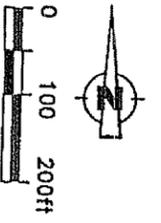
#### 3.2 WASTE SAMPLING

"Grab" type samples of "poly waste" were collected at two locations in a disposal area utilized by previous mill owners as shown in Figure 3.1. Surface grasses and soil were removed and the waste samples were collected from a depth of three inches to twelve inches below ground surface. An additional sample (S003) was collected near the toe of the former landfill in an area that may have been impacted by former disposal operations. Samples were collected using pre-cleaned steel trowels and were

TABLE 3.1

SAMPLING SUMMARY  
 ROCK-TENN COMPANY  
 OSTEGO, MICHIGAN

| <i>Sample ID</i> | <i>Matrix</i> | <i>Location</i>   | <i>Analytical Parameters</i> |
|------------------|---------------|---|------------------------------|
| W100693-BTH-001  | Surface water | Ponded water on northeast side of former landfill               |                              |
| S100693-BTH-002  | Sediment      | Northeast side of former landfill at surface water location 001 | PCBs                         |
| S100693-BB-003   | Soil          | Ditch on west side of former landfill                           | PCBs                         |
| S100693-BB-004   | Soil          | Ditch on south side of former landfill                          | PCBs                         |
| W112693-MY-004   | Surface water | Ditch on south side of former landfill                          | PCBs                         |
| W100693-BB-005   | Surface water | Ponded water on southeast side of former landfill               | PCBs                         |
| S100693-BB-006   | Sediment      | Southeast side of former landfill at surface water location 005 | PCBs                         |
| W100793-BTH-007  | Groundwater   | South of former landfill and poly waste disposal areas          | PCBs                         |
| S100793-BB-008   | Waste         | Poly waste disposal area south of former landfill               | PCBs, VOCs                   |
| S100793-BB-009   | Waste         | Poly waste disposal area south of former landfill               | PCBs                         |
| S100793-BTH-010  | Soil          | Outfall ditch for mill storm sewer                              | PCBs                         |
| W112693-MY-010   | Surface water | Storm sewer outfall   | PCBs                         |
| S100793-BTH-011  | Soil          | Outfall ditch for mill storm sewer                              | PCBs                         |
| S100793-BB-012   | Soil          | Outfall ditch for mill storm sewer                              | PCBs                         |
| W112693-MY-012   | Surface water | Storm sewer outfall   | PCBs                         |
| S100793-BB-013   | Soil          | Outfall ditch for mill storm sewer                              | PCBs                         |
| W112693-MY-013   | Surface water | Storm sewer outfall   | PCBs                         |



**LEGEND**

- WELL LOCATION
- ⊕ SAMPLING LOCATION

5375(2)-FEB. 3/94-REV.0 (P-04)(MN)

**CRA**

figure 3.1  
 SAMPLING LOCATIONS  
 PHASE II EVALUATION  
 ROCK-TENN COMPANY  
 Otsego, Michigan

placed into laboratory pre-cleaned sample containers. The waste samples were submitted for PCB analyses. A summary of the samples collected and the requested analyses is provided in Table 3.1. Sample containers were labeled, packaged in iced coolers and were shipped to the laboratory via overnight courier under chain of custody.

### 3.3 GROUNDWATER SAMPLING

A groundwater sample was collected from a production well operated by the RTC Mill and located downgradient of the former waste disposal areas. The sample was collected at the well head directly into laboratory pre-cleaned sample containers. The groundwater sample was submitted for PCB and volatile organic compound (VOC) analyses. A summary of the samples collected and the requested analyses is provided in Table 3.1. Sample containers were labeled, packaged in iced coolers and were shipped to the laboratory via overnight courier under chain of custody.

### 3.4 SURFACE WATER/RUN-OFF SAMPLING

"Grab" type surface water samples were collected from three run-off drainageways serving the former waste disposal area and from three storm sewer outfalls from the RTC Mill and discharging to the Kalamazoo River. The surface water and run-off samples were collected from the same locations as soil/sediment samples unless there was insufficient water flowing to collect a sample. The water samples were collected directly into laboratory pre-cleaned sample containers and were submitted for PCB analyses. A summary of the samples collected and the requested analyses is provided in Table 3.1. Sample containers were labeled, packaged in iced coolers and were shipped to the laboratory via overnight courier under chain of custody.

Sample analyses were performed by Enseco-Wadsworth/Alert Laboratories, Inc. of North Canton, Ohio (EWAL). All analyses were conducted in accordance with methods presented in USEPA document SW-846 entitled "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (third edition), dated November 1986 and USEPA document 600/4-79-020 entitled "Methods for the Chemical Analyses of Water and Wastes (revised) dated March 1983. The analytical methods are summarized in Table 4.1. The analytical reports from EWAL are presented in Appendix A.

Analytical data quality assessments and validations of the results obtained by EWAL for the samples analyzed were conducted by CRA's quality assurance officer. The evaluations of the analytical data were based on information obtained by EWAL including field duplicates, a trip blank, laboratory blank data, as well as recovery data from matrix and surrogate spikes and check samples. The analytical data were assessed for accuracy and precision based on the review of the duplicate and spike recovery data. Based on the results of the data quality assessments and validations, the analytical data are valid and suitable for use in this project. The analytical data quality assessment and validation is presented in Appendix B.

TABLE 4.1

SUMMARY OF ANALYTICAL METHODS  
 ROCK-TENN COMPANY  
 OTSEGO, MICHIGAN

| <u>Chemical Parameter</u>  | <u>Analytical Methods<sup>1</sup></u> |
|----------------------------|---------------------------------------|
| Polychlorinated Biphenyls  | SW-846 8080                           |
| Total Solids               | USEPA 160.3 (modified)                |
| Volatile Organic Compounds | SW-846 8240                           |

<sup>1</sup> SW-846 - "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", EPA SW-846, 3rd edition November 1986.  
 USEPA - "Methods for the Chemical Analysis of Water and Wastes", EPA 600/4-79-020, revised March 1983.

5.0 SUMMARY OF FINDINGS

5.1 WASTE SAMPLING

The Poly Waste samples collected from both locations, S008 and S009, contained PCBs at concentrations of 1.4 and 12 parts per million (ppm), respectively. The soil sample collected near the toe of the former landfill (S003) also contained PCBs at concentrations of 5.5 ppm and 5.7 ppm in duplicate sample analyses. Analytical data are presented in Table 5.1. This data confirms the findings of the Phase I study, which identified PCBs in wastes from disposal operations conducted by previous owners.

5.2 DISPOSAL AREA SAMPLING

Soil, sediment and surface water samples collected from the potential surface run-off locations near the former disposal areas did not contain any detectable concentrations of PCBs. Analytical data are presented in Tables 5.1 and 5.2.

5.3 GROUNDWATER SAMPLING

The groundwater sample collected from the RTC production well did not contain any detectable concentrations of the VOCs or PCBs analyzed. Analytical data are presented in Table 5.2.

5.4 MILL AREA/RUN-OFF SAMPLING

None of the sediment or surface water/run-off samples collected from all identified stormwater discharges from the mill contained detectable concentrations of PCBs. Analytical data are presented in Tables 5.1 and 5.2.

**TABLE 5.1**  
**SUMMARY OF SOIL/SEDIMENT SAMPLE ANALYSES**  
**ROCK-TENN COMPANY**  
**OSTEGO, MICHIGAN**

| Parameter     | Concentration (mg/kg) |          |        |          |        |          |        |          |        |        |        |        |        |        |
|---------------|-----------------------|----------|--------|----------|--------|----------|--------|----------|--------|--------|--------|--------|--------|--------|
|               | S002                  | S002 Dup | S003   | S003 Dup | S004   | S004 Dup | S006   | S006 Dup | S008   | S009   | S010   | S011   | S012   | S013   |
| Arochlor 1016 | ND (1)                | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Arochlor 1221 | ND (1)                | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Arochlor 1232 | ND (1)                | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Arochlor 1242 | ND (1)                | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | 12     | ND (1) | ND (1) | ND (1) | ND (1) |
| Arochlor 1248 | ND (1)                | ND (1)   | 2.7    | 2.9      | ND (1) | ND (1)   | ND (1) | ND (1)   | 1.4    | ND (1) |
| Arochlor 1254 | ND (1)                | ND (1)   | 2.9    | 2.6      | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Arochlor 1260 | ND (1)                | ND (1)   | ND (1) | ND (2.1) | ND (1) | ND (1)   | ND (1) | ND (1)   | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |

Note:  
 ND - Not detected at the method detection limit shown in parenthesis

TABLE 5.2  
 SUMMARY OF GROUNDWATER AND SURFACE WATER SAMPLE ANALYSES  
 ROCK-TENN COMPANY  
 OSTEGO, MICHIGAN

| Parameter     | Concentration (µg/L) |          |          |           |          |          |          |           | Trip Blank |
|---------------|----------------------|----------|----------|-----------|----------|----------|----------|-----------|------------|
|               | W001                 | W004     | W005     | W007      | W010     | W012     | W013     | W013 Dup  |            |
| Arochlor 1016 | ND (0.5)             | ND (0.5) | ND (0.5) | ND (0.5)  | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.81) | NA         |
| Arochlor 1221 | ND (0.5)             | ND (0.5) | ND (0.5) | ND (0.5)  | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.81) | NA         |
| Arochlor 1232 | ND (0.5)             | ND (0.5) | ND (0.5) | ND (0.5)  | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.81) | NA         |
| Arochlor 1242 | ND (0.5)             | ND (0.5) | ND (0.5) | ND (0.5)  | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.81) | NA         |
| Arochlor 1248 | ND (0.5)             | ND (0.5) | ND (0.5) | ND (0.5)  | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.81) | NA         |
| Arochlor 1254 | ND (1)               | ND (1)   | ND (1)   | ND (1)    | ND (1)   | ND (1)   | ND (1)   | ND (1.6)  | NA         |
| Arochlor 1260 | ND (1)               | ND (1)   | ND (1)   | ND (1)    | ND (1)   | ND (1)   | ND (1)   | ND (1.6)  | NA         |
| VOCs          | NA                   | NA       | NA       | ND (5-50) | NA       | NA       | NA       | NA        | ND (5-50)  |

Note:  
 NA - Not analyzed  
 ND - Not detected at the method detection limit shown in parenthesis

6.0 CONCLUSIONS

Based on the observations made during the Phase II Site inspection and the analytical results of the sampling programs, the following conclusions can be made:

- i) waste and waste area samples collected from disposal areas operated by the former mill owners contain low concentrations of PCBs;
- ii) no surface water/drainage routes from the former disposal areas to the Kalamazoo River were identified during the Site inspection. Runoff from the former disposal areas infiltrates into the highly permeable soils in the vicinity;
- iii) the absence of PCBs in water and sediment samples collected from run-off routes servicing the former disposal areas indicates that the PCBs present in the former disposal areas are not migrating from the disposal areas via surface pathways;
- iv) the absence of PCBs in the down-gradient groundwater production well indicates that PCBs are not migrating from the former disposal area via the groundwater; and
- v) the absence of PCBs in the stormwater and sediment samples collected from the mill storm discharges indicates that the current operations at the mill and recent past operations at the mill have not resulted in discharge of PCBs to the Kalamazoo River.

All Of Which is Respectfully Submitted,

CONESTOGA-ROVERS & ASSOCIATES



Brian C. Boevers

**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

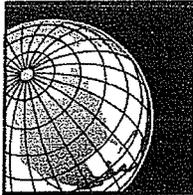
**FORMER ROCK-TENN MILL PROPERTIES  
431 HELEN AVENUE  
OTSEGO, MICHIGAN 49078**

July 20, 2006

**PREPARED FOR:**

**COGSWELL ROMULUS PROPERTIES, LLC  
6901 COGSWELL ROAD  
ROMULUS, MICHIGAN 48174**

**PREPARED BY:**



**GLOBAL  
ENVIRONMENTAL  
ENGINEERING INC.**

---

**6140 HILL 23 DRIVE, SUITE 1  
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PHONE (810) 238-9190  
FAX (810) 238-9195**

**GLOBAL PROJECT # F1192**

|   |           |
|---|-----------|
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### EXECUTIVE SUMMARY

Global Environmental Engineering Inc. (Global) was retained by Mr. Mike Davis Jr. of Cogswell Romulus Properties, LLC. to conduct a Phase I Environmental Site Assessment (Phase I ESA) in conformance with American Society for Testing and Materials (ASTM) Standard E 1527-05, for the former Rock Tenn Papermill complex located at 431 Helen Avenue, Otsego, Allegan County, Michigan. The evaluation, recommendations, and conclusions contained in this Phase I ESA represent the site conditions as of July 10, 2006.

The subject property is located on the south side of River Road, west of Helen Avenue, City of Otsego, Section 16, Township 2 North, Range 13 West, Otsego, Allegan County, Michigan. The subject property mailing address is 431 Helen Avenue, Otsego, Michigan 49078. The subject property is developed with multiple site buildings formerly operating as a paper mill. Currently the site buildings are vacant. Asphalt and concrete paved parking and access roads, dirt areas containing debris and scrap materials, natural vegetation and overgrown grassy areas surround the buildings.

The subject property was identified in a number of categories within the regulatory database search, including a listing as a Small Quantity Generator of hazardous wastes under the Resource Conservation and Recovery Act (RCRA). The site is also listed as having a number of spills that required reporting to the State of Michigan. The site is also listed as utilizing underground storage tanks (USTs) and aboveground storage tanks (ASTs) on the site. As the facility is currently vacant, and not in operations, manifests and other environmental documents were not available for review. Global also searched the Michigan Department of Environmental Quality (MDEQ) and United States Environmental Protection Agency (EPA) websites for additional information regarding records of waste disposal for the subject property. During the time of the site assessment Global was unable to find additional waste disposal information.

Based on historical resources reviewed during the time of this assessment, the subject property has operated as a paper manufacturing mill since at least 1908. Review of historical documents indicates that paper manufacturing activities expanded throughout the site history, and a number of buildings were expanded, demolished and constructed on the site throughout the site history. Manufacturing buildings currently located on the subject property are much the same as they were in the early 1900's. Property owners have included the Mac-Sim-Bar Paper Company, the Babcock Tissue Paper Company, the Wolverine Paper Company, the Mead Corporation, and most recently, the Rock-Tenn Paper Company.

Modifications to site buildings that are observed over time include expansions to the facilities in the 1920's and 1930's, and demolition of select site buildings apparent in the 1970's and 1980s. The site has been vacant since Rock Tenn ceased operations in July of 2004.

The property was vacant at the time of the site reconnaissance. A number of Areas of Concern were identified on the subject property related to historical operations. Areas of Concern included closed detention basins historically used to store fluids from the paper processing activities, residual chemical materials, including residual flammable materials, caustics, inks, and oily sludges identified in a press pit in the manufacturing building, a former Type III Landfill located on the northern portion of the property, and documentation indicating low level polychlorinated biphenyl (PCB) contamination throughout the site.

Global has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 for the property described as the 431 Helen Avenue, Otsego, Allegan County, Michigan. Any exceptions to, or deletions from, this practice are described in

Section 1.4 of this report. **This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except as follows:**

On Site Recognized Environmental Concerns:

- Former retention basins located on the western portion of the subject property.
- Documentation indicating low-level polychlorinated biphenyl (PCB) contamination throughout the site.
- Residual chemicals located in the manufacturing building. Chemical materials include flammables, inks, caustics, and corrosive materials associated with former manufacturing operations.
- Residual oils and sludge visible in a press pit located in the former manufacturing building.
- The site includes two closed Type III landfill cells on the northern portion of the property. These cells were permitted to accept mill waste and poly-waste generated on-site in former mill operations.

Off Site Recognized Environmental Concerns:

- Off site environmental concerns include the ongoing Superfund investigation and remedial action for PCB and dioxin impacts in the sediments of the adjacent Kalamazoo River. Based on the information regarding this site, the sediments are believed to represent a recognized potential off-site environmental concern to the subject property.

Further environmental investigations are recommended to assess the recognized environmental conditions on the subject property.

## 1.0 INTRODUCTION

Global Environmental Engineering Inc. (Global) was retained by Mr. Mike Davis Jr. of Cogswell Romulus Properties, LLC. to conduct a Phase I Environmental Site Assessment (Phase I ESA) in conformance with American Society for Testing and Materials (ASTM) Standard E 1527-05, for the former Rock Tenn Papermill complex and property located at 431 Helen Avenue, Otsego, Allegan County, Michigan (herein referred to as the property or subject property). The evaluation, recommendations, and conclusions contained in this Phase I ESA represent the site conditions as of July 10, 2006.

The subject property consists of the former Rock Tenn Papermill Complex and associated manufacturing buildings. The parcel contains approximately 50 separate buildings associated with paper manufacturing operations located on the 105-acre property. In addition to the site buildings, the property also includes a series of closed detention basins on the western portion of the property, and two closed Type III landfill cells located north of the manufacturing buildings.

Exterior areas of the facility around the manufacturing buildings are surfaced with asphalt and concrete. The remainder of the property includes vegetated areas and dirt areas covering the historical detention basins and landfill areas. Miscellaneous scrap materials and debris piles are present on exterior portions of the property. The location of the subject property is depicted on a U.S.G.S. Topographic Map included as **Figure 1**.

### 1.1 PURPOSE

The purpose of this Phase I ESA was to conduct and document all appropriate inquiry into the previous ownership and uses of the subject property consistent with good commercial and customary practice, as defined in Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, 42 USC Section 9601 (35) (B), and as provided in Part 201 of the Natural Resources and Environmental Protection Act, as amended MCL Section 342.20126(3)(h) in order to identify recognized environmental conditions, within reasonable limits of time and cost. Recognized environmental conditions are defined as the presence or likely presence of any hazardous substances or petroleum products on the subject property that are under conditions that indicate an existing release, a past release, or a material threat of release into structures, groundwater, soil, or surface water on the subject property. As such, the Phase I ESA is intended to permit the user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (commonly referred to as "landowner liability protections" or "LLPs").

As stated within ASTM Standard E 1527, no environmental assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a Phase I ESA is intended to reduce but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property.

### 1.2 DETAILED SCOPE OF SERVICES

The scope of services for this project included the following:

A visual site reconnaissance was conducted on the interior and exterior portions of the subject property including walking the perimeter and traversing the subject property, inspecting structures on the property, observing on-site activities, observing activities on adjacent properties and noting potential environmental concerns. The intent of the inspection

was to determine existence or potential existence of environmental concerns, including but not limited to the following:

- Evidence of stains or corrosion related to improper material use, storage, or handling
- Evidence of floor drains, sumps, floor hoist and oil/water separators
- Evidence of hazardous substances and petroleum products
- Evidence of storage tanks
- Evidence of odors
- Evidence of pools of liquid
- Evidence of potential polychlorinated biphenyls (PCBs) sources
- Evidence of pits, ponds or lagoons
- Evidence of stressed vegetation
- Evidence of improper solid waste disposal
- Evidence of improper waste water disposal
- Evidence of wells
- Evidence of a septic system
- Evidence of contamination on adjacent properties

A review of regulatory agency files was conducted, in order to determine whether the subject property or neighboring properties were listed as known sites of environmental concern. Regulatory agency files included federal and state databases of potential environmental concern, including but not limited to known sites of environmental contamination, registered underground storage tanks (USTs), and hazardous waste generators. If readily available, and at the discretion of the environmental professional, records from the governing city, township, or county were reviewed.

A review of readily available physical setting sources was conducted to document geologic, hydrogeologic, hydrologic, or topographic characteristics of the subject property including the following:

- Current U.S.G.S. topographic map for the area of the subject property
- Additional physical setting sources, at the discretion of the environmental professional

The following historical site use information was reviewed, if reasonably ascertainable, in order to develop a detailed history of the previous uses of the subject property and the surrounding area and identify past uses that may have caused environmental conditions in connection with the property.

- Historical aerial photographs for the subject property
- Available fire insurance maps for the subject property
- Local assessment and/or building records
- Other historical sources at the discretion of the environmental professional

Conducting interviews aids in establishing past uses of the property and the surrounding area, along with identifying any potential concerns that may exist currently. The following people were interviewed:

- Readily available present owners, operators, and occupants of the subject property or representatives
- Readily available past owners, operators, and occupants of the subject property or representatives
- The ESA User or representative
- At least one local government agency official or local government office serving the area

### **1.3 SIGNIFICANT ASSUMPTIONS**

In preparing this report, Global has relied upon certain verbal information and representations provided by state and/or local government and representations of property owners, and upon documents provided by the client and in state and local government files. Global did not attempt to independently verify the accuracy or completeness of this information; however, if any inconsistency in data was noticed that might call into question the validity of any of this information, it is mentioned in the report. To the extent that the conclusions in this report are based in whole or in part on such information, they are contingent on its validity.

### **1.4 DEVIATIONS, LIMITATIONS AND EXCEPTIONS**

There were no deviations from the ASTM Standard E 1527 – 05. Limitations to the site reconnaissance included, vegetation, paving, debris piles, interior and exterior building finishes and miscellaneous debris located throughout the site. Additional limitations to the assessment, if any, are discussed in the appropriate sections of this report.

This Phase I ESA was restricted to observations made during Global's inspection of the subject property and research into property history. In addition, the scope of work did not address compliance with any federal, state or local statutes, regulations, ordinances or codes.

Sketches, maps and drawings used in this report are included to aid in the visual understanding by the reader and should not be considered surveys or engineering studies, unless labeled as such.

The processes followed in the Phase I ESA are not intended to establish comprehensive or all-inclusive conclusions. This report is only intended to assist the user in making a reasonable assessment of risk with respect to potential environmental impact at the subject property. The results of this investigation do not guarantee a zero level of environmental liability. No other warranty, expressed or implied, is made.

### **1.5 SPECIAL TERMS AND CONDITIONS**

Certain environmental conditions, which may exist on the property that are beyond the scope of this practice but may warrant consideration by parties to a commercial real estate transaction, are not included. Those conditions include, but are not limited to the following: asbestos containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic impacts, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines.

No special terms and conditions were agreed upon between the ESA User and Global.

### **1.6 USER RELIANCE**

Global confirms that the evaluation, recommendations, and conclusions contained in this Phase I ESA represent the site conditions as of July 10, 2006 and have been evaluated according to industry standard practices and ASTM E 1527-05. Therefore, the employees and principles of Cogswell Romulus Properties, LLC may rely on it as a due diligent inquiry into the environmental condition of the subject property. No third parties are intended to benefit from or rely on information contained within this report.

## 2.0 SITE LOCATION AND DESCRIPTION

### 2.1 LOCATION AND LEGAL DESCRIPTION

As depicted in the site map and site plan presented in **Figure 2**, the subject property is located on the south side of River Road, at the end of Helen Avenue, Otsego Township, Section 22, Township 1 North, Range 12 West, Otsego, Allegan County, Michigan. The subject property mailing address is 431 Helen Avenue, Otsego, Michigan, 49078. The subject property consists five parcels containing approximately 46 acres of total land area. The parcels are identified as Parcel 54-015-006-00 Parcel 54-575-001-00, Parcel 54-800-001-00, Parcel 03-17-17-015-002-00, and Parcel 03-17-17-015-001-10.

Parcel 54-015-006-00 (PARCEL A) consists of 44 acres of land and contains approximately 19 industrial buildings utilized in the paper mill activities. Parcel 54-575-001-00 (PARCEL B) includes 3.4 acres of vacant land that includes LOTS 1 THRU 22 INC. MAC-SIM-BAR ADDITION. Parcel 54-800-001-00 (PARCEL C) consists of approximately 2.7 acres of land, and does not have any buildings. Parcels D (23.5 acres) and E (31.5 acres) are located north of the Otsego City Limits within Otsego Township. These two parcels are divided by an abandoned railroad right-of-way running diagonally northwest to southeast. The properties consist of developed buildings associated with the former papermill operations, asphalt and concrete paved parking areas and access roads, dirt covered/vegetated areas, and areas historically used for detention basins and landfill activities. Site photographs are included in **Appendix A**.

Access routes: Paved access to the subject property is available from Helen Avenue through vehicle gates.

The legal descriptions for the subject properties are included on the assessment records located in **Appendix B**. According to the City of Otsego records, the properties are included as Zoning Class PUD, (Planned Use Development). Assessment records do not indicate the date that the buildings on Parcel A were constructed, however, many of the site buildings are present in a 1908 Sanborn Fire Insurance Map of the area. The location of the subject property is depicted on a U.S.G.S. Topographic Map included as **Figure 1**.

### 2.3 CURRENT USE OF THE SUBJECT PROPERTY

The subject property is developed with multiple industrial buildings associated with the papermill activities. Building uses included manufacturing, warehousing, maintenance uses, and equipment buildings. Exterior portions of the property have been utilized for equipment and material storage, construction of on-site wastewater detention basins, and permitted to accept Type III refuse from operations completed on-site.

### 2.4 PAST USE OF THE SUBJECT PROPERTY AND DATA GAPS

Based on historical resources reviewed during the time of this assessment, all three parcels of the subject property have been operated as a papermill since at least 1908. The subject property has had multiple owners over time, including the Mac-Sim-Bar Paper Company, the Babcock Tissue Paper Company, the Wolverine Paper Company, the Mead Corporation, and most recently, the Rock-Tenn Paper Company.

All of the site buildings are located within Parcel A, which includes the main manufacturing, processing, and storage buildings. Review of historical aerial photographs for the site indicates that a majority of the site buildings were present in approximately 1908.

Specific building use for the site has remained consistent, with the addition of support buildings, storage, and the expansion of the site over time. The exact dates of site development and building additions and expansions have not been determined. No other data gaps occurred during the completion of this Phase I ESA.

## 2.5 DESCRIPTIONS OF STRUCTURES, ROADS, OTHER IMPROVEMENTS

The subject property is developed with a multi-story industrial building and outlying support structures. The main complex consists of 19 individual buildings that house site operations. The following table provides information regarding the site buildings:

| Building Number | Section/Building Number                | Occupancy         | Use Description   | Floor Area (Square Feet) |
|-----------------|--|-------------------|---|--------------------------|
| 1               | Building 1                             | Warehouse/Storage | Boiler House  | 8,184                    |
| 2               | Building 2,3,4                         | Warehouse/Storage | Turbine House/Maintenance Shop Building/turbine Room Control Room                         | 18,188                   |
| 3               | Building 5,6                           | Warehouse/Storage | Abandoned Storage Building  | 12,528                   |
| 4               | Building 7,8                           | Warehouse/Storage | Beater Room Building  | 19,296                   |
| 5               | Building 9                             | Warehouse/Storage | Machine Room Building/Size Tank Building  | 20,864                   |
| 6               | Building 10                            | Warehouse/Storage | Production Office/Canteen Building  | 6,720                    |
| 7               | Building 11                            | Warehouse/Storage | Roll Core Building/Board Machine Laboratory   | 2,940                    |
| 8               | 12 & 13                                | Warehouse/Storage | Personnel/Roll Core Storage Building/East Air Handling Building                           | 6,480                    |
| 9               | 14                                     | Warehouse/Storage | Main Office Building  | 3,680                    |
| 10              | 15                                     | Warehouse/Storage | 95" Trimmer Building  | 6,720                    |
| 11              | 18                                     | Warehouse/Storage | Spine Cutter Room   | 5,980                    |
| 12              | 19                                     | Warehouse/Storage | Beater Room   | 4,900                    |
| 13              | 38                                     | Warehouse/Storage | Waste Paper/Roll Stock Building   | 18,464                   |
| 14              | 35,36,37                               | Warehouse/Storage | Finished Roll Goods Building/ Finished Sheet Goods Building/Waste Paper Conveyor Building | 47,510                   |
| 15              | 34, 53                                 | Warehouse/Storage | Cut to Size Building/Skid Shop/Converting Docks   | 29,640                   |
| 16              | 23                                     | Warehouse/Storage | Laminator Building  | 32,450                   |
| 17              | 1 <sup>st</sup> BK/SL Storage Building | Warehouse/Storage |   | 8,648                    |
| 18              | 40, 41, 42, 43                         | Warehouse/Storage | Waste Paper Sheds   | 38,080                   |
| 19              | 51, 52                                 | Warehouse/Storage | Lumber Buildings  | 9,980                    |

Tax assessment records identify the following for the site:

Public roads on-site/adjacent: Helen Avenue accesses the site, and a portion of Helen Avenue was abandoned by the City of Otsego and has been incorporated into the site property. River Road borders much of the subject property to the north, but separates a portion of Parcel A.

Railroads on-site/adjacent: Former railroad sidings and spurs were present to access the property and site buildings through a series of rail spurs and sidings accessing various buildings on site. These spurs have all been abandoned.

Waterways/access on-site: The Kalamazoo River borders the site to the south, and forms the southern property border of the facility.

Airfields/access on site: there are no airfields located on or adjacent to the subject property.

Utilities:

- Natural Gas: Service is available on the subject property.
- Electric: Service is available on the subject property.
- Water: Records indicate the facility includes a number of potable supply wells, and is also serviced by city water.
- Sewer: Municipal sewers are available on the subject property and there is an inactive wastewater treatment system located on the subject property.
- Telephone: Telephone service is available on the subject property.

## 2.6 CURRENT USES OF ADJOINING PROPERTIES

The current uses of adjoining properties are as follows:

|           |  |
|-----------|--|
| North     | Vacant, agricultural and residential land  |
| Northeast | Agricultural and residential properties, Former Bardeen Paper Company                    |
| East      | Industrial and residential properties Former Wolverine Paper Company industrial property |
| Southeast | Industrial and residential properties  |
| South     | Kalamazoo River, City of Otsego south of Kalamazoo River                                 |
| Southwest | Self service storage facility/residential property                                       |
| West      | Vacant/Agricultural land   |
| Northwest | Vacant/Agricultural land   |

## 3.0 USER PROVIDED INFORMATION

### 3.1 TITLE RECORDS

Title records for the subject property were not provided to Global by the ESA user.

### 3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

No information regarding environmental liens, activity and use limitations, specialized knowledge, or valuation reduction for environmental issues was provided to Global by the ESA user.

### 3.3 SPECIALIZED KNOWLEDGE

Mike Davis Jr., ESA user stated that he believed the paper mill has operated on the subject property since development in the early 1900's/late 1800's. He stated that he has no knowledge of historical operations occurring at the subject property.

### **3.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION**

As part of the Kalamazoo River Superfund Site investigation, the facility was investigated by the United States Environmental Protection Agency (US EPA) and the Michigan Department of Environmental Quality (MDEQ) for potentially contributing to PCB contamination discovered in sediments in the Kalamazoo River. The site was evaluated for inclusion on the National Priorities List (NPL). As part of the Superfund investigation, samples were collected from the subject property for analysis.

While low levels of PCBs were detected throughout the subject property, the findings of the US EPA were that the facility operations had not contributed to the PCB contamination detected in the Kalamazoo River sediments, and the site did not exhibit PCB contamination above 50 parts per million (PPM) and was not regulated under federal law. Accordingly, the site was not included as a Potentially Responsible Party (PRP) in the Kalamazoo River sediments Superfund action, and the subject property was not included on the NPL.

Accordingly, with the exception of stating that the subject property has operated as a paper mill since development, and that low levels of PCBs have been detected at the site, no other information regarding known or reasonably ascertainable information about the subject property, which would help Global to identify conditions indicative of a release or threatened release were available.

### **3.5 VALUE REDUCTION FOR ENVIRONMENTAL ISSUES**

Mr. Mike Davis Jr., ESA Users indicated that he did not believe the purchase price being paid for this property reflects a value reduction for environmental concerns, and that the price reflects fair market value of the property.

### **3.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION**

The subject property is vacant, and the Rock Tenn Paper Company ceased operations on July 3, 2004, and on July 10, 2004 Rock Tenn announced that the facility was permanently closed. Waste Water treatment plant operations continued into 2005 as the on-site detention basins were emptied and closed.

### **3.7 REASON FOR PERFORMING PHASE I ESA**

This Phase I ESA was performed for the purpose of identifying any recognized environmental conditions on the subject property prior to purchase.

## **4.0 RECORDS REVIEW**

### **4.1 STANDARD ENVIRONMENTAL RECORD SOURCES**

Research of standard federal and state environmental records sources was conducted by Global to comply with ASTM Standard Practice for Environmental Site Assessments, E 1527-05. Environmental Data Resources (EDR) provided the environmental records research. A description of the databases is included in the Radius Map Report. The Radius Map Report is included in **Appendix C**.

| Type of Site   | Agency Release Date | ASTM Standard Radius | Number of sites within ASTM radius |
|--|---------------------|----------------------|------------------------------------|
| National Priority List (NPL) Sites   | 4/19/2006           | 1.0 mile             | 0                                  |
| Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Sites | 2/01/2006           | ½ mile               | 0                                  |
| CERCLIS No Further Remedial Action Planned (NFRAP) Sites   | 2/01/2006           | ½ mile               | 1                                  |
| Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal (TSD) sites            | 3/09/2006           | ½ mile               | 0                                  |
| RCRA Generator sites   | 3/09/2006           | ¼ mile               | 1                                  |
| RCRA TSD Corrective Action (CORRACTS) sites  | 3/15/2006           | 1.0 mile             | 0                                  |
| Emergency Release Notification System (ERNS) sites   | 12/31/2005          | Subject Property     | 0                                  |
| State Hazardous Waste Sites (SHWS)   | 5/18/2006           | 1.0 mile             | 0                                  |
| Solid Waste Facility (SWF) sites   | 5/01/2006           | ½ mile               | 0                                  |
| Leaking Underground Storage Tank (LUST) sites  | 3/13/2006           | ½ mile               | 2                                  |
| Underground Storage Tank (UST) sites   | 3/13/2006           | ¼ mile               | 0                                  |
| Baseline Environmental Assessment (BEA) sites  | 3/16/2006           | ½ mile               | 1                                  |
| Brownfields  | 2/23/2006           | ½ mile               | 1                                  |

The subject property was identified in a number of categories within the regulatory database search. The facility is identified as a RCRA Small Quantity Generator of Hazardous Waste, registered as having underground and aboveground storage tanks. A review of UST registration data indicated that all USTs and ASTs on the site have been removed and received closure from the MDEQ.

Global also searched the Michigan Department of Environmental Quality (MDEQ) and United States Environmental Protection Agency (EPA) websites for additional information regarding records of waste disposal for the subject property. There were no additional issues identified during the time of the site assessment.

Information included in the regulatory data identified multiple sites within the specified search distances. The following sites were mapped on the Regulatory Report.

**Subject Property**

| Identification   | Address                              | Distance         | Database Listing                   |
|--|--------------------------------------|------------------|------------------------------------|
| Rock Tenn Paper Company<br>(Subject Property)  | 431 Helen Avenue<br>Otsego, Michigan | Subject Property | RCRA-SQG,<br>AIRS,<br>PEAS,<br>UST |
| <b>Evaluation</b>  |                                      |                  |                                    |
| The subject property is listed as a former AIRS and UST site, and has reported three separate spills to the State of Michigan PEAS System. The USTs at the site have been removed and closed, and response activities associated with the spills have been completed. The Rock Tenn Paper Company was a RCRA Small Quantity Generator of Hazardous Wastes during site operations (MID 0424925611). |                                      |                  |                                    |

**Surrounding Sites**

| Identification  | Address               | Distance                     | Database Listing                    |
|---|-----------------------|------------------------------|-------------------------------------|
| Menasha Corporation   | 320 North Farmer Road | Approximately ¼ mile<br>East | CERCLIS-NFRAP/<br>De-listed<br>SWHS |
| <b>Evaluation</b>   |                       |                              |                                     |
| The Menasha Corporation Farmer Road facility is listed as having been evaluated under CERCLA. Inclusion in the CERCLIS-NFRAP database indicates that the site has been evaluated, and based on the review, found not to warrant inclusion as a National Priorities List. Note that this designation does not necessarily mean that there are no hazards on the site, but rather that based on the available information, the site is not judged to be a potential NPL site. The Menasha site is also listed as a de-listed solid and hazardous waste site (SHWS). Inclusion in this database indicates that the site has been deleted or removed from the State of Michigan's List of Contaminated Sites. |                       |                              |                                     |

| Identification  | Address             | Distance                            | Database Listing |
|---|---------------------|-------------------------------------|------------------|
| JB Painting and Equipment RPR   | 248 N. North Street | Approximately 1/8 mile<br>southeast | RCRA-SQG         |
| <b>Evaluation</b>   |                     |                                     |                  |
| The JB Painting and Equipment site is listed as a RCRA-Small Quantity Generator of hazardous Wastes. No violations have been reported for the site therefore the site is not believed to represent a potential environmental concern to the subject property. |                     |                                     |                  |

| Identification    | Address                 | Distance                          | Database Listing |
|-------------------|-------------------------|-----------------------------------|------------------|
| United #6250      | 703 West Allegan Street | Approximately ½ mile<br>southwest | LUST<br>(Closed) |
| <b>Evaluation</b> |                         |                                   |                  |

The site is listed as a closed Leaking Underground Storage Tank (LUST) site. The site is listed as Closed, indicating that cleanup activities have been completed.

| Identification   | Address               | Distance                       | Database Listing |
|--|-----------------------|--------------------------------|------------------|
| City of Otsego Service Department  | 210 North Farmer Road | Approximately ½ mile southwest | LUST (Closed)    |
| <b>Evaluation</b>  |                       |                                |                  |
| The site is listed as a closed Leaking Underground Storage Tank (LUST) site. The site is listed as Closed, indicating that cleanup activities have been completed. |                       |                                |                  |

| Identification  | Address               | Distance                       | Database Listing    |
|---|-----------------------|--------------------------------|---------------------|
| City of Otsego Service Department   | 210 North Farmer Road | Approximately ½ mile southwest | Brownfield AUL Site |
| <b>Evaluation</b>   |                       |                                |                     |
| The site is listed as an AUL Site, indicating that Administrative/Engineering controls are required to prevent exposure and migration of contaminants at the site. The Brownfield designation indicates that the site has been evaluated under State of Michigan Part 201 or 213 using the Baseline Environmental Assessment (BEA) process. |                       |                                |                     |

Two additional sites were identified within the regulatory database report. These sites include a Mead Paperboard Division Type III Historical Landfill, identified as being north of River Street, and a BEA site identifies as 421 & 423 Farmer Street. The Mead Type III Landfill Site is identified as being located north of River Road. Indications are that this is a former landfill located on the subject property (PARCEL D). The property at 421 & 423 Farmer is located >1/4 mile east of the site, and based on the distance and direction from the subject property, this site does not appear to represent a concern. There were no other unplottable sites defined in the Database search.

#### 4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

With the exception of the local government records described in Section 4.4.5, no additional environmental record sources were reviewed during the course of this assessment.

#### 4.3 PHYSICAL SETTING SOURCES

##### 4.3.1 USGS Topographic Map

The United States Geologic Survey (USGS) topographic map, Otsego Quadrangle, issued in 1967 and photo revised 1973, was reviewed to determine the physical setting and location of the subject property. The subject property is located approximately 710 feet above sea level and shows little relief. The property is shown as gently sloping to the south towards the Kalamazoo River.

**Surface Water:** There is currently no surface water located on the subject property. The site historically operated on-site detention basins on the site, however, the detention basins have been filled and capped. The nearest surface water body is the Kalamazoo River which borders the site to the south.

#### 4.3.2 USDA Soil Survey

The Soil Survey for Allegan County, compiled by the United States Department of Agriculture was reviewed to determine the physical setting of the property. Two soil types were identified on the subject property, including Aquent and Histosol soils in the detention basin area, and Made Land/Oakville series soils throughout the remainder of the site. Additionally, the permitted Type III landfill is identified on the soil survey as a Sanitary Landfill. Soils on the site are described as follows:

*Urban Land - Oakville Complex, 0 to 6 percent slopes – The nearly level and undulating map unit consists of Urban land and a well drained Oakville soil on broad flats and side slopes. Individual areas range from 10 to 300 acres in size. They are 50 to 85 percent Urban Land and 10 to 45 percent Oakville soil. The Urban land and Oakville soil occur as areas so intricately mixed or so small that mapping them separately is not practical. The Urban land is covered by streets, parking lots, buildings, and other structures.*

*Aquents and Histosols, ponded. These very poorly drained, nearly level soils are in marshes and swamps. They generally are ponded most of the year. The Aquents formed in mineral material and the Histosols in organic material. The marshes support cattails, reeds, grasses, woody shrubs, and scattered clumps of water tolerant trees. The swamps support trees, individual areas area irregularly shaped or linear and range from 4 to several hundred acres in size.*

The base map for the soil survey consists of an aerial photograph dated 1980. The subject property and adjacent sites appear to be developed for residential and commercial use on the photograph.

#### **4.4 HISTORICAL USE INFORMATION**

##### 4.4.1 Historical Aerial Photographs

Aerial photographs from 1938, 1950, 1960, 1967, 1974, 1981, and 1982 were obtained and reviewed to identify site history and potential environmental concerns associated with the subject property. The Historical Aerial Photographs are included in **Appendix D – Historical Resource Documentation**.

##### **1938 Aerial Photograph**

The subject property appears to be developed in the 1938 aerial with a majority of the main manufacturing buildings. The warehouse and storage building (Building 18 – Figure 3) had not been constructed, and the clarifiers south of the main facility are not present. The landfill area north of River Road appears to be undeveloped agricultural land, and the lagoon area west of the main building is undeveloped. The Bardeen Paper Company facility is visible in the northeast portion of the property, south of Helen Road. The Wolverine Paper Company building is also visible on the southeast portion of the site.

##### **1950 Aerial Photograph**

The site shows significant development from the 1938 aerial, with expansion on the existing structures and the addition of new buildings on the site. Buildings 13 and 18 are visible on the western portion of the property, and there appears to be expansion on Buildings 14, 16, 8, and 9. There appears to be grading activity in the lagoon area, and building 19 (now razed) is present. The landfill area north of the site remains undeveloped. There is a

warehouse building visible east of the Bardeen Paper Company, and the Wolverine Paper Company appears to be unchanged.

#### **1960 Aerial Photograph**

The site buildings are much the same as in 1950, with all of the buildings present. Areas around the production areas have been graded, and it appears that parking areas and access roads have been cleared and paved. Two rectangular waste treatment detention basins are present in the lagoon area, and there appears to be construction activities on the far western portion of the property. There also appears to be activity in the far northern portion of the landfill area. The Bardeen Paper Company and Wolverine Paper Company appear to be unchanged.

#### **1967 Aerial Photograph**

The site buildings are much the same as in 1960, with all of the buildings present on-site. The waste treatment detention basins have been expanded, and include two additional "L" shaped detention basins present on the western portion of the property. The landfill activities in the northern portion of the site have expanded to the south, and encompass the entire northern portion of the property. There appears to be grading activities east of the Wolverine Paper Company plant, and the Bardeen Paper Company appear to be unchanged.

#### **1974 Aerial Photograph**

The site buildings are much the same as in 1967, with little development on the property. All of the buildings present on-site. The waste treatment detention basins have been expanded, and include two additional "L" shaped detention basins present on the western portion of the property. The landfill activities in the northern portion of the site have expanded to the south, and encompass the entire northern portion of the property. There appears to be grading activities east of the Wolverine Paper Company plant, and the Bardeen Paper Company appear to be unchanged.

#### **1974 Aerial Photograph**

No significant changes are evident on the subject property or adjacent properties on the 1974 aerial photograph. Landfill activities appear to continue on the northern portion of the site, and the Bardeen Paper Company plant, and Wolverine Paper Company appear to be unchanged.

#### **1981 Aerial Photograph**

No significant changes are evident on the subject property on the 1981 aerial photograph. The detention basins on the western portion of the property appear to be in use, and landfill activities appear to continue on the northern portion of the site. The Wolverine Paper Company plant has been demolished, while the warehouse building on the eastern edge of the property remains. The Bardeen Paper Company facility appears to be unchanged.

#### **1992 Aerial Photograph**

With the exception of the appearance of the wastewater treatment plant clarifier tanks on the southern portion of the property, there do not appear to be significant changes in the site. Note the northern landfill areas is not visible on the 1992 aerial. The warehouse on the former Wolverine Paper Company property and the Bardeen Paper Company appear to be unchanged.

### **1999 Aerial Photograph**

No significant changes are evident on the subject property on the 1999 aerial photograph. The detention basins on the western portion of the property appear to be in use, and landfill activities appear to continue on the northern portion of the site. The Wolverine Paper Company plant has been demolished, while the warehouse building on the eastern edge of the property remains. The Bardeen Paper Company facility appears to be unchanged.

#### 4.4.2 Historical Fire Insurance Maps

Historical Fire Insurance Maps indicate uses of properties at specific dates usually within city limits. Building uses, locations of above and underground storage tanks, and other pertinent fire insurance information are included on these maps. Fire insurance maps are used for environmental purposes to identify and locate historical environmental concerns such as storage tanks. A Historical Fire Insurance Map search was conducted on the subject property by EDR.

Historical Fire Insurance Maps were obtained for the years 1908, 1911, 1918, 1928, 1936, 1950, were reviewed and identified the subject property.

#### **1908 Sanborn Fire Insurance Map**

The main factory building is indicated in the 1908 Sanborn map identified as the Mac-Sim-Bar Paper Company. The main building is identified as being sprinklered.

#### **1911 Sanborn Fire Insurance Map**

The main factory building is indicated in the 1911 Sanborn map, with additions apparent from the 1908 map. Additions include installation of a water tower, and additions in the Building 16 area of the complex. The Babcock Tissue Paper Company (Wolverine) and Otsego Coated Paper (Bardeen) facilities are present, and much the same as the buildings would appear over time.

#### **1918 Sanborn Fire Insurance Map**

The main factory building is indicated in the 1918 Sanborn map, with minor modifications apparent from the 1911 map. Additions include construction of Building 9. The Wolverine facility was expanded on the western portion of the building and the Bardeen facility remains unchanged.

#### **1928 Sanborn Fire Insurance Map**

The main factory building is indicated in the 1928 Sanborn map, with major site modifications present. Modifications apparent from the 1918 map include construction of portions of Building 18, expansion in the areas of building 15 and 16, and installation of the boiler room (Building 1). The Wolverine and the Bardeen facility remained relatively unchanged.

#### **1936 Sanborn Fire Insurance Map**

The 1936 Sanborn map indicates additional development at the property, completing additions to the main factory that are much as are found today. Modifications include the expansion of buildings 13, 14, 16, and 18, and construction of an additional building to the east of building 3. The Wolverine and the Bardeen facility remained relatively unchanged.

#### **1950 Sanborn Fire Insurance Map**

The 1950 Sanborn map indicates that with the exception of the clarifiers, the building construction was completed to what is present on site today. The Wolverine facility is

identified as being owned by the Mac-Sim-Bar Paper Company, and scheduled to be dismantled. The Bardeen facility remained relatively unchanged.

#### 4.4.3 Historical Plat Maps

Historical plat maps were not available for the site, however, current plat maps from the city of Otsego and Otsego Township were reviewed by Global. The plat maps indicate that the current property is comprised of five separate lots, identified as Parcel 54-015=006-00 (PARCEL A) consists of 44 acres of land and contains approximately 19 industrial buildings utilized in the paper mill activities. Parcel 54-575=001-00 (PARCEL B) includes 3.4 acres of vacant land that includes LOTS 1 THRU 22 INC. MAC-SIM-BAR ADDITION. Parcel 54-800-001-00 (PARCEL C) consists of approximately 2.7 acres of land, and does not have any buildings. Parcels D (23.5 acres) and E (31.5 acres) are located north of the Otsego City Limits within Otsego Township. These two parcels are divided by an abandoned railroad right-of-way running diagonally northwest to southeast. The legal descriptions are as follows:

#### **LOTS WITHIN THE CITY OF OTSEGO:**

##### Parcel Number 03-54-015-006-00

COM AT A PT 888.5 FT W & 32.8 FT N OF THE SE COR OF SEC 15 FOR POB OF THIS DES, (BEING THE SE COR OF TOWNSEND'S ADD) THE N 81 DEG 50' W 337.75 FT TO THE E 1/8 LIN OF SEC 15 THE N ON SD 1/8 LIN TO THE N CITY LIMIT LIN (BEING THE S 1/8 LIN OF SEC 15) TH S ON SD N & S 1/4 LIN TO THE S 1/4 POST OF SEC 15 TH S ALG THE N & S 1/4 LIN OF SEC 22 TO THE KALA RIVER TH E'LY ALG SD RIVER TO THE W LIN OF NORTH ST TH N'LY ALG THE W LIN OF NORTH ST TO A PT THAT IS 214.7 FR S'LY FROM THE S LIN OF HELEN AVE. TH W'LY IN A STRAIGHT LIN TO A PT 885.5 FT W OF THE E LIN OF SD SEC 22 & 200 FT S'LY FROM THE S LIN OF SD HELEN AVE. TH N PPL WITH SD E LIN OF SEC 22 TO THE S LIN OF HELEN AVE. TH NW'LY ALG S LIN OF HELEN AVE. TO POB EX COM AT A PT IN THE CTR OF RIVER ST WHERE THE N & S 1/4 LIN OF SEC 15 CROSSES THE SD HWY TH E'LY ALG THE CTR LIN OF SD HWY 40 RDS TH N PPL WITH SD 1/4 LIN TO THE N CITY LIMIT (BEING THE S 1/8 LIN OF SEC 15) THE W'LY ALG SD N CITY LIMIT LIN TO THE SD 1/4 LIN TH S ON SD 1/4 LIN TO POB ALSO EX COM AT NE COR OF SEC 22 THE S 103.40' TH N 79 DEG 16' W 255.75' ALG SLY R/W HELEN ST TH S 3 DEG 25' W 198.12' ALG W'LY R/W NORTH ST TO POB THIS DESC TH S 23 DEG 25' W 270.95' ALG SD R/W TO N'LY BANK OF THE KALAMAZOO RIVER TH N 870 DEG 22' 28" W 353.51' ALG SD RIVER TH N 1 DEG 45' 20" E 210' TH N 65 DEG 25' E 60.43' TH N 76 DEG 30' 20" E 79.50' TH S 79 DEG 16' 230' TO POB SEC 22 T1N R12W.

##### Parcel Number 54-800-001-00

LOTS 1 TO 14 INC VACATED WILLIAM ST ASLO THE VACATED PART OF HELEN AVE BEING THAT PART LYING W OF W LINE OF JOHN ST EXTRENDED TOWNSEND ADDITION.

##### Parcel Number 54-575-001-00

LOT'S 1 THRU 22 INC. MAC SIM BAR ADDITION

## **LOTS WITHIN OTSEGO TOWNSHIP:**

### Parcel Number 03-17-17-015-002-00

COM AT A PT ON CTRR LINE OF RIVER ST AT A PT WHERE THE E 1/8 LIN SEC 15 INTERS CTR LIN SD RIVER ST TH N PPL TO E LIN SEC 15 TO N OF LINE SD RIVER ST THE CONT N ON SD PPL LIN A DIST OF 868 FT TO POB TH N 285 FT TO A PT ON SWLY LIN OF NYC RR R/W TH NWLY ALG SD SWLY LIN OF RR R/W TO W LIN SD SEC E 1/2 SD SEC TH S ALG SD W LIN A DIST OF 1167.6 FT ST FT 167.4 FT N OF E & W 1/4 LIN SEC 15 TH NELY PPL TO SD RIVER ST 543 FT SD PT DIST 66 FT SD SWLY RR R/W LIN MEASURED AT RT ANG TO SD R/W TH SELY PPL TO SD RR R/W 234.7 FT TH S PPL WITH W LIN SD E 1/2 SD SEC 1626.4 FT TO E 1/8 LIN SD SEC TH E ON 1/8 LIN TO POB SEC 15 T1N R12W.

### Parcel Number 03-17-17-015-001-10

COM NE COR OF SEC TH S 1325.80' TH W 2534.70' TO NE'LY R/W OF PENN CTR RR & POB OF THIS DESC TH E 1209.60' TO N'LY EXT OF N & S 1/8 LIN OF SE 1/4 TH S 2213.30' TO NE'LY R/W LIN OF SD RR TH N 29 DEG 13' 43" W 2539.23' TO POB SEC 15 T1N R12W.

A scaled drawing of the subject property and boundaries has been included as **Figure 2**.

#### 4.4.5 Local Government Records

Tax assessment records for the subject property were requested from the City of Otsego and Otsego Township. Copies of the Assessment Records are included as **Appendix B**.

The records indicate that the site consists of five parcels with an address of 431 Helen Avenue. The property is described as five parcels totaling approximately 105 acres in size. The Assessors records indicate that the Rock-Tenn Paper Company is the owner of these properties. No environmental concerns were noted on the assessment records reviewed.

#### 4.4.6 Address Directory

Address directories were not available for the site, however, Sanborn Fire Insurance Map, assessment records, and historical documents identify the site as a paper mill back to at least the early 1900's.

## **5.0 SITE RECONNAISSANCE**

On July 10, 2006, Ms. Julie Varco, Site Assessor and Mr. Chris Byle, Senior Geologist with Global, conducted a site reconnaissance of the subject property.

### **5.1 METHODOLOGY AND LIMITING CONDITIONS**

During the site inspection, on site buildings were inspected, and the properties were inspected to identify areas of environmental concern. Limitations to the site inspection included limited access, vegetation, fill material, interior and exterior building finishes, and miscellaneous debris.

### **5.2 GENERAL SITE SETTING**

The subject property consists of approximately 105 acres and is developed with multiple manufacturing and support buildings. On site operations utilized 53 separate areas within the property. Currently the facility is not in operation, however monitoring activities continue on the site associated with the former detention basins. The buildings were in various states of

repair, and were constructed to complete specific activities associated with the paper mill activities. Many of the buildings contain legacy manufacturing and mechanical equipment associated with former site operations. The subject property is located in an area developed for commercial and industrial land use.

### 5.3 INTERIOR AND EXTERIOR OBSERVATIONS

Residual chemical materials and potential environmental concerns were observed at various locations on-site. The following table identifies locations with legacy chemical materials and identifies potential concerns identified in the interior of the manufacturing buildings. The main site buildings were generally block and steel truss construction, with outlying support buildings constructed of concrete block or wood.

| Building Number (Tax Records) | Section/Building Number | Occupancy/Use   | Observations/Concerns                                  | Floor Area (Square Feet) |
|-------------------------------|-------------------------|---|--|--------------------------|
| 1                             | Building 1              | Boiler Room   | 2-55 gallon drums kerosene<br>1-55 gallon drum PM 9447 | 8,184                    |
| 2                             | Building 2,3,4          | Turbine House<br>Maintenance Shop<br>Building<br>Turbine Room<br>Control Room |  | 18,188                   |
| 3                             | Building 5,6            | Abandoned<br>Storage Building   |  | 12,528                   |
| 4                             | Building 7,8            | Beater Room<br>Building   |  | 19,296                   |
| 5                             | Building 9              | Machine Room<br>Building/Size Tank<br>Building                                | Oil sludge in pits<br>Oil staining                     | 20,864                   |
| 6                             | Building 10             | Production<br>Office/Canteen<br>Building                                      |  | 6,720                    |
| 7                             | Building 11             | Roll Core<br>Building/Board<br>Machine<br>Laboratory                          | Former laboratory area                                 | 2,940                    |
| 8                             | 12 & 13                 | Personnel/Roll<br>Core Storage<br>Building/East Air<br>Handling Building      |  | 6,480                    |
| 9                             | 14                      | Main Office<br>Building   |  | 3,680                    |
| 10                            | 15                      | 95" Trimmer<br>Building   |  | 6,720                    |
| 11                            | 18                      | Spine Cutter<br>Room  |  | 5,980                    |
| 12                            | 19                      | Beater Room   |  | 4,900                    |
| 13                            | 38                      | Waste Paper/Roll  |  | 18,464                   |

|    |  |   |  |        |
|----|--|---|--|--------|
|    |  | Stock Building  |  |        |
| 14 | 35,36,37                               | Finished Roll Goods Building/ Finished Sheet Goods Building/Waste Paper Conveyor Building | Floor drains in restroom<br>Flammable cabinet with small lot chemicals<br>Oil staining on concrete   | 47,510 |
| 15 | 34, 53                                 | Cut to Size Building/Skid Shop/Converting Docks   | Hazardous Waste Storage, including:<br>10-55 gallon drums dyes<br>3-300 gallon totes-dyes<br>4-5 gallon buckets dyes<br>5-55 gallon drums oils<br>1-300 gallon tote paraffin<br>2-55 gallon drums PM9447<br>1-300 gallon tote PM9447<br>5-300 gallon totes sodium hydroxide<br>5-300 gallon totes AF4771<br>4-300 gallon totes AD 8020<br>Oil stain (exterior near transformers) | 29,640 |
| 16 | 23                                     | Laminator Building  |  | 32,450 |
| 17 | 1 <sup>st</sup> BK/SL Storage Building |   |  | 8,648  |
| 18 | 40, 41, 42, 43                         | Waste Paper Sheds   | Mercury vapor lamps, 2-55 gallon drums carbon  | 38,080 |
| 19 | 51, 52                                 | Lumber Buildings  | Buildings razed. Small shed near former location of these buildings was locked – no access   | 9,980  |

During the site visit, the Global observed localized areas of staining and miscellaneous debris piles at various locations on the property. Staining was observed on the concrete floor Building, 37, in machine pits in Building 9, and adjacent to the transformer area on the northern portion of the property north of Building 53. There were also miscellaneous piles of debris identified at various locations within the building, and on exterior portions of the property.

A locked storage shed (near the former location of Building 51 and 52) was located on the northern portion of the property east of the former lagoon area. Access to this building was not available.

The exterior of the subject property around the manufacturing buildings was surfaced with asphalt, concrete, and vegetated areas. The exterior portions of the property include a number of debris piles and apparent demolition debris from site activities. The debris piles typically consist of concrete, wood and steel debris, and do not appear to represent an environmental concern. There are two wastewater treatment clarifier tanks located immediately south of Building 7. These clarifiers provided pretreatment prior to discharge to the detention basin system. Specific on-site observations are documented in the following paragraphs. Site photographs are included in **Appendix A**.

- Hazardous Substances/Petroleum Products  
A large amount of residual chemical materials remain on-site. The materials include flammable materials, caustics, inks, and dyes, and miscellaneous chemical materials. The chemicals are located within the site buildings, and the containers appear to be in good repair with no indications of leakage or damage. The chemical materials and locations are identified in the table in Section 5.3
- Drains, sumps, floor hoists and oil water separators  
There are two clarifier tanks associated with former wastewater treatment operations located on the south side of the building. These clarifiers treated process wastewater prior to discharge to the detention basin system. Floor drains were observed in a lavatory area located in Building 37. There were no indications of oil water separators, or hoists in the manufacturing areas. The discharge location of the drain was unknown. The unknown discharge location is believed to represent a potential recognized environmental concern to the subject property. If it can be verified that the drain is connected to a sanitary sewer, this concern may be eliminated.
- Storage Tanks  
There are a number of aboveground water storage tanks located on the site, used to supply firewater and process water. One 1,000-gallon aboveground storage tank (AST) was noted in building 11. The AST appeared to contain oil and was surrounded by a concrete secondary containment system. No concerns were noted with the AST at the time of the site inspection. No underground storage tanks (USTs) were identified that were used to contain petroleum or regulated materials. The site is listed as removing and closing registered USTs in 1999. No underground storage tanks (USTs) were observed during the time of the site inspection.
- Odors  
There were no petroleum or other unusual odors observed inside or outside the site buildings during the time of the site inspection with the exception of the area of the press pit. In this area, thick oily residue was observed in the pit, and a moderate oily odor was identified. The former press pit is identified as potential recognized environmental concern to the subject property.
- Pools of Liquid  
With the exception of the press pits identified in the manufacturing area of Building 9, there were no residual oils, liquids, or sludges observed on the subject property during the site inspection.
- PCBs  
The manufacture and resale of PCBs was banned in the United States in 1979; however, existing PCB sources were allowed to remain in use. The property was inspected for potential sources of PCBs, including hydraulics, cutting oils, and dielectric fluids. Light fixture ballasts were not inspected as part of this assessment.

Pole- and wall-mounted transformers were located at a number of areas on the site. These transformers appeared to be of newer construction, and included markings that identified them as "NON-PCB" containing transformers. There are a series of three pad mounted transformers identified on the north side of building 53 that were not labeled,

and there was significant oil staining on the soils adjacent to the transformer pad. These transformers appeared to be of older construction.

Note that the property was assessed for PCB impacts as part of a US EPA investigation of the Kalamazoo River Superfund Site. The investigation identified low levels of PCB contamination in the soils throughout the site, however, the concentrations of PCBs detected was only slightly above the laboratory detection limit, and the concentrations did not warrant additional cleanup or response activities. The source of the PCB contamination on the site is thought to be the use of PCB containing dyes and inks used in the printing process. The US EPA ultimately determined that the Rock-Tenn Paper Company was not a responsible party for the PCB contamination discovered in the Kalamazoo River.

- Pits, Ponds or Lagoons

The site includes a series of detention basins utilized in the on-site wastewater treatment plant operations located on the western portion of the property. These detention basins are inactive, and have been closed, filled, and capped, and are in long term Closure Monitoring.

The site also operated a Type III Landfill on the northern portion of the property. These landfill cells were permitted to accept wood pulp wastes, and non-hazardous debris generated in on-site activities. The landfill cells were properly closed in approximately 1990.

Note that during the site inspection, the soils and materials south of the landfill cell appeared to have been excavated and transported as cap material to the former lagoon area. The landfill closure and lagoon monitoring activities are currently being completed by an environmental firm retained by Rock-Tenn Paper Company. Global reviewed the MDEQ files for the site and found these activities to be appropriate. Note that a review of the US EPA Enforcement and Compliance History Online (ECHO) database did not identify any conditions of non-compliance for the site.

- Stained Soil or Pavement

Staining was noted at localized areas throughout the site, including the following areas:

- Adjacent to the pad mounted transformers north of Building 53,
- Oil stains were observed on the concrete floor in Building 36.
- Oil and oil sludge was observed in a pit and on the concrete floor near the roller assemblies in Building 9.
- Localized staining was observed in multiple areas associated with demolition debris within the facility. These areas include Buildings 3, 4, and 14. Additional paint and dye staining was observed near a vandalized area in Building 14.
- Oil staining in various locations throughout the subject property.

- Stressed Vegetation

The pit on the northern portion of the 44-acre parcel, used for cap materials during the closure of the lagoons was devoid of vegetation. No other areas of stressed vegetation were observed on the subject property at the time of the site inspection.

- Solid Waste  
The site historically operated as a Type III landfill, permitted to handle non-hazardous waste materials generated on-site. The landfill area is located north of the manufacturing buildings. The landfill was permitted through the MDEQ, and has been closed.

Miscellaneous debris and rubble was observed throughout the site and within the site buildings. Large debris piles were observed immediately north of Building 40, inside Buildings 3, 4, 14, and 18. The debris piles appeared to be primarily demolition debris, scrap steel, and general rubbish, concrete, glass, fluid containers, and empty drums.

- Wastewater  
The site formerly operated a wastewater treatment system associated with the paper manufacturing operations. Two wastewater clarifiers are present on the south side of the property, and there is a series of closed detention basins located on the western portion of the site. Sanitary wastes are discharged to the City of Otsego wastewater treatment facility.

- Wells  
Tax assessment records indicate that the subject property maintains four on-site pumping wells to provide process water. Wells are located immediately east of the clarifiers, on the southern portion of the property adjacent to the Kalamazoo River.

There are also multiple ground water monitoring wells located on site in the area to complete periodic compliance monitoring activities associated with site closure. Note that personnel may require periodic access to these wells for on-going groundwater monitoring events.

- Septic Systems  
The property is connected to the municipal sewer system and included a process wastewater treatment system. No evidence of an on-site septic system was observed.

#### **5.4 OBSERVATIONS OF ADJOINING PROPERTIES**

The surrounding properties were observed from the site and adjacent roadways. The adjacent sites are described in Section 2.6. There were no obvious potential environmental concerns noted with the adjacent properties.

## **6.0 INTERVIEWS**

### **6.1 INTERVIEWS WITH OWNER, SITE MANAGER, AND OCCUPANTS**

Global spoke with several former employees of the Rock-Tenn Mill. The general consensus was that the mill operated under conditions carefully monitored to prevent undue environmental hazards. Management was concerned with employee health and safety and held regular meetings to deal with environmental conditions. They were not aware of any activities at the Rock-Tenn Mill that would have adversely affected the environmental conditions in the plant or surrounding areas.

### **6.2 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS**

Global contacted Mr. Thad Beard, Otsego City Manager, and representatives of the MDEQ Water Bureau, Remediation and Response Division, and Waste Management Division regarding the subject property. All parties confirmed that the site has a long history of operations as a paper mill, and a number of identified environmental issues. Issues include:

The presence of closed landfill cells on the northern portion of the property;

The presence of closed wastewater treatment lagoons on the western portion of the property

The presence of low-level PCB contamination throughout the subject property, as identified by US EPA and MDEQ while evaluating the Rock-Tenn operations at the site as a Potentially Responsible Party for the Kalamazoo River Superfund Site. The evaluation determined that Rock-Tenn was not a responsible party.

However, as the mill processed only recycled paper and produced only unbleached paperboard. As such, many of the hazardous chemicals typically associated with paper mills were never used at this plant, and environmental concerns with the plant are relatively minor.

## 7.0 FINDINGS, OPINION, AND CONCLUSIONS

Global Environmental Engineering Inc. (Global) was retained by Mr. Mike Davis Jr. of Cogswell Romulus Properties, LLC to conduct a Phase I Environmental Site Assessment (Phase I ESA) in conformance with American Society for Testing and Materials (ASTM) Standard E 1527-05, for the former Rock-Tenn Paper Company property located at 431 Helen Avenue, Otsego, Allegan County, Michigan. The evaluation, recommendations, and conclusions contained in this Phase I ESA represent the site conditions as of July 10, 2006.

The subject property is located on the south side of River Road, west of Helen Avenue, City of Otsego, Section 16, Township 2 North, Range 13 West, Otsego, Allegan County, Michigan. The subject property mailing address is 431 Helen Avenue, Otsego, Michigan 49078. The subject property is developed with multiple site buildings formerly operating as a paper mill. Currently the site buildings are vacant. Asphalt and concrete paved parking and access roads, dirt areas containing debris and scrap materials, natural vegetation and overgrown grassy areas surround the buildings.

The subject property was identified in a number of categories within the regulatory database search, including a listing as a Small Quantity Generator of hazardous wastes under the Resource Conservation and Recovery Act (RCRA). The site is also listed as having a number of spills that required reporting to the State of Michigan. The site is also listed as utilizing underground storage tanks (USTs) and aboveground storage tanks (ASTs) on the site. As the facility is currently vacant, and not in operations, manifests and other environmental documents were not available for review. Global also searched the Michigan Department of Environmental Quality (MDEQ) and United States Environmental Protection Agency (EPA) websites for additional information regarding records of waste disposal for the subject property. During the time of the site assessment Global was unable to find additional waste disposal information.

Based on historical resources reviewed during the time of this assessment, the subject property has operated as a paper manufacturing mill since at least 1908. Review of historical documents indicates that paper manufacturing activities expanded throughout the site history, and a number of buildings were expanded, demolished and constructed on the site throughout the site history. Manufacturing buildings currently located on the subject property are much the same as they were in the early 1900's. Property owners have included the Mac-Sim-Bar Paper Company, the Babcock Tissue Paper Company, the Wolverine Paper Company, the Mead Corporation, and most recently, the Rock-Tenn Paper Company.

Modifications to site buildings that are observed over time include expansions to the facilities in the 1920's and 1930's, and demolition of select site buildings apparent in the 1970's and 1980s. The site has been vacant since Rock Tenn ceased operations in July of 2004.

The property was vacant at the time of the site reconnaissance. A number of Areas of Concern were identified on the subject property related to historical operations. Areas of Concern included closed detention basins historically used to store fluids from the paper processing activities, residual chemical materials, including residual flammable materials, caustics, inks, and oily sludges identified in a press pit in the manufacturing building, a former Type III Landfill located on the northern portion of the property, and documentation indicating low level polychlorinated biphenyl (PCB) contamination throughout the site.

Global has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 for the property described as the 431 Helen Avenue, Otsego,

Allegan County, Michigan. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. **This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property except as follows:**

On Site Recognized Environmental Concerns:

- Former retention basins located on the western portion of the subject property.
- Documentation indicating low-level polychlorinated biphenyl (PCB) contamination throughout the site.
- Residual chemicals located in the manufacturing building. Chemical materials include flammables, inks, caustics, and corrosive materials associated with former manufacturing operations.
- Residual oils and sludge visible in a press pit located in the former manufacturing building.
- The site includes two closed Type III landfill cells on the northern portion of the property. These cells were permitted to accept mill waste and poly-waste generated on-site in former mill operations.

Off Site Recognized Environmental Concerns:

- Off site environmental concerns include the ongoing Superfund investigation and remedial action for PCB and dioxin impacts in the sediments of the adjacent Kalamazoo River. Based on the information regarding this site, the sediments are believed to represent a recognized potential off-site environmental concern to the subject property.

Further environmental investigations are recommended to assess the recognized environmental conditions on the subject property.

## 8.0 REFERENCES

The following published references were used during this Phase I ESA:

- American Society for Testing and Materials Standard E 1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
- Aerial Photographs obtained from the Environmental Data Resource
- Historical Fire Insurance Maps, provided by Environmental Data Resource
- Plat Maps, reviewed through the City and Township of Otsego
- State and federal environmental database review, see attached regulatory report which lists each database reviewed, provided to Global by Environmental Data Resource
- United States Geological Survey, 7.5 Minute Topographical Maps
- City of Otsego Government Offices
- Consumers Energy Service Information Management System (SIMS)
- United States Department of Agriculture (USDA) Soil Survey for Allegan County

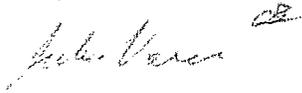
The following people were interviewed for this Phase I Environmental Site Assessment:

- Mr. Mike Davis Jr. of Cogswell Romulus Properties, LLC
- Mr. Thad Beard, City Manager for the City of Otsego
- MDEQ Waste Management Division
- MDEQ Remediation and Response Division
- MDEQ Water Bureau
- Multiple former Rock-Tenn employees

## 9.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

The information contained in this Phase I Environmental Site Assessment for the subject property identified as 431 Helen Avenue, Otsego, Allegan County, Michigan is based on existing site conditions and land use information discovered or disclosed during the past and current site investigation activities.

Prepared by:



---

Ms. Julie Varco, Site Assessor



---

Mr. Chris S. Byle, Senior Geologist/Project Manager

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

Date: July 20, 2006

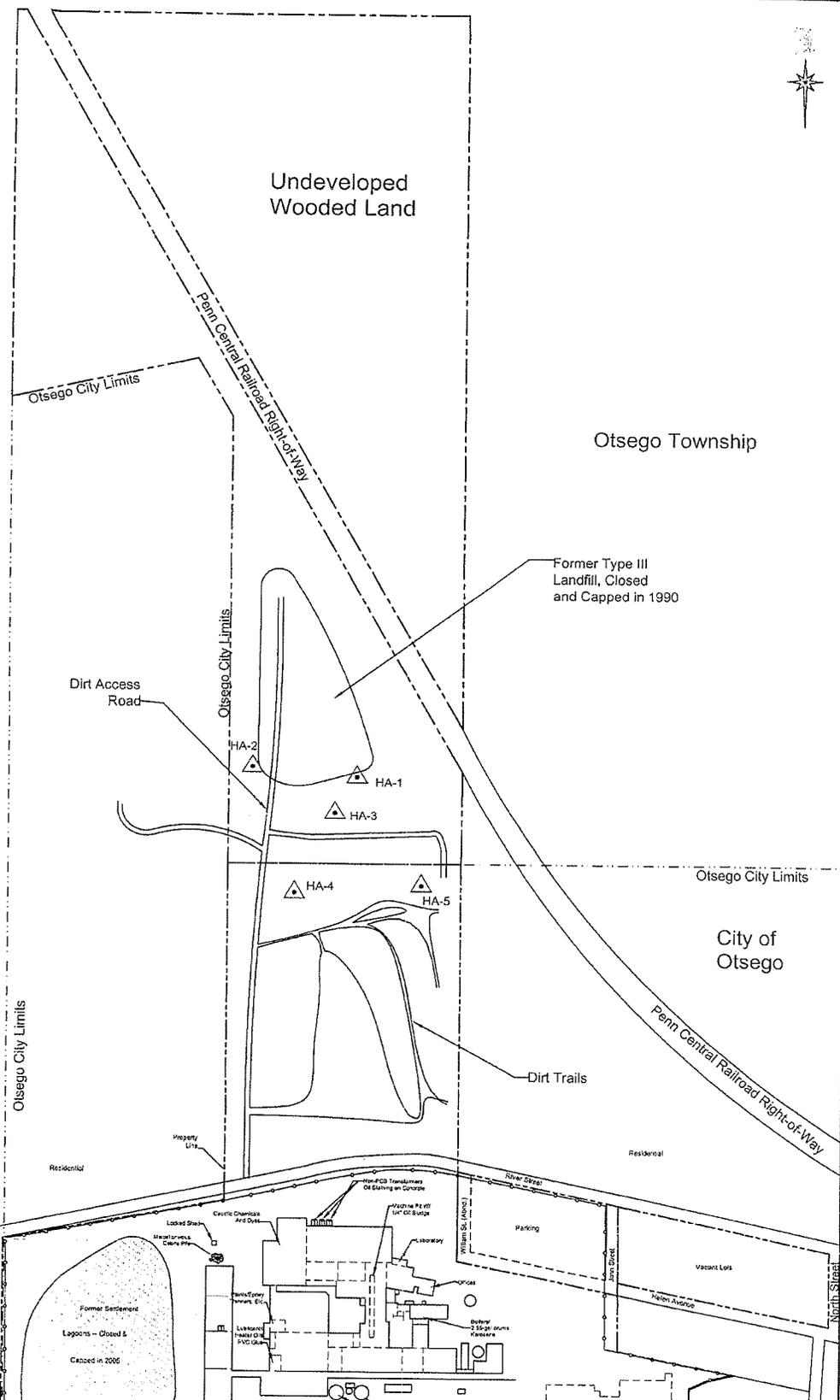


Undeveloped Wooded Land

Otsego Township

Former Type III Landfill, Closed and Capped in 1990

City of Otsego



FORMER ROCK-TENN PROPERTIES  
Otsego, Michigan

North Parcels Soil Samples

|                |           |
|----------------|-----------|
| Last Modified: | July 2006 |
| Project No.:   | F1192     |

|             |   |
|-------------|---|
| Figure No.: | 4 |
|-------------|---|



B200601017PL

BASELINE ENVIRONMENTAL ASSESSMENT  
CONDUCTED PURSUANT TO SECTION 20726(1)(C)  
OF 1995 PA 451, PART 201, AS AMENDED  
AND THE RULES PROMULGATED THEREUNDER

FORMER ROCK-TENN MILL PROPERTIES  
431 HELEN AVENUE  
OTSEGO, MICHIGAN

September 20, 2006



BEA B200601017PL

ROCK-TENN (FMRLY)  
431 HELEN AVENUE  
OTSEGO, MI 49078  
PART 201 - ALLEGAN COUNTY  
GLOBAL ENVIRONMENTAL  
BEA COMPLETED 9/20/06



**GLOBAL**  
ENVIRONMENTAL  
ENGINEERING INC.

**BASELINE ENVIRONMENTAL ASSESSMENT  
CONDUCTED PURSUANT TO SECTION 20126(1)(C)  
OF 1995 PA 451, PART 201, AS AMENDED  
AND THE RULES PROMULGATED THEREUNDER**

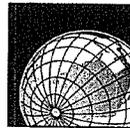
**FORMER ROCK-TENN MILL PROPERTIES  
431 HELEN AVENUE  
OTSEGO, MICHIGAN**

**September 20, 2006**

Prepared For:

**COGSWELL/ROMULUS PROPERTIES, LLC  
6901 COGSWELL ROAD  
ROMULUS, MICHIGAN 48174**

Prepared By:



**GLOBAL  
ENVIRONMENTAL  
ENGINEERING INC.**

6140 Hill 23 Drive  
Flint, Michigan 48507  
Phone (810) 238-9190  
Fax (810) 238-9195



Global Project Number F1192

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Figure 1 Site Location Map  
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 Figure 3 Mill Details and Sampling Locations  
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**APPENDIXES**

Appendix A Phase I Environmental Site Assessment, July 20, 2006  
 Appendix B Soil Boring Logs  
 Appendix C Laboratory Analytical Data  
 Appendix D Material Safety Data Sheets (MSDS) of Formerly Used Chemicals  
 Appendix E Environmental Professionals Qualifications

## 1.0 BASELINE ENVIRONMENTAL ASSESSMENT IDENTIFICATION

Global Environmental Engineering Inc. (Global) was retained to complete a Baseline Environmental Assessment (BEA) Pursuant to Section 20126(1)(c) of 1984 PA 451, Part 201, as amended, and the Rules promulgated there under for the property identified as Parcel Numbers 03-54-015-006-00, 54-800-001-00, 54-575-001-00, 03-17-17-015-002-00 and 03-17-17-015-001-10, 241 Helen Street, Otsego, Allegan County, Michigan.

BEA Author: Ms. Julie M. Varco, Site Assessor  
Mr. Chris S. Bylle, Project Manager  
Global Environmental Engineering Inc.  
6140 Hill 23 Drive, Suite 1  
Flint, Michigan 48507

BEA Conducted: September 11, 2006  
BEA Completed: September 20, 2006

## 2.0 INTRODUCTION

Global has completed a Type N Baseline Environmental Assessment (BEA) for the property identified as five parcels including 03-54-015-006-00, 54-800-001-00, 54-575-001-00, 03-17-17-015-002-00 and 03-17-17-015-001-10, 241 Helen Street, Otsego, Allegan County, Michigan, for the purpose of establishing an exemption from liability for historical contamination. The location of the subject property is shown on the Site Location Map included as **Figure 1**, and Site Diagrams included as **Figure 2** and **Figure 3**. Photographs of the property are included in the attached Phase I Environmental Site Assessments (ESA). Ms. Julie M. Varco, of Global, took site photographs on July 10, 2006. The Phase I ESA is attached as **Appendix A**.

This BEA has been completed for Cogswell/Romulus Properties LLC. The subject property is intended to be used for general commercial and warehousing. The property was previously used as a paper mill for over one hundred. Sanborn Fire Insurance Maps indicate a fully developed paper mill at the property in 1906. There is no clear record of the date of first construction at the site. The most recent operator of the paper mill, Rock-Tenn, ceased operations on July 3, 2004. The property has been vacant since that time.

## 3.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

No previous BEAs are known to have been completed at this property.

Global completed a Phase I Environmental Site Assessment (ESA), for the subject property, on July 20, 2006, attached as **Appendix A**. The Phase I ESA revealed the following recognized environmental condition:

### On-Site Recognized Environmental Concerns:

- Former retention basins located on the western portion of the subject property.
- Documentation indicating low-level polychlorinated biphenyl (PCB) contamination throughout the site.
- Residual chemicals located in the manufacturing building. Chemical materials include flammables, inks, caustics, and corrosive materials associated with former manufacturing operations.

- Residual oils and sludge visible in a press pit located in the former manufacturing building.

The site includes two closed Type III landfill cells on the northern portion of the property. These cells were permitted to accept mill waste and poly-waste generated on-site in former mill operations.

Off-Site Recognized Environmental Concerns:

- Off-site environmental concerns include the ongoing Superfund investigation and remedial action for PCB and dioxin impacts in the sediments of the adjacent Kalamazoo River. Based on the information regarding this site, the sediments are believed to represent a recognized potential off-site environmental concern to the subject property.

As an operating paper mill, the site has been closely monitored by the Michigan Department of Environmental Quality (MDEQ). The site was operating under a National Pollution Discharge Elimination System (NPDES) permit until October 2005 when the settlement lagoons were officially closed and discharge to the Kalamazoo River was permanently ceased. Records from the Water Bureau (WB) of the MDEQ show that the site had several exceedences of NPDES discharge limits over the years, and several spills of process water occurred. The primary exceedences consisted of biological and chemical oxygen demand (BOD and COD) and pH concerns. None of which are considered an existing environmental concern for the property.

Mead Paper Company operated a licensed Type III landfill for over 30 years on the northern parcel of the subject property. The landfill began operation in approximately 1955 and was officially closed in 1990 following the purchase of the mill by the Rock-Tenn Company. Type III landfills are typically used for general construction debris and are not permitted to accept any hazardous materials. Environmental testing was completed at the time of closure and no significant hazardous materials were identified. Low-level polychlorinated biphenols (PCBs) were identified in shallow sediments in and around the landfill, but the levels were low and did not require corrective action. It is believed that the low-level PCBs identified were the result of pre-1970 ink washing methods used by Mead Paper Company during their ownership of the property. PCBs have not been used at the site in over 30 years.

In addition to the landfill, settlement lagoons were used at the property until site closure in 2004. The lagoons were used to allow suspended solids to precipitate out of process water before discharge to the Kalamazoo River. In the late 1990's, the MDEQ performed testing of the lagoon sediments in connection with the Superfund evaluation of the Kalamazoo River sediments. PCB impacted sediments have been identified in approximately 80 miles of the Kalamazoo River between Battle Creek and Allegan. MDEQ testing identified low-level PCBs in the lagoon sediments. However, Rock-Tenn retained a consultant to evaluate the PCBs and determine the potential contribution to the Kalamazoo River sediments. Based on an extensive and detailed evaluation, it was determined that while PCBs were present in the lagoon sediments, the concentration and distribution within the lagoons would not have provided any significant PCBs to the Kalamazoo River. The plant and associated owners were not listed as potentially responsible parties (PRPs) for the Kalamazoo River Superfund Project.

Following plant closure in July of 2004, the settlement lagoons were dewatered and capped. A closure plan was submitted to and approved by the MDEQ. Closure activities began in late 2004 and were completed during the summer of 2005. The NPDES permit for the facility was deactivated in September of 2005 following completion of construction activities. Monitoring wells were installed around the former lagoons and annual monitoring was proposed for a period of five years. Groundwater testing of the monitoring wells indicated elevated levels of

several metals (Boron, Magnesium and Iron), nitrogen as ammonia and total inorganic nitrogen. A restrictive covenant was filed for the area of the lagoons preventing use of the groundwater. In addition, the elevated levels of these constituents have migrated onto the southeast corner of the adjacent property to the west. Rock-Tenn notified the property owner of the migration of these contaminants onto his property, and is in negotiation to file an additional restrictive covenant on the neighbor's property.

Because the facility has historically processed uncoated, unbleached paperboard, many of the toxic chemicals typical of paper manufacturing facilities have never been used at the property. However, large quantities of caustics, dyes, lubricants, fuels and other potentially toxic substances have been stored, used and consumed at the property. Not all of these chemicals have been evaluated in the sediments and soils of the subject property. Because this is a Type N BEA, an extensive evaluation and delineation of all potential contaminants has not been completed. Based on the future uses of the property by potential leasees on the site, additional investigation may be necessary to continue to provide protection from liability for possible contamination on the property.

#### 4.0 PROPERTY DESCRIPTION

The subject property is located on the north side of the City of Otsego, Sections 15 and 22, Township 1 North, Range 12 West, Allegan County, Michigan. The subject property mailing address is 431 Helen Avenue, Otsego, Michigan 49078. The subject property consists of five distinct parcels, three of which are located within the City Limits of Otsego, the other two are located in Otsego Township, Allegan County, Michigan. Parcel Numbers 03-54-015-006-00 (approximately 44 acres), 03-54-800-001-00 (approximately 2.7 acres) and 03-54-575-001-00 (approximately 3.4 acres) are located within the City of Otsego. Parcel numbers 03-17-147-015-002-00 (approximately 23.5 acres) and 03-17-17-015-001-00 (approximately 31.5 acres) are located in Otsego Township north of the City of Otsego. The legal descriptions of the subject properties is as follows:

#### LOTS WITHIN THE CITY OF OTSEGO:

Parcel Number 03-54-015-006-00  
COM AT A PT 888.5 FT W & 32.8 FT N OF THE SE COR OF SEC 15 FOR POB OF THIS DES, (BEING THE SE COR OF TOWNSEND'S ADD) THE N 81 DEG 50' W 337.75 FT TO THE E 1/8 LIN OF SEC 15 THE N ON SD 1/8 LIN TO THE N CITY LIMIT LIN (BEING THE S 1/8 LIN OF SEC 15) TH S ON SD N & S 1/4 LIN TO THE S 1/4 POST OF SEC 15 TH S ALG THE N & S 1/4 LIN OF SEC 22 TO THE KALA RIVER TH ELY ALG SD RIVER TO THE W LIN OF NORTH ST TH N'LY ALG THE W LIN OF NORTH ST TO A PT THAT IS 214.7 FR S'LY FROM THE S LIN OF HELEN AVE. TH W'LY IN A STRAIGHT LIN TO A PT 885.5 FT W OF THE E LIN OF SD SEC 22 & 200 FT S'LY FROM THE S LIN OF SD HELEN AVE. TH N PPL WITH SD E LIN OF SEC 22 TO THE S LIN OF HELEN AVE. TH NW'LY ALG S LIN OF HELEN SVE. TO POB EX COM AT A PT IN THE CTR OF RIVER ST WHERE THE N & S 1/4 LIN OF SEC 15 CROSSES THE SD HWY TH ELY ALG THE CTR LIN OF SD HWY 40 RDS TH N PPL WITH SD 1/4 LIN TO THE N CITY LIMIT (BEING THE S 1/8 LIN OF SEC 15) THE W'LY ALG SD N CITY LIMIT LIN TO THE SD 1/4 LIN TH S ON SD 1/4 LIN TO POB ALSO EX COM AT NE COR OF SEC 22 THE S 103.40' TH N 79 DEG 16' W 255.75' ALG S'LY RW HELEN ST TH S 3 DEG 25' W 198.12' ALG W'LY RW NORTH ST TO POB THIS DESC TH S 23 DEG 25' W 270.95' ALG SD RW TO N'LY BANK OF THE KALAMAZOO RIVER TH N 870 DEG 22' 28" W 353.51' ALG SD RIVER TH N 1 DEG 45' 20" E 210' TH N 65 DEG 25' E

60.43' TH N 76 DEG 30' 20" E 79.50' TH S 79 DEG 16' 230' TO POB SEC 22 T1N R12W.

Parcel Number 54-800-001-00

LOTS 1 TO 14 INC VACATED WILLIAM ST ASLO THE VACATED PART OF HELEN AVE BEING THAT PART LYING W OF W LINE OF JOHN ST EXTENDED TOWNSEND ADDITION.

Parcel Number 54-575-001-00

LOTS 1 THRU 22 INC. MAC SIM BAR ADDITION

#### LOTS WITHIN OTSEGO TOWNSHIP:

Parcel Number 03-17-17-015-002-00

COM AT A PT ON CTRR LINE OF RIVER ST AT A PT WHERE THE E 1/8 LIN SEC 15 INTERS CTR LIN SD RIVER ST TH N PPL TO E LIN SEC 15 TO N OF LINE SD RIVER ST THE CONT N ON SD PPL LIN A DIST OF 868 FT TO POB TH N 285 FT TO A PT ON SWLY LIN OF NYC RR RAW TH NWLY ALG SD SWLY LIN OF RR RW TO W LIN SD SEC E 1/2 SD SEC TH S ALG SD W LIN A DIST OF 1167.6 FT ST FT 167.4 FT N OF E & W 1/4 LIN SEC 15 TH NELY PPL TO SD RIVER ST 543 FT SD PT DIST 66 FT SD SWLY RR RAW LIN MEASURED AT RT ANG TO SD RW TH SELY PPL TO SD RR RW 234.7 FT TH S PPL WITH W LIN SD E 1/2 SD SEC 1626.4 FT TO E 1/8 LIN SD SEC THE ON 1/8 LIN TO POB SEC 15 T1N R12W.

Parcel Number 03-17-17-015-001-10

COM NE COR OF SEC TH S 1325.80' TH W 2534.70' TO NELY RW OF PENN CTR RR & POB OF THIS DESC THE 1209.60' TO N'LY EXT OF N & S 1/8 LIN OF SE 1/4 TH S 2213.30' TO NELY RW LIN OF SD RR TH N 29 DEG 13' 43' W 2539.23' TO POB SEC 15 T1N R12W.

A scaled drawing of the subject property and boundaries has been included as **Figure 2**.

#### 5.0 INTENDED HAZARDOUS SUBSTANCE USE

The intended use of the property is for future commercial and warehousing space. There is no intended use or storage of hazardous materials planned at the site. Based on the planned usage, this report is being prepared as a Type N BEA. The purchaser of the property will have little personal presence at the property. It is expected that space within the complex will be leased out to other companies for commercial/industrial and/or warehousing. The intended use by individual leasees will be evaluated, and if hazardous materials will be a part of their projected activities at the site, additional testing may be necessary and modified BEAs may be required.

#### 6.0 KNOWN CONTAMINATION

Based on the recognized environmental conditions identified within the Phase I ESA, a subsurface investigation was conducted on the subject property along with sampling of the sludge present in the press pit within the building. The subsurface investigation was conducted to evaluate the current level of PCB impact in the subsurface soils of the northern parcel where the Type III landfill was located. The subsurface investigation was conducted on August 30, 2006. Boring Logs are included as **Appendix B**. The subsurface investigations and findings are summarized below.

### 6.1 Subsurface Investigation

The soil borings were conducted to a maximum depth of approximately 4 feet below grade. Soil boring locations have been included on **Figure 3 and 4**. Soil borings and associated sample collection is summarized as follows:

| Boring | Depth   | Date      | Rational For Location          | Sample Depth and Matrix |
|--------|---------|-----------|--------------------------------|-------------------------|
| GP1    | 4'      | 8/30/2006 | Former PCB identified area.    | 1'-2' - soil            |
| GP2    | 4'      | 8/30/2006 | Former PCB identified area.    | 3'-4' - soil            |
| GP3    | 4'      | 8/30/2006 | Former PCB identified area.    | 1'-2' - soil            |
| GP4    | 4'      | 8/30/2006 | Former PCB identified area.    | 2'-3' - soil            |
| GP5    | 4'      | 8/30/2006 | Former PCB identified area.    | 1'-2' - soil            |
| HA1    | Surface | 8/30/2006 | Oil/sludge in press pit.       | 0-3" - sludge           |
| HA2    | Surface | 8/30/2006 | Basement area below press pit. | 0-6" - soil             |

Table Notes:

- PCBs = Polychlorinated Biphenyls
- GP = Geoprobe Boring
- HA = Hand Auger Boring

### 6.2 Laboratory Analysis

#### Laboratory Analytical Parameters

| Sample Identification | Laboratory Analysis                           |
|-----------------------|---|
| GP1                   | PCB   |
| GP2                   | PCB   |
| GP3                   | PCB   |
| GP4                   | PCB   |
| GP5                   | PCB   |
| HA1                   | PCB, VOCs, SVOCs, Michigan 10 Metals, Mercury |
| HA2                   | PCB, VOCs, SVOCs, Michigan 10 Metals, Mercury |

Table Notes:

- VOCs = Volatile Organic Compounds
- SVOCs = Semi-Volatile Organic Compounds
- PCBs = Polychlorinated Biphenyls
- 10 Metals = Arsenic, barium, cadmium, copper, chromium, lead, selenium, silver, zinc

### 6.3 Elevated Contaminant Levels Identified in MDEQ File Review

Based on a review of the files housed by the MDEQ, several areas of known impact were identified. The northern parcels where Mead operated a Type III landfill have been proven to contain soils with low level PCB contamination. Samples collected from soils on that property displayed levels of PCB ranging from 1.4 parts per million (ppm) to 12 ppm. The MDEQ Generic Residential Cleanup Criteria for total PCBs in soil is 1 ppm. PCB levels above 50 ppm become federally regulated issues and must be addressed

under federal law. The levels identified at the site are not federally regulated, but do exceed MDEQ Generic Residential Cleanup Criteria.

The sediments in the former lagoons were also identified as PCB-containing. Again, the levels present in the former lagoon sediments are relatively low with detectable concentrations ranging from 1.2 to 18 ppm. The lagoons were officially closed in 2005 with an engineered impermeable cap installed over the lagoons. Because the lagoons were capped, the MDEQ Generic Residential Cleanup Criteria for PCBs in soil is raised to 10 ppm. Additional PCB testing was completed along the bank of the Kalamazoo River, but no detectable levels were identified.

In addition to the PCBs identified at the subject property, groundwater monitoring wells are present in the area of the former lagoons. Groundwater testing completed using these wells has identified levels of boron, magnesium and iron above the MDEQ health based and/or Aesthetic Drinking Water Cleanup Criteria. Nitrogen as ammonia and total inorganic nitrogen were also identified as being above these criteria. A restrictive covenant was filed with the MDEQ and the Allegan County Register of Deeds to prevent the use of groundwater from the western portion of the 44 acre parcel where the former lagoons were located. Impacted groundwater has also migrated off-site onto the adjacent property to the west. Rock-Tenn has provided the necessary notice of off-site migration to the affected property owner and is negotiating to place a restriction on that property as well. To date the adjacent property owner has not shown interest in the restriction.

Based on the presence of PCBs in the soils and elevated metals, ammonia and nitrogen, the existing known impact to the site designates the site as a "facility" under Part 201 of PA 451, *Natural Resources and Environmental Protection Act*, 1994, as amended.

#### 6.4 Laboratory Analytical Results/Facility Determination

The compounds detected within the laboratory analytical results were compared to the generic residential cleanup criteria and screening levels, published in the MDEQ Remediation and Redevelopment Division Operational Memorandum Number 1, dated December 10, 2004. A summary table of the laboratory analytical results is attached in **Appendix C**.

Two analytes were detected above the applicable MDEQ Residential Cleanup Criteria and Screening Levels. Based on the detection of compounds above these levels, the property is a "facility" as defined in Section 20126(1)(c) of 1994 PA 451, Part 201, as amended. The highest level of each compound detected above the MDEQ Residential Cleanup Criteria and Screening Levels is shown in the following table:

#### FACILITY COMPOUNDS

| Analyte | CAS Number | Soil Facility Compounds Table        |                   | Sample Location |
|---------|------------|--------------------------------------|-------------------|-----------------|
|         |            | Cleanup Criteria                     | Analytical Result |                 |
| Copper  | 7440508    | Michigan 10 Metals<br>5,800,000 (DW) | 113,000,000       | HA1             |
| Lead    | 7439921    | 400,000 (DC)                         | 1,940,000         | HA1             |

Table Notes:

- DC – Direct Contact
- DW – Drinking Water Protection Criteria

- HA – Hand Auger Soil Boring
- All values in parts per billion (ppb)
- Cleanup Criteria consists of the lowest applicable residential cleanup criteria and screening levels.

## 7.0 LIKELIHOOD OF OTHER CONTAMINATION

Previous investigations related to the former lagoon and the PCB impact along with the sampling of the machining pit identified a number of chemicals above the MDEQ Generic Residential Cleanup Criteria as listed in the sections above. However, this document is being submitted as a Type N BEA, and exhaustive investigation has not been completed. As an operating paper mill for a period of over 100 years, a number of other potential contaminants may be present. A search of the facility identified a list of material safety data sheets (MSDSs) for Rock-Tenn. A number of the MSDSs are for materials that may cause acute health effects upon contact with the chemicals, but would not persist as an environmental concern on the property. The following is a list of toxic chemicals identified in the MSDSs from the mill that have the potential to be present, but were not identified in the limited testing completed at the site:

| Chemical Name                    | CAS Number |
|----------------------------------|------------|
| Petroleum Solvents               | 64741-89-5 |
| Petroleum Distillates            | 64742-47-8 |
| Motor Oil                        | 64741-88-4 |
| Petroleum Grease                 | 64742-54-7 |
| 4-4-methylenedianiline           | 101-77-9   |
| Ethylene Glycol                  | 107-21-1   |
| Tetrachloroethylene              | 127-18-4   |
| Cyclohexamine                    | 108-91-8   |
| Triethanolamine                  | 102-71-6   |
| Pottasium Phthalate              | 877-24-7   |
| 1, 1, 1-trimethylethane          | 71-56-6    |
| Dichloromethane                  | 71-09-2    |
| Monoethanolamine                 | 141-43-5   |
| Ethylene Glycol mono butyl ether | 711-76-2   |
| Methylene chloride               | 75-09-2    |
| Ethylene Trichloride             | 79-01-6    |

In addition to the above compounds known to have been used at the site in the recent past, the plant has been operating as a paper mill for over 100 years. Prior to the enactment of environmental laws and regulations, it is not known exactly what chemicals may have been used at the site. However, a potential list of pollutants that are typical of paper mills and may have been used in the past at the site includes:

- Chlorine and Chlorine compounds

- Chloroform
- Dioxins
- Furans
- Nitrogen oxides
- Phenols
- Various sulfur compounds

At the present time, there is no evidence from this or previous investigations that any of these compounds have impacted the environmental resources of the site. However, specific testing has not been completed, and based on the proposed use of the property, none is planned. The potential does exist for any one or combination of these compounds to be present on the subject property.

#### **8.0 ABANDONED CONTAINERS**

No abandoned underground storage tanks were identified or known to exist on the subject property. Several large above ground storage tanks are present at the site. However, these were used for water storage and/or treatment. They are not believed to be a threat to environmental conditions at the site. In addition, a number of containers, totes and drums were present at the site. Many of these were sealed and most were in very good condition. As identified in the Phase I ESA, most of the containers held caustic chemicals or dyes. A lesser number of containers of volatiles, kerosene and other chemicals were observed around the plant. None of the observed containers, totes or drums were located outside the building with the exception of one drum of soil cuttings left over from the installation of the monitoring wells for the lagoon closure. The purchaser of the property will address the proper removal of all the various containers and chemicals before occupancy, and none are considered to be threats to the environment of the site as they are on concrete and within the building.

#### **9.0 ALTERNATIVE APPROACHES**

The planned usage of the property is for no hazardous chemical storage or use. Based on this proposed use, no alternative approaches are necessary.

#### **10.0 ENVIRONMENTAL PROFESSIONALS QUALIFICATIONS**

Qualifications for the environmental professional(s) completing the BEA are included in **Appendix D.**

#### **11.0 CONCLUSIONS**

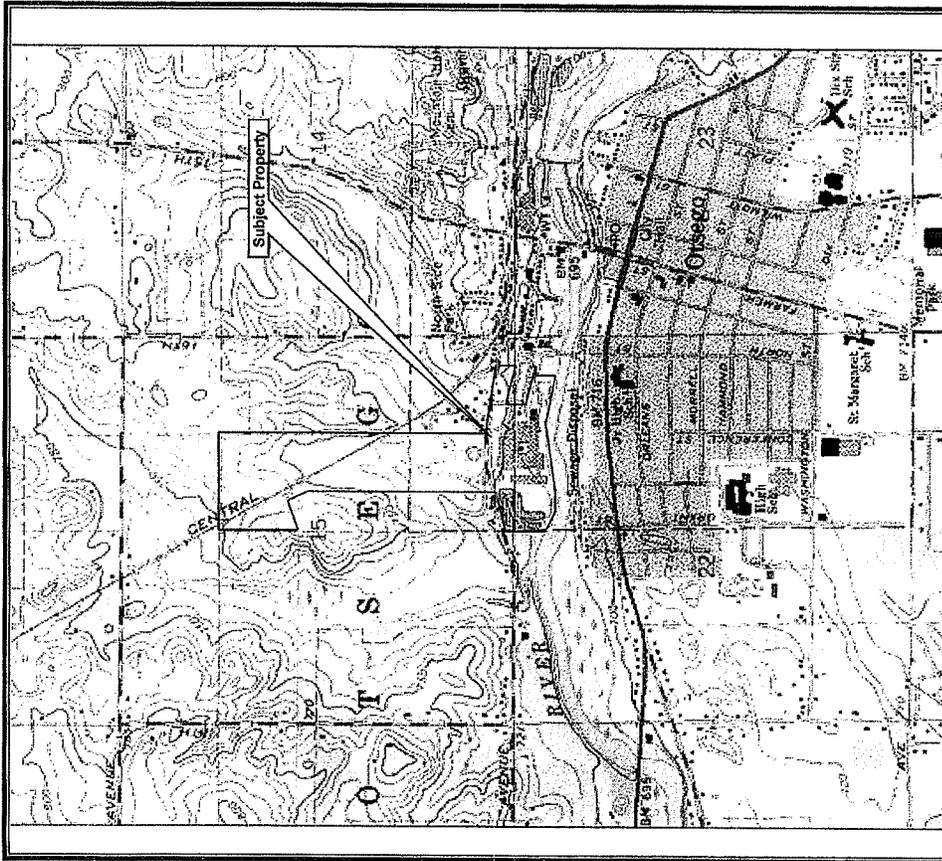
A BEA was conducted on the property identified as five parcels including 03-54-015-006-00, 54-800-001-00, 54-575-001-00, 03-17-17-015-002-00 and 03-17-17-015-001-10, 241 Helen Street, Otsego, Allegan County, Michigan. The BEA identified compounds above the applicable residential cleanup criteria and screening levels. Based on the detection of compounds above the residential cleanup criteria and screening levels, the property is a "facility" as defined in Section 20126(1)(c) of 1994 PA 451, Part 201, as amended.

Future use of the property will not involve significant hazardous substance use and this is the basis for being able to distinguish existing contamination from a new release.

**12.0 REFERENCES**

- Phase I Environmental Site Assessment, Global Environmental Engineering Inc., July 21, 2006
- Section 20126(f)(c) of 1994 PA 451, Part 201, as amended, and the Rules promulgated thereunder
- Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division Operational Memorandum Number 1, dated December 10, 2004

**FIGURE 1**  
**Site Location Map**



|   |   |
|---|---|
|  <p><b>GLOBAL ENVIRONMENTAL ENGINEERING, INC.</b><br/>6140 Hill 23 Drive, Suite 1<br/>Flint, Michigan 48507<br/>Phone : 810-238-9190 Fax: 810-238-9195</p> | <p><b>Former Rock-Tenn Mill<br/>431 Helen Avenue<br/>Otsego, Michigan</b></p> |
| <p>Excerpt: USGS 7.5 Minute Quadrangle<br/>Otsego Quadrangle<br/>Delorme Topoquads® 1999<br/>Scale 1:19,500</p>   |   |

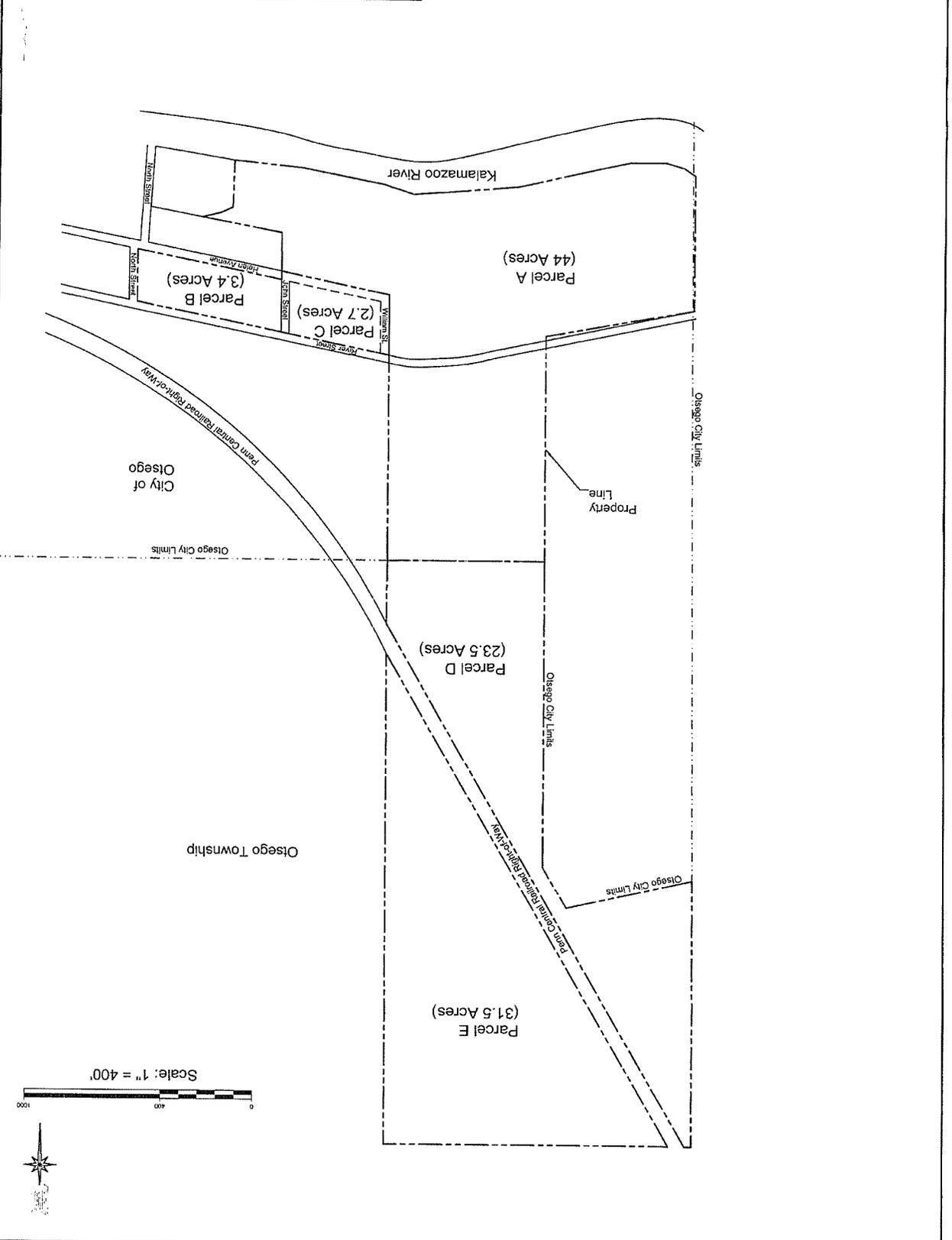
Figure 1 - U.S.G.S. Topographic Map

**Figure 2**  
**Site Diagram**

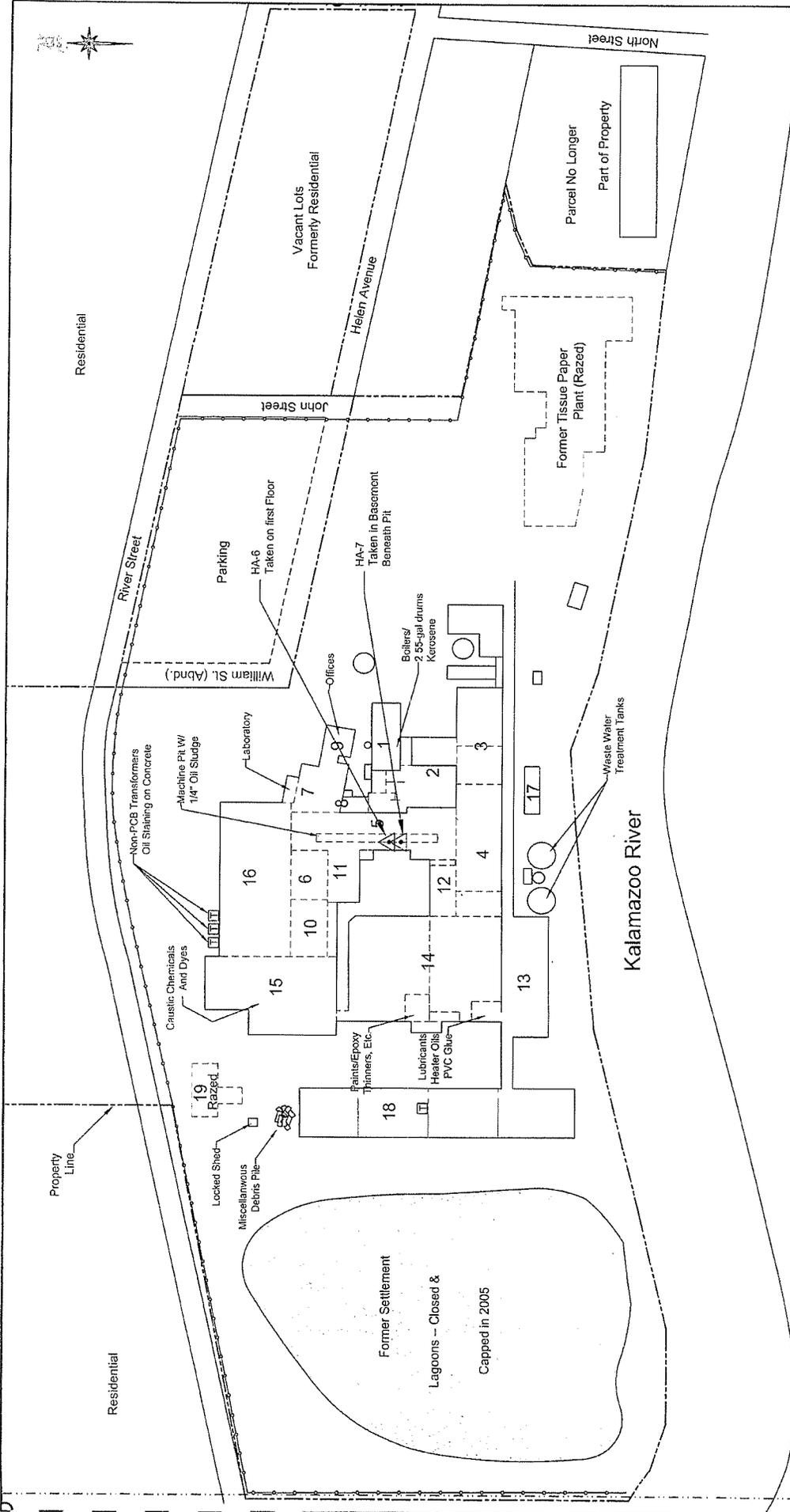
|                          |
|--------------------------|
| Project No.: F1192       |
| Last Modified: July 2006 |
| Figure No.: 2            |

FORMER ROCK-TENN MILL PROPERTIES  
Ossego, Michigan

Site Boundary Map



**Figure 3**  
**Mill Details and Sampling Locations**



FORMER ROCK-TENN MILL PROPERTIES  
 Otsego, Michigan

Mill Details

Last Modified: July 2006  
 Project No.: F1192

Figure No.: **3**



1000

**Figure 4  
North Parcel Detail and Sampling Locations**

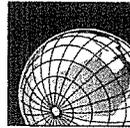
SECTION 7a COMPLIANCE ANALYSIS  
FOR A PROPERTY AT  
FORMER ROCK-TENN MILL PROPERTIES  
431 HELEN AVENUE, OTSEGO, MICHIGAN  
REQUESTED IN CONJUNCTION WITH  
A BASELINE ENVIRONMENTAL ASSESSMENT

September 20, 2006

Prepared For:

COGSWELL/ROMULUS PROPERTIES, LLC  
6901 COGSWELL ROAD  
ROMULUS, MICHIGAN 48174

Prepared By:



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Global Project Number F1192

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## 1.0 INTRODUCTION

Global Environmental Engineering Inc. (Global) was retained to complete a Section 7a Compliance Analysis (Section 7a CA or "due care" analysis) Pursuant to Section 20129a of 1994 PA 451, Part 201, as amended and the Part 9 Rules for the property identified as Parcel Numbers 03-54-015-006-00, 54-800-001-00, 54-575-001-00, 03-17-17-015-002-00 and 03-17-17-015-001-10, 241 Helen Street, Otsego, Allegan County, Michigan.

A Baseline Environmental Assessment (BEA) identified contamination on the subject property in excess of applicable Residential Cleanup Criteria and Screening Levels, published in the Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Division Operational Memorandum Number 1, dated December 10, 2004. Based on the detection of compounds above the residential cleanup criteria and screening levels, the property is a "facility" as defined in Section 20126(1)(c) of 1994 PA 451, Part 201, as amended. Section 7a(1) rules provide that a person who owns or operates a property that he/she has knowledge is a facility must do all the following:

- Undertake measures to prevent exacerbation of existing contamination.
- Exercise due care by undertaking response activity necessary to mitigate unacceptable exposures to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use of the property in a manner that protects the public health and safety.
- Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that could result from those acts or omissions.

The Section 7a CA is based on information, regarding the existing contamination and future site use, known at the time of the completion of this report.

## 2.0 DETAILED CHARACTERISTICS OF PROPERTY USE

The subject property is located on the north side of the City of Otsego, Sections 15 and 22, Township 1 North, Range 12 West, Allegan County, Michigan. The subject property mailing address is 431 Helen Avenue, Otsego, Michigan 49078. The subject property consists of five distinct parcels, three of which are located within the City Limits of Otsego, the other two are located in Otsego Township, Allegan County, Michigan. Parcel Numbers 03-54-015-006-00 (approximately 44 acres), 03-54-800-001-00 (approximately 2.7 acres) and 03-54-575-001-00 (approximately 3.4 acres) are located within the City of Otsego. Parcel numbers 03-17-147-015-002-00 (approximately 23.5 acres) and 03-17-17-015-001-00 (approximately 31.5 acres) are located in Otsego Township north of the City of Otsego. A site diagram including the property boundaries and boring locations is attached as **Figures 1-3**.

The intended use of the property is for future commercial and warehousing space. Future use of the property will not include the storage or handling of significant hazardous substances.

Utility improvements on the property include municipal storm sewer, municipal water along with potable wells, electricity, and natural gas. No plans exist for changes to on-site utilities or infrastructure. No plans exist for future construction activity on the property.

**2.0 HAZARDOUS SUBSTANCE INFORMATION**

The BEA completed by Global identified the following facility contaminates on the subject property:

| Analyte | CAS Number | Cleanup Criteria   |             | Analytical Result | Sample Location |
|---------|------------|--------------------|-------------|-------------------|-----------------|
|         |            | Michigan 10 Metals | DC          |                   |                 |
| Copper  | 7440508    | 5,800,000 (DW)     | 113,000,000 |                   | HA1             |
| Lead    | 7439921    | 400,000 (DC)       | 1,940,000   |                   | HA1             |
| PCBs    | 1336363    | 2,800              | 1,000       |                   | GP2             |

**Table Notes:**

- DC – Direct Contact
- DW – Drinking Water Protection Criteria
- PCB – Polychlorinated Biphenyls
- All values in parts per billion (ppb)
- Cleanup Criteria consists of the lowest applicable residential cleanup criteria and screening levels, published in MDEQ Remediation and Redevelopment Division Operational Memorandum Number 1, dated December 10, 2004.

Laboratory analytical data is included in **Appendix A**.

A licensed Type 3 landfill operated for over 30 years on the northern parcel of the subject property. The landfill began operation in approximately 1955 and was officially closed in 1990 following the purchase of the mill by the Rock-Tenn Company. Type 3 landfills are typically used for general construction debris and are not permitted to accept any hazardous materials. Environmental testing was completed at the time of closure and no significant hazardous materials were identified. Low-level polychlorinated biphenols (PCBs) were identified in shallow sediments in and around the landfill, but the levels were low and were not deemed at levels requiring corrective action.

In July of 2004, the settlements lagoons were dewatered and capped. A closure plan was submitted to and approved by the MDEQ. Closure activities began in late 2004 and were completed during the summer of 2005. Groundwater testing of the monitoring wells indicated elevated levels of several metals (Boron, Magnesium and Iron), nitrogen as ammonia and total inorganic nitrogen. A restrictive covenant was filed for the area of the lagoons preventing use of the groundwater.

The facility status of the subject property was identified based on comparison of the detected analytes to the lowest applicable residential cleanup criteria and screening levels. The Section 7a CA obligations are based on the zoning (Planned Use Development) and intended use of the property. The highest concentrations of facility compounds are compared to the Commercial II Cleanup Criteria and Screening Levels and are shown in the following table.

**Section 7a CA Comparison Tables**

| Analyte | Maximum Concentration | Groundwater Contact |               |             | Ambient Air | Direct Contact |
|---------|-----------------------|---------------------|---------------|-------------|-------------|----------------|
|         |                       | Drinking Water      | Indoor Air    | Outdoor Air |             |                |
| Metals  |                       |                     |               |             |             |                |
| Copper  | 113,000,000           | 5,800,000           | 1,000,000,000 | NLV         | NLV         | 73,000,000     |
| Lead    | 1,940,000             | 700,000             | na            | NLV         | na          | 900,000        |
| PCBs    | 2,800                 | NLL                 | NLL           | 16,000,000  | 810,000     | 1,000          |

**Table Notes:**

- All values in parts per billion (ppb).
- Cleanup Criteria consists of the Commercial II Cleanup Criteria and Screening Levels, published in MDEQ Remediation and Redevelopment Division Operational Memorandum Number 1, dated December 10, 2004.
- Bolded and shaded values represent an exceedance of the Commercial II Cleanup Criteria.
>
- NLV = Hazardous substance is not likely to volatilize under most conditions.
- NLL = Hazardous substance is not likely to leach under most soil conditions.
- na= Not applicable as fine fraction lead is only compacted to direct contact and particulate soil inhalation exposures.

As shown in the above tables, the maximum concentrations identified exceed the Commercial II Drinking Water and Direct Contact Cleanup Criteria. Applicable exposure pathways with regard to the maximum impacts identified on the subject property are discussed below.

| Exposure Pathway                   | Discussion   |
|------------------------------------|--|
| Drinking Water                     | Cooper and Lead were identified in excess of the cleanup criteria. No active drinking water wells exist on the subject property. Municipal water is available to the property. No wells will be installed in the future, without further characterization of the water bearing aquifer. Based on the above, Section 7a CA obligations have been met for the pathway.                                   |
| Groundwater Contact                | Groundwater testing of the monitoring wells indicated elevated levels of several metals (Boron, Magnesium and Iron), nitrogen as ammonia and total inorganic nitrogen. A restrictive covenant was filed for the area of the lagoons (located on the southwest portion of the property) preventing use of the groundwater. Based on the above, Section 7a CA obligations have been met for the pathway. |
| Soil Volatilization to Indoor Air  | Contamination was not identified in excess of the cleanup criteria; consequently, Section 7a CA obligations have been met for the pathway.   |
| Soil Volatilization to Outdoor Air | Contamination was not identified in excess of the cleanup criteria; consequently, Section 7a CA obligations have been met for the pathway.   |
| Particulate Soil Inhalation        | Contamination was not identified in excess of the cleanup criteria; consequently, Section 7a CA obligations have been met for the pathway.   |

| Exposure Pathway | Discussion   |
|------------------|--|
| Direct Contact   | <p>Copper and Lead were identified in excess of the cleanup criteria. The elevated level of impact was identified in sludge located in the press pit area sample HA1. The sample collected was a surface sample. PCBs were identified in excess of cleanup criteria. The elevated level of impact was identified in the Type 3 landfill operated for over 30 years on the northern parcel of the subject property.</p> <p>Due care measures to prevent direct contact exposure will include: Cleaning the press pit area, cleaning and proper removal of all the oily sludge. Cleaning and removal of the sludge will eliminate all known contamination in the building area of the Site. Based on the above, Section 7a CA obligations have been met for the pathway.</p> <p>PCB contamination is present in the lagoon sediments and the shallow subsurface soils on the northern property. The level of impact is above direct contact unless the contaminants are capped. Based on this information, the cap on the lagoons and the cap on the former Type 3 landfill cannot be disturbed. Surface activities are allowed as long as the caps are not compromised.</p> <p>Construction activities including grading or removal of soils will not take place at the former landfill. Grading is allowed outside the former landfill, but a cap must be installed to prevent direct contact with the potential PCB contaminants. The cap may consist of clean fill, topsoil or asphalt/concrete. Soil from the northern property cannot be removed from the site unless transported to a landfill for proper disposal. In the event of future site development, utility workers, or other subsurface workers contracted to work on the property will be notified of the environmental condition via certified mail. Employees, occupants, and other contractors of the property owner will, at minimum be verbally made aware of the environmental condition of the site. When applicable, only the use of subsurface workers properly trained with OSHA hazardous waste operations training will be used.</p> |

As shown in the above table no unacceptable exposures to hazardous substances are expected and the site will be used in a manner that allows for the intended site use and protects the public health and safety.

No fire and explosion hazards due to hazardous substances are believed to exist at the subject property. However, the former type 3 landfill has a potential to generate methane. While construction debris generally is not a major source of organic material, any organic matter (wood, paper, etc.) could decay and produce methane. Prior to construction in the area of the landfill, a test should be conducted to determine the level of methane production from the landfill and if it has the potential of creating an explosive atmosphere in an enclosed space.

No discarded or abandoned containers are known to exist at the subject property.

**4.0 PLAN FOR RESPONSE ACTIVITIES**

The plan for response activities describes how a facility owner will satisfy their obligations under Section 7a, with regard to the intended use of the property and addresses the intended response activities that will or have been conducted.

The press pit area will be properly cleaned to remove all existing oily sludge from the pit area. The contractor will utilize proper cleaning and disposal methods.

Employees or contractors of the property owner will, at minimum be verbally made aware of the environmental condition of the site, so as not to exacerbate the impact. A copy of the Section 7a Compliance Analysis will be made available upon request.

Potential future response activities will include the following. If activities are undertaken at the subject property that would require excavation of soils, necessary precautions will be implemented. All excavated soils will be returned to their place of origin, sampled for PCBs and metals prior to relocation, or properly disposed at a Type II Sanitary Landfill. Precautions will be taken to not allow excavated soil to present a runoff hazard or leave the subject property, except for proper disposal.

**5.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH SECTION 20107A OBLIGATIONS**

This section is an evaluation of the information in the previous sections that discusses and demonstrates how the proposed use satisfies obligations under Section 7a. The evaluation and demonstration of compliance is discussed below.

**Exacerbation**

The proposed site use is not expected to exacerbate the existing contamination or increase potential response costs. Soils will not be excavated or relocated on the subject property, without prior sampling, or except for disposal at a Type II Sanitary Landfill. Local soil erosion and sedimentation regulation will be followed during any future development activities.

Employees or contractors of the property owner will, at minimum be verbally made aware of the environmental condition of the site, so as not to exacerbate the impact. Utility or other subsurface workers will be notified of the site condition via certified mail.

**Due Care**

| Exposure Pathway | Discussion  |
|------------------|---|
| Drinking Water   | As no active drinking water wells are located at the subject property and no wells will be installed in the future, without further characterization.<br>Cooper and Lead were identified in excess of the cleanup criteria. The elevated level of impact was identified in sludge located in the press pit area sample HA1. The sample was collected as a surface sample. |
| Direct Contact   | Due care measures to prevent direct contact exposure will include: Cleaning the press pit area, cleaning all of the oily sludge and   |

| Exposure Pathway | Discussion   |
|------------------|--|
| Groundwater      | <p>properly disposing of. Based on the above, Section 7a CA obligations have been met for the pathway.</p> <p>Groundwater testing of the monitoring wells indicated elevated levels of several metals (Boron, Magnesium and Iron), nitrogen as ammonia and total inorganic nitrogen. A restrictive covenant was filed for the area of the lagoons (located on the southwest portion of the property) preventing use of the groundwater. Based on the above, Section 7a CA obligations have been met for the pathway.</p> |

The above information and the environmental condition of the property will be verbally communicated to workers and contractors at the subject property. The existence of the Section 7a CA will also be communicated and a copy will be provided to workers or contractors upon request.

Information regarding the environmental condition of the property will be verbally communicated to workers and contractors conducting subsurface activities at the subject property. The existence of the Section 7a CA will also be communicated and a copy will be provided to subsurface workers and contractors upon request.

**Reasonable Precautions**

Based on the exceedance of Commercial II Cleanup Criteria or Screening Levels the following reasonable precautions will be implemented at the property.

| Precaution Activity            | Discussion   |
|--------------------------------|--|
| Notification                   | <p>Future site development, utility workers, or other subsurface workers contracted to work on the property will be notified of the environmental condition via certified mail. Employees, occupants, and other contractors of the property owner will, at minimum be verbally made aware of the environmental condition of the site. When applicable, only the use of subsurface workers properly trained with OSHA hazardous waste operations training will be used. A copy of the Section 7a Compliance Analysis will be made available upon request.</p> |
| Cleaning of the press pit area | <p>The press pit area will be thoroughly cleaned of all oily sludge and properly disposed of.</p>  |

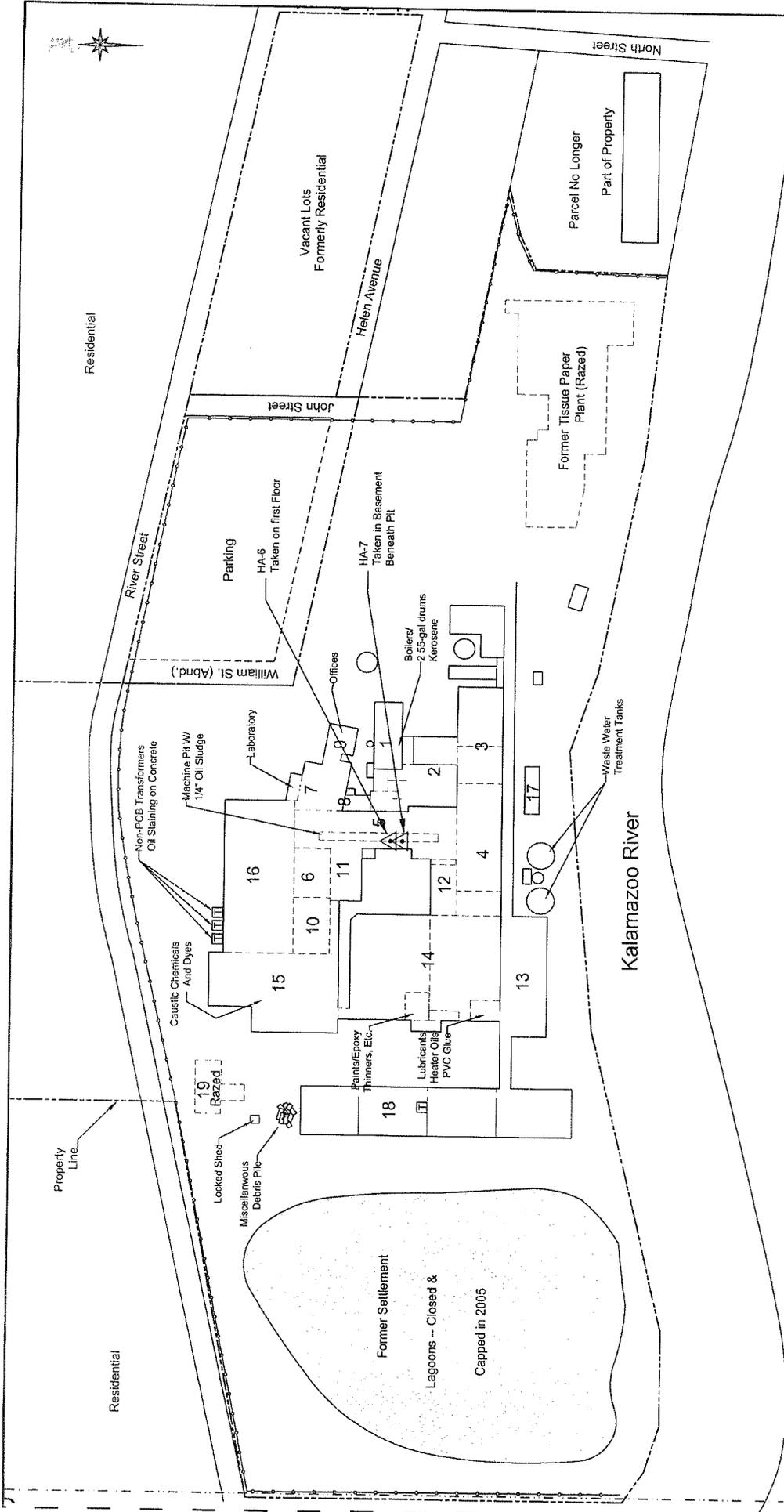
Additional discussion of the above activities is included in Section 2.0 and 3.0.

**Future Use Changes**

If the future use of the property changes in a manner that the obligations, response actions, or due care described within this report are no longer applicable to the site conditions, the Section 7a Ca will be revised.

FIGURES



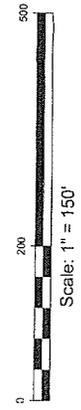


**FORMER ROCK-TENN MILL PROPERTIES**  
 Otsego, Michigan

Mill Details

Last Modified: July 2006  
 Project No.: F1192

Figure No.: **2**



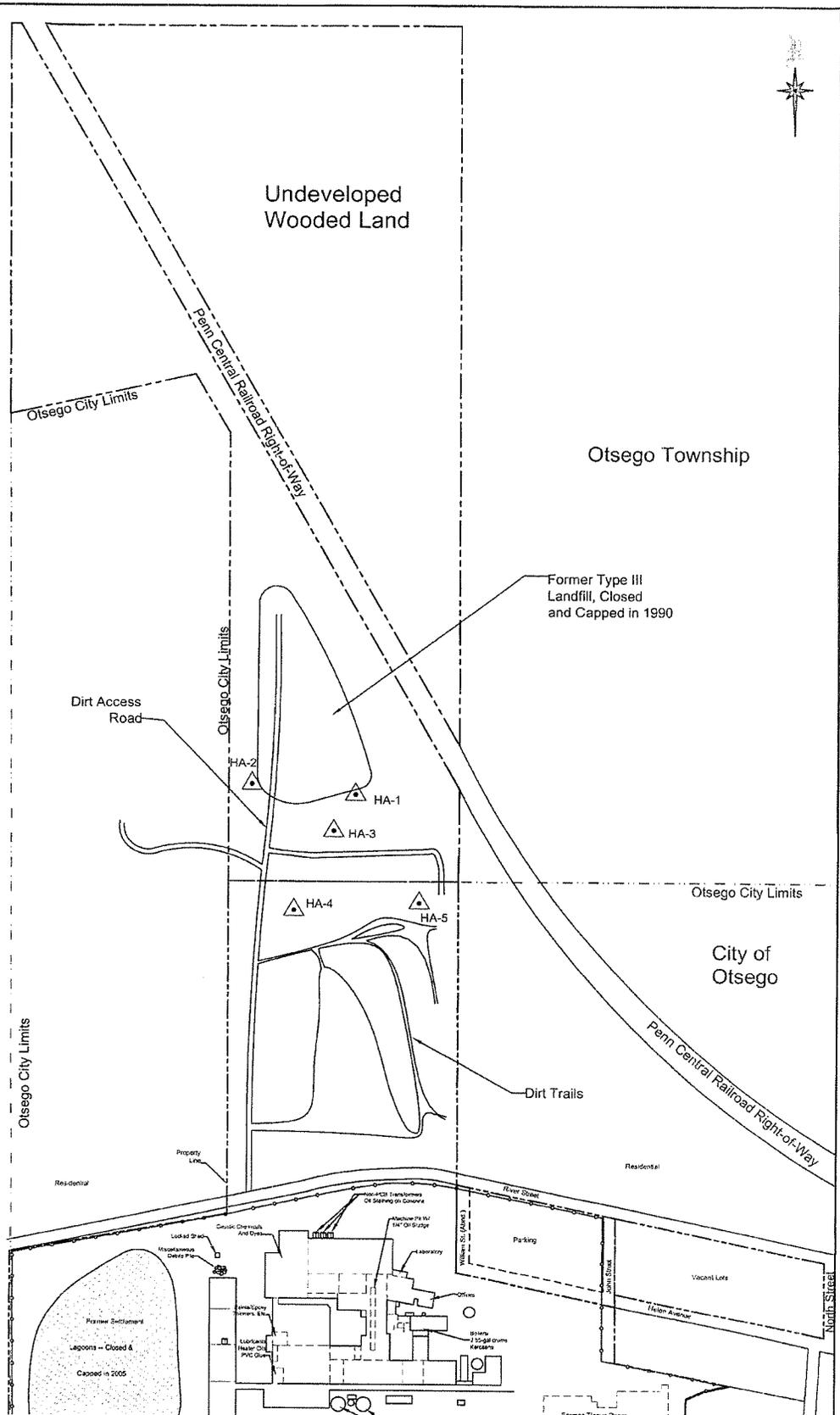


Undeveloped  
Wooded Land

Otsego Township

Former Type III  
Landfill, Closed  
and Capped in 1990

City of  
Otsego



FORMER ROCK-TENN PROPERTIES  
Otsego, Michigan

North Parcels Soil Samples

Last Modified:

July 2006

Figure No.:

3

Project No.:

F1192



GLOBAL  
ENVIRONMENTAL  
ENGINEERING INC.



January 18, 2012

Mr. Brian Kelly  
On-Scene Coordinator  
Emergency Response Branch  
U.S. Environmental Protection Agency, Region 5  
9311 Groh Road  
Grosse Ile, MI 48138

**Subject:       Site Assessment Report  
                  Rock-Tenn Site  
                  Otsego, Allegan County, Michigan  
                  Technical Direction Document No. TO-01-11-11-0027  
                  OTIE Contract No. EP-S5-10-10**

Dear Mr. Kelly:

OTIE is submitting the enclosed Site Assessment Report for the Rock-Tenn Site in Otsego, Michigan. If you have any questions or comments about the report or need additional copies, please contact me at (312) 220-7000 ext. 24 or Raghu Nagam at (312) 220-7005.

Sincerely,

Naren Babu  
Project Manager

Enclosure

cc:       Raghu Nagam, START Program Manager

**SITE ASSESSMENT REPORT  
ROCK-TENN SITE  
OTSEGO, ALLEGAN COUNTY, MICHIGAN**

Prepared for:

U.S. Environmental Protection Agency  
Emergency Response Branch, Region 5  
9311 Groh Road  
Grosse Ile, MI 48138

|                                |                  |
|--------------------------------|------------------|
| TDD No.:                       | TO-01-11-11-0027 |
| Date Prepared:                 | January 18, 2012 |
| Contract No.:                  | EP-S5-10-10      |
| Prepared by:                   | OTIE             |
| START Project Manager:         | Naren Babu       |
| Telephone No.:                 | (312) 220-7000   |
| U.S. EPA On-Scene Coordinator: | Brian Kelly      |
| Telephone No.:                 | (734) 692-7684   |



100 W Monroe Street, Suite 300  
Chicago, IL 60603

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**APPENDICES**

- A PHOTOGRAPHIC LOG
- B VALIDATED ANALYTICAL DATA PACKAGE

## 1. INTRODUCTION

---

OTIE has prepared this Site Assessment Report in accordance with the requirements of U.S. Environmental Protection Agency (U.S. EPA) Technical Direction Document (TDD) No. TO-01-11-11-0027 under the Superfund Technical Assessment and Response Team (START) contract No. EP-S5-10-10. The scope of this TDD was to conduct a Site Assessment at the Rock-Tenn Site in Otsego, Allegan County, Michigan. START was tasked to prepare a site-specific Health and Safety Plan, field sampling and analysis plan, subcontract an analytical laboratory, collect waste liquid drum samples and solid samples, evaluate analytical data, document on-site conditions with written logbook notes and still photographs, and prepare this Site Assessment Report. START Project Manager Naren Babu and START Elisa Walker conducted sampling activities on November 16 and 17, 2011. START Caitlin Ruza collected additional soil samples on December 14, 2011.

This Site Assessment Report summarizes the site background; discusses the assessment activities; provides a summary of the analytical data; and discusses potential site-related threats. The Appendices for this report include a photographic log of the Site activities (Appendix A) and the validated sample analytical results (Appendix B).

## 2. SITE BACKGROUND

---

This section provides Site background information and the history of the Site.

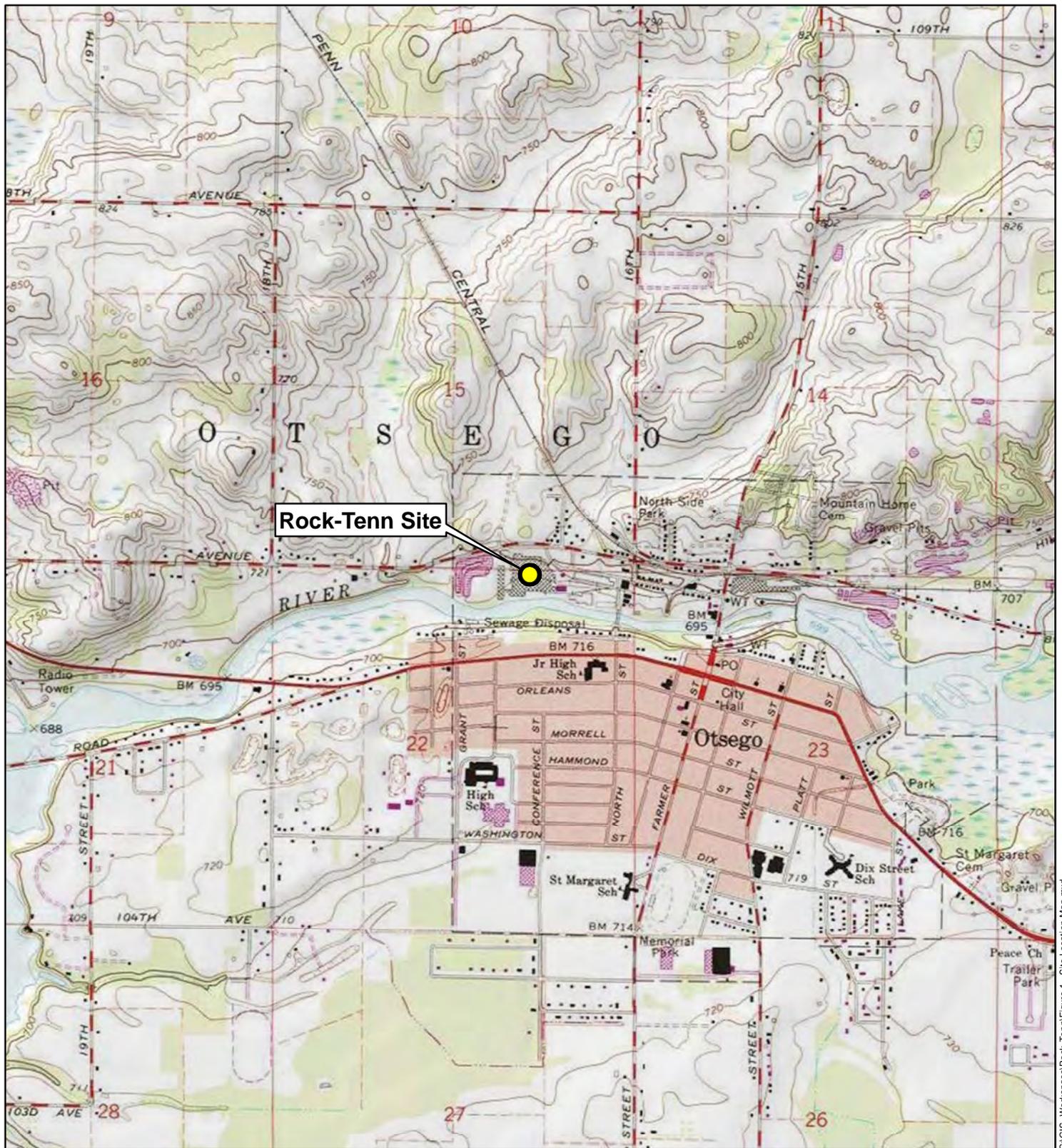
### 2.1 Site Description

The Rock-Tenn Site is located at 431 Helen Ave in Otsego, Allegan County, Michigan and is comprised of a former paper mill building in which representatives of Allegan County discovered over 200 drums, totes, and containers. The site is currently unoccupied. The geographical coordinates for the building are 42.464421 degrees latitude and -85.706537 degrees longitude (Figure 1 – Site Location Map). The Site occupies an approximate area of about 17 acres in an industrial setting area and is surrounded by W. River Street to the north, John Street and N. North Street to the east, the Kalamazoo River to the south and vacant land to the west.

### 2.2 Site History

MacSimBar Paper Company began papermaking at the Site in 1906. Paper and related products were produced at the Site for 98 years during which time the facility was operated under several different names. The plant shut down in 2004. In July 2004 approximately 100 people were employed at the facility (The Rock-Tenn mill) when it was closed. A fire damaged the plant in 2006. Cogswell Property LLC, of Redford Township near Detroit, bought the mill site in September 2006. The company's plans to revitalize the property never developed. The property entered foreclosure in April 2011 after Cogswell failed to pay overdue property taxes. Currently, the county owns the site property (Ref #1 and #2).

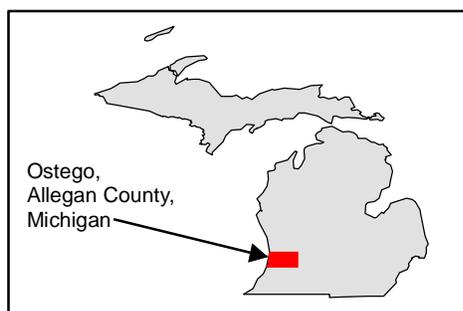
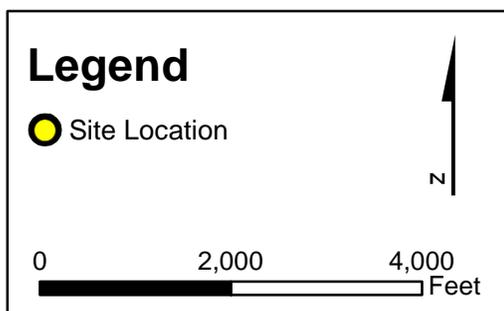
Otsego County and the State of Michigan have referred the Site to U.S. EPA Region 5 Superfund Division to conduct a removal assessment.



G:\GIS\_Workspace\Rock-Tenn\Figure 1 - Site Location Map.mxd

USGS 7.5 MINUTE SOURCE QUAD MAP (MICHIGAN): OTSEGO

Disclaimer: This map is intended for visual orientation use only. In no way is this map to be used for precise locational use.



United States Environmental Protection Agency

**ROCK-TENN SITE ASSESSMENT**  
**OTSEGO, ALLEGAN COUNTY,**  
**MICHIGAN**  
 TDD No. TO-01-11-11-0027

**FIGURE 1**  
**SITE LOCATION MAP**

### 3. SITE ASSESSMENT ACTIVITIES

---

Site Assessment activities at the Rock-Tenn Site, including site reconnaissance and sampling, are discussed below. U.S. EPA and START performed site assessment activities which included the collection of drum and solid samples. Field screening of drum contents was performed prior to sample collection.

A site-specific Sampling and Analysis Plan (SAP) was developed for the SA prior to fieldwork. The SAP described the data quality objectives (DQO), sampling strategy, proposed sampling locations, sampling methodology, and analytical procedures used during the SA.

This section summarizes field investigation activities including site reconnaissance and field screening (subsection 3.1) and sampling (subsection 3.2). Table 1 presents a summary of the field screening results. Table 2 presents a summary of all samples collected and their associated locations. Photographic documentation is provided in Appendix A.

#### 3.1 Site Reconnaissance

On November 16<sup>th</sup>, 2011, U.S. EPA On-Scene Coordinator (OSC), Brian Kelly, and OTIE START members Naren Babu and Elisa Walker mobilized to the site and met with local officials from Otsego City and Allegan County's consultant (Photo #1 in Appendix A). The OSC conducted a Health and Safety meeting and discussed the SAP and proposed sampling. Prior to conducting the site reconnaissance, START calibrated personal monitoring equipment-RAE Systems MultiRAE® Plus five-gas monitor. The MultiRAE instrument includes a photoionization detector that measures organic vapors, carbon monoxide (CO) sensor, hydrogen sulfide (H<sub>2</sub>S) sensor, lower explosive limit (LEL) sensor, and oxygen (O<sub>2</sub>) sensor.

U.S. EPA and START conducted site reconnaissance inside the building in modified Level "D" Personal Protective Equipment (PPE) in accordance with the approved site-specific HASP. Air monitoring was conducted in the breathing zone throughout the site reconnaissance using a MultiRAE® plus five-gas monitor. Even though the site is fenced and has a gate that is locked, clear signs of vandalism in the form of broken glass doors and graffiti on the doors and walls were observed (Photos #2 and #3). Drums, totes and containers with unknown material were observed at several locations inside the site buildings. Several areas inside the building had no lights and were dark. Open pits were observed with no signs of caution around them. Local officials departed from the site after identifying areas where drums and other

containers containing unknown material were stored. No readings above background in the breathing zone were detected during the site reconnaissance.

### 3.2 Field Screening and Container Inventory

OSC and START members donned level C PPE for the field screening activities. Field screening results from November 16, 2011 are shown in Table 1. Inside the front room of Building #14 (Figure 2), which is located north of the power house Building #1, OSC and START observed more than 100 containers each of “phoenix asphalt roof coating paint” and “FRY cold application cement” (Photo #4). Field screening conducted on a paint container with a partially opened lid indicated 450 parts per million (ppm) of volatile organic compounds (VOCs). In the back rooms of Building #14, 43 metal 55-gallon drums and approximately 40 plastic 5-gallon buckets were found. Some of the drums were labeled as “Latex Wall Paint”. Field screening conducted near the bung opening of one of the drums indicated less than 5 ppm VOCs. Field screening conducted on a bucket with a partially opened lid indicated 0.7 ppm VOCs.

Near the loading dock on the west end of the building #53, 18 totes and 45 drums were observed with standing water on the floor. Several drums were observed with the following labels: Corrosive “UN1824”, Corrosive “UN1760”, “and PARACOL” paraffin wax emulsion. A total of 12 drums stored in this area were labeled as “non-hazardous”. Field pH tests conducted on a poly drum with dark liquid indicated a pH of 2 (Photo #5). Field pH tests conducted on a drum material with a UN1760” label indicated a pH of 4. Field pH test results for liquid material in two totes with a “UN1824” label were between 8 and 9. Hissing noise was observed when the bung on a blue-colored drum was opened. Field screening conducted inside the bung opening of the blue colored metal drum indicated 15.8% O<sub>2</sub> and 26 ppm CO. Several of the containers were labeled Rock-Tenn Company and included Rock-Tenn’s former address. Field screening conducted on the tote indicated elevated levels of VOCs at 201 ppm (Photos #6 and #7).

Hydrated lime was stored in several paper bags near an open garage door of the loading dock on the north side of Building #34A (Photo # 8). The pH of the lime was tested and results indicated that the lime material was basic in nature (Photo # 9). A possible run-off path from the lime was also observed.

Two poly drums were observed in Building #39. A field screening pH test was performed on two of the drums. The results indicated that one drum contained liquid with a pH <2 SU and the other drum contained liquid with a pH >12 SU. These highly acidic and basic liquid drums were next to each other (Photo #10). Three 55-gallon metal drums with used oil were observed in building #18 (Photo #11). One of the drums had a field screening result of 57 ppm VOCs.

**Table 1  
Field Screening Results  
Otsego Paperboard Assessment  
Otsego, Michigan**

| <b>Drum/Material</b>  | <b>Sample ID</b> | <b>pH</b>   | <b>MultiRAE screening</b>     |
|---|------------------|-------------|-------------------------------|
| Two Black Metal Drums outside Building #14 on the east side   | Not Sampled      | Neutral     | CO: 200 ppm                   |
| Container Labeled “Phoenix Asphalt Roof Coating” and “Danger Mineral Spirits inside Building #14”   | RT-D001          | Not Tested  | VOCs: 450 ppm                 |
| One Drum labeled as “Latex Wall Paint” inside Building #14  | Not Sampled      | Not Sampled | Paint-like odor, VOCs: < 5ppm |
| 5-Gallon Bucket inside Building #14   | Not Sampled      | Not Sampled | VOCs: 0.7ppm                  |
| Poly Drum inside Building #53 near the loading dock area  | RT-D002          | ~2          | Background                    |
| Poly Tote with Rock-Tenn Label inside Building #53 near the loading dock area                       | RT-D003          | 10          | VOCs: 201 ppm                 |
| Poly Tote Labeled as “1824”, “corrosive”, and “NaOH” inside Building #53 near the loading dock area | RT-D004          | 8-9         | Not Screened                  |
| Poly Tote Labeled as “1824”, “corrosive”, and “NaOH” inside Building #53 near the loading dock area | RT-D005          | 8-9         | Not Screened                  |
| Poly Drum with base inside Building #39 near another acid drum                                      | RT-D006          | <2          | Not Screened                  |
| Poly Drum with acid inside Building #39 near the another base drum                                  | RT-D007          | >12         | Not Screened                  |
| Bags of Hydrated Lime on the northern side of Building #34A near the open loading dock door         | Not Sampled      | 9-10        | Not Screened                  |
| Metal Drum with Oil   | RT-D008          | Neutral     | VOCs: 57 ppm                  |
| Soil where pavement met vegetation at northeast corner of main building                             | RT-S001          | Not Tested  | Not Screened                  |
| Upstream of Sewer Approx. 40 ft south of RT-S001  | RT-S002          | Not Tested  | Not Screened                  |
| Duplicate of RT-S002  | RT-S002-D        | Not Tested  | Not Screened                  |
| “L” shaped storm water outfall collected approx. 100 ft south of RT-S002                            | RT-S003          | Not Tested  | Not Screened                  |

Notes:

D- Identification name given for drum samples

S-Identification name given for soil samples

Screening was conducted on November 16<sup>th</sup>, 2011 under START contract EP-S5-10-10.

On December 14<sup>th</sup>, 2011 the OSC and OTIE START member Caitlin Ruza mobilized to the site and met with Special Agent Richard Porter from EPA's Criminal Investigation Division and MDEQ representative Ben Zamon. The MDEQ described observing at least 10 transformers present on the site in 2008. MDEQ indicated the transformers were dismantled on the pavement in front of the loading dock of Building #23. Oil from the transformers reportedly ran southeast along the pavement to a drain

### 3.3 Sampling Activities

Sampling was conducted on November 17, 2011 and December 14, 2011. Samples were collected for off-site chemical analysis at a commercial laboratory. A number of drum samples were collected using dedicated glass drum thieves and directly transferred into lab-supplied clean sample jars. Three surface soil samples were collected for PCB analysis using dedicated stainless steel spoons and trowels from the top 0-6 inches of the soil. Soil samples were grab samples per the request of the OSC. Figure 3 shows all locations of the samples collected during the SA.

On November 17<sup>th</sup>, 2011, U.S. EPA and START evaluated the field screening results and selected potential drums and solid material for sampling and laboratory analysis. A total of eight drum liquid samples were collected. Drum sampling was conducted in Level "C" PPE. Air monitoring was conducted using a MultiRAE instrument during sampling.

Sample RT-D001 was collected from a small container labeled "Phoenix Asphalt Roof Coating Paint" and "Danger Mineral Spirits" located inside the front room in Building #14. Sample RT-D002 was collected from a poly drum containing a dark liquid in building #53, which had with pH result of 2. The field pH test indicated. RT-D003 was taken from a drum labeled "Rock-Tenn" and was found to have a pH of about 10 and 201 ppm VOCs. The content of sample RT-D003 was a glue type material therefore a drum thief could not be used to retrieve sample. Instead a spoon was used to transfer the sample to the jar. Samples RT-D004 and RT-D005 were both taken from drums labeled "1824" and "NaOH". pH results of these drums were between 8 and 9. Base and acid drums were stored next to each other and sampled as RT-D006 and RT-D007 respectively. RT-D006 was found to have a pH of >12, while RT-D007 was found to have a pH <2. Lastly, RT-D008 was collected from a metal drum containing used oil in building #18.

On December 14<sup>th</sup>, 2011, surface soil samples were collected for PCB analysis. START collected soil sample RT-S001 from where the pavement met vegetation at the northeast corner of building #1. Sample RT-S002 was collected from a drain opening approximately 40 feet south of the RT-S001 location. A duplicate sample RT-S002-D was also collected. A slight white/grey sheen was observed on the water

accumulated above the soil as well as on the surface of samples RT-S001, and RT-S002. . RT-S003 was collected from an “L” shaped storm water outfall approximately 100 feet south of RT-S002.

START prepared the sample jars with labels, completed the chain of custody and placed all samples on ice. START secured the samples inside a cooler for transportation. Samples were shipped to Spectrum Analytical, Inc. in Tampa, FL on November 17, 2011 and December 14, 2011.

**Table 2  
Sampling Summary  
Rock-Tenn Site Assessment  
Otsego, Michigan**

| <b>Sample ID</b> | <b>Sample Description</b>   | <b>Laboratory Analyses</b>       |
|------------------|---|----------------------------------|
| RT-D001          | Waste Liquid found in container Labeled “Phoenix Asphalt Roof Coating” and “Danger Mineral Spirits inside Building #14”   | Ignitability, Flashpoint         |
| RT-D002          | Waste Liquid found in Poly Drum inside Building #53 near the loading dock area  | pH                               |
| RT-D003          | Waste Liquid found in Poly Tote with Rock-Tenn Label inside Building #53 near the loading dock area                       | pH, Total & TCLP VOCs, and SVOCs |
| RT-D004          | Waste Liquid found in Poly Tote Labeled as “1824”, “corrosive”, and “NaOH” inside Building #53 near the loading dock area | pH                               |
| RT-D005          | Waste Liquid found in Poly Tote Labeled as “1824”, “corrosive”, and “NaOH” inside Building #53 near the loading dock area | pH                               |
| RT-D006          | Waste Liquid found in Poly Drum with base inside Building #39 near another acid drum                                      | PH                               |
| RT-D007          | Waste Liquid found in Poly Drum with acid inside Building #39 near the another base drum                                  | pH                               |
| RT-D008          | Waste Liquid found in a Metal Drum with Oil   | PCBs                             |
| RT-S001          | Soil from where pavement met vegetation at northeast corner of building #1  | PCBs                             |
| RT-S002          | Soil from Upstream of Sewer Approx. 40 ft south of RT-S001  | PCBs                             |
| RT-S002-D        | Duplicate of sample RT-S002   | PCBs                             |
| RT-S003          | Soil from “L” shaped storm water outfall collected approx. 100 ft south of RT-S002  | PCBs                             |

**Notes:**

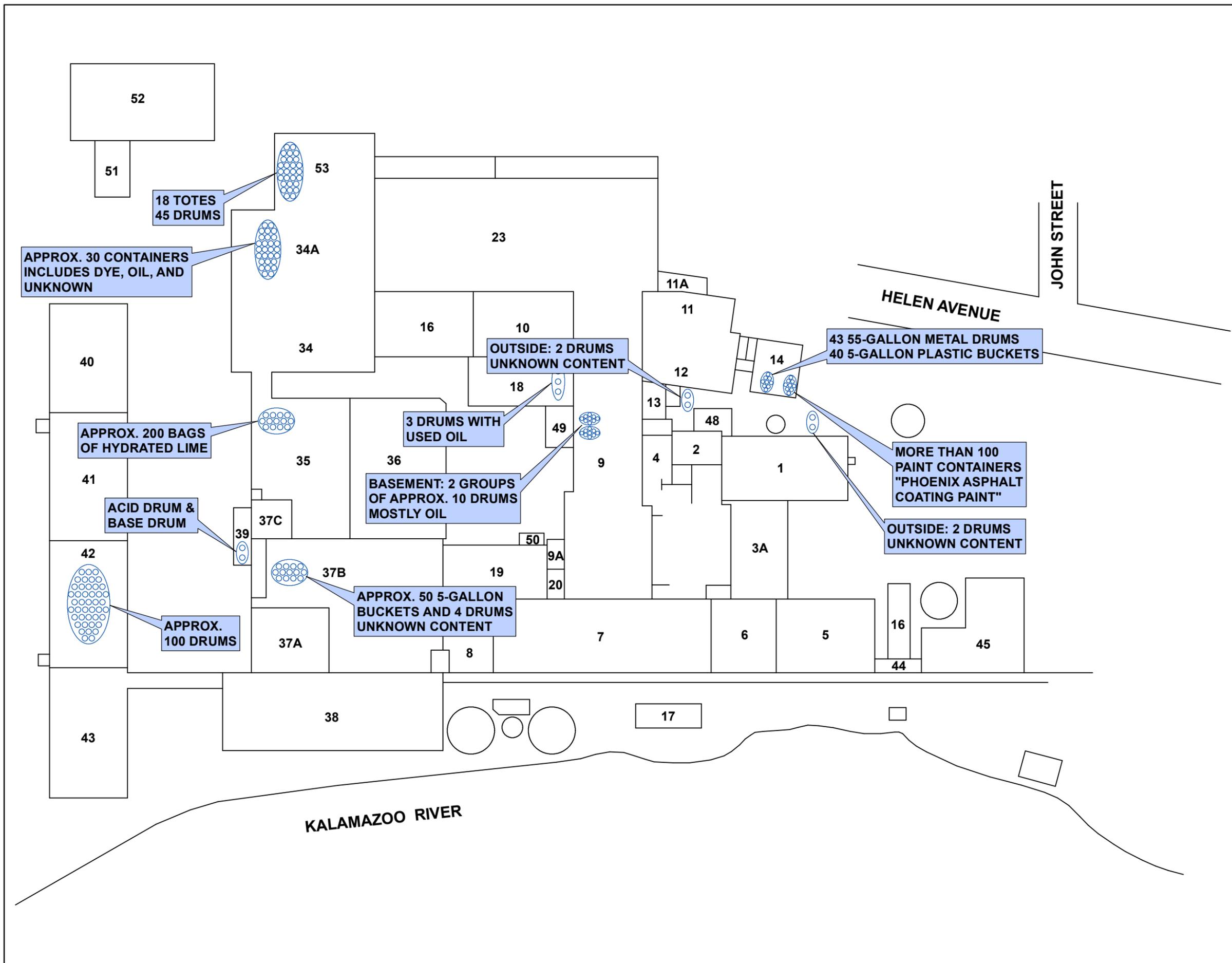
VOCs - volatile organic compounds

SVOCs - semi-volatile organic compounds

TCLP - Toxic Characteristic Leaching Procedure

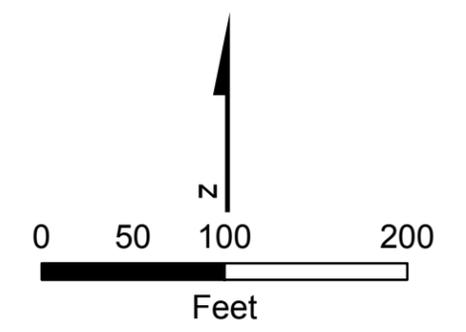
Sample ID- identification names given for samples

Samples were collected on November 17<sup>th</sup>, and December 14<sup>th</sup>, 2011 under START contract EP-S5-10-10. Analyses were conducted by Spectrum Analytical, Inc. under TDD No: TO-01-11-11-0027



# Legend

- 14 Building with Building Number
- Drums, Buckets, Containers

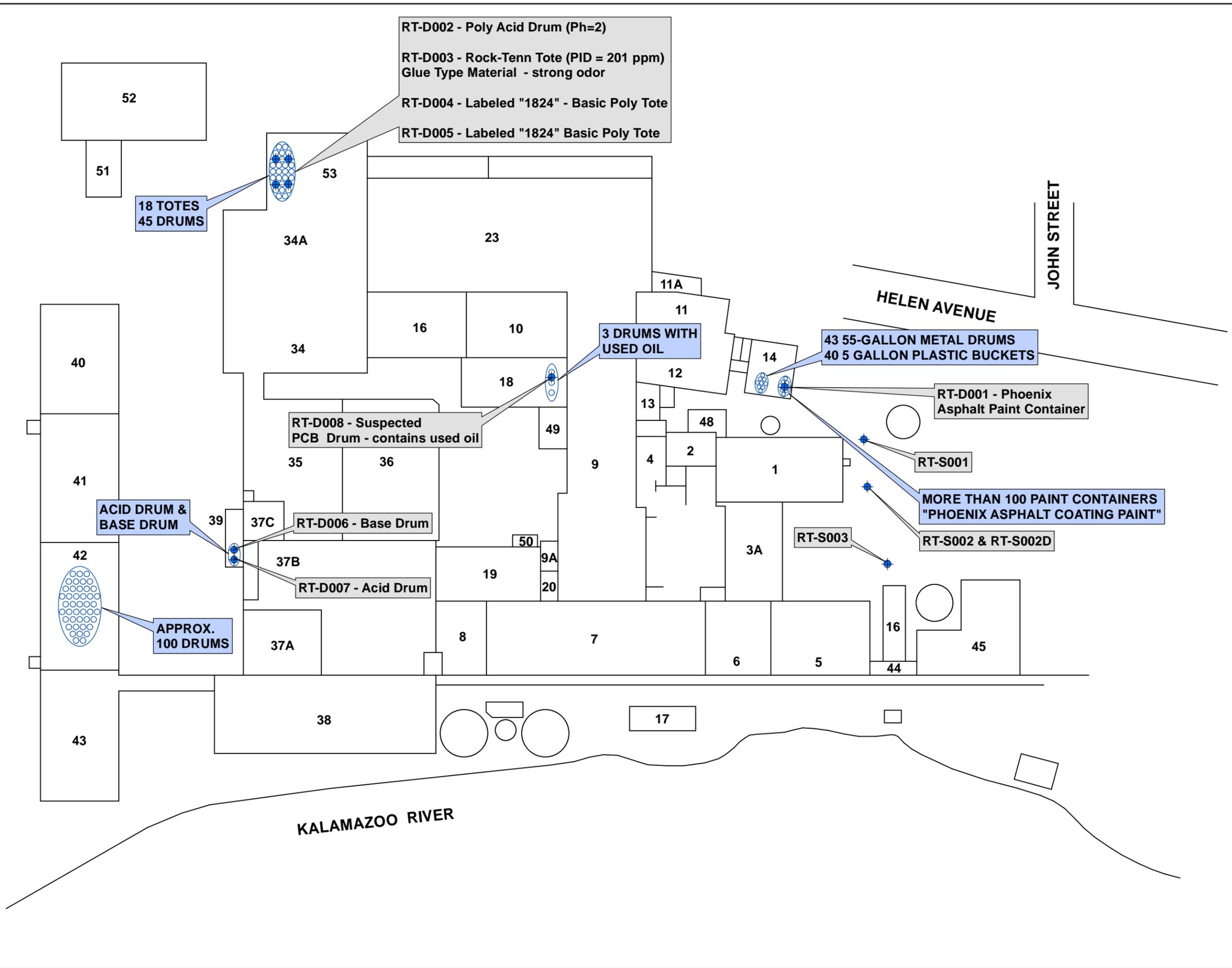


United States Environmental Protection Agency

**ROCK-TENN SITE ASSESSMENT  
OTSEGO, ALLEGAN  
COUNTY, MICHIGAN  
TDD No. TO-01-11-11-0027**

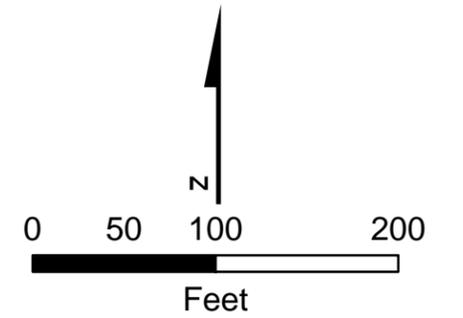
**FIGURE 2  
SITE LAYOUT  
MAP**





# Legend

- Sample
- Building with Building Number
- Drums, Buckets, Containers



United States Environmental Protection Agency

**ROCK-TENN SITE ASSESSMENT  
 OTSEGO, ALLEGAN  
 COUNTY, MICHIGAN  
 TDD No. TO-01-11-11-0027**

**FIGURE 3  
 SAMPLE LOCATION  
 MAP**



#### 4. SAMPLE ANALYTICAL RESULTS

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START reviewed the sample analytical data and supporting quality assurance/quality control (QA/QC) data provided by Spectrum Analytical, Inc. The validated analytical data package is included in Appendix B. Based on START's data validation, the data are acceptable for use as qualified.

Analytical results of the drum samples and surface soil that were above the method detection level are shown in Tables 3 and 4 respectively. The results in table 3 were compared against values listed in 40 Code of Federal Regulations (CFR) Section 261.22-261.24 – “Characteristics of Hazardous Waste”. Analytical results for the surface soil samples in Table 4 were compared to the EPA Regional Screening Levels (RSLs) for Industrial Soil provided in the tables at the web address: (<http://www.epa.gov/region9/superfund/prgf/>). Industrial Soil screening level is calculated based on a 1 in a million cancer risk.

Analytical result for drum sample RT-D002 indicated a pH value of 1.96 standard units (SU), while sample RT-D007 had a pH value of 0.27 SU. These samples exceed the hazardous characterization criteria for corrosivity of <2 pH per 40 CFR Section 261.22 regulation. RT-D002 and RT-D007 are considered strong acids. pH results for RT-D003 through 006 were all between 2 and 12.5 SU and did not exceed the hazardous characterization criteria for corrosivity. Sample RT-D001 had a flash point above 140 degrees F and was not considered as “ignitable” as per to 40CFR section 261.21 regulation.

Total and TCLP analytical results did not indicate any detects for VOCs or SVOCs in the drum sample RT-D003. PCB Aroclor analytical results for drum sample RT-D008 were all below the method detection limits. Aroclor 1260 was detected in surface soil samples RT-S001, RT-S002 and RT-S003, but the levels were all below the EPA RSL of 740 micrograms per kilograms ( $\mu\text{g}/\text{Kg}$ ).

**Table 3  
Detected Sample Analytical Results  
Rock-Tenn Site Assessment  
Otsego, Michigan**

| Drum Sample Results         |  |                           |             |            |             |             |           |             |         |
|-----------------------------|--|---------------------------|-------------|------------|-------------|-------------|-----------|-------------|---------|
| ANALYTE/<br>PARAMETER       | 40 CFR Section<br>261 Regulatory<br>Limit <sup>1</sup> | RT-D001                   | RT-D002     | RT-D003    | RT-D004     | RT-D005     | RT-D006   | RT-D007     | RT-D008 |
| <i>pH (SU)</i>              | <2 or >12.5  | NA                        | <b>1.96</b> | <b>9.8</b> | <b>10.5</b> | <b>10.5</b> | <b>12</b> | <b>0.27</b> | NA      |
| <i>Flashpoint (°F)</i>      | <140   | <i>No Flash<br/>@ 140</i> | NA          | NA         | NA          | NA          | NA        | NA          | NA      |
| Surface Soil Sample Results |  |                           |             |            |             |             |           |             |         |
| ANALYTE/<br>PARAMETER       | EPA RSL for<br>Industrial Soil <sup>2</sup>            | RT-S001                   | RT-S002     | RT-S002-D  | RT-S003     |             |           |             |         |
| <b>PCBs (µg/Kg)</b>         |  |                           |             |            |             |             |           |             |         |
| Aroclor 1260                | 740  | <b>9.9 J</b>              | <b>12 J</b> | ND         | <b>72</b>   |             |           |             |         |

Notes:

<sup>1</sup> - Hazardous Waste Characterization Criteria according to 40 CFR Sections 261.21-261.24

<sup>2</sup> - EPA Regional Screening Levels (RSL) for Industrial Soil were referenced from the RSL Tables provided at the web address:

<http://www.epa.gov/region9/superfund/prg/>.

SU - standard units

°F - degrees Fahrenheit

NA - analyte not analyzed

PCBs - polychlorinated biphenyls

µg/Kg - micrograms per kilograms

J - result less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

ND - analyte not detected above the laboratory method detection limit

Only detected analytes/parameters are listed in this table

**Bolded** results indicate detections above reporting limit

**Bolded and Shaded** results exceeded the regulatory limit

Samples were collected on November 17, 2011 under START contract EP-S5-10-10.

Analyses were conducted by Spectrum Analytical, Inc. under TDD No: TO-01-11-11-0027

## 5. POTENTIAL SITE RELATED THREATS

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Threats posed by the Site contaminants were evaluated in accordance with National Contingency Plan (NCP) criteria for initiating a removal action listed under Title 40 of the CFR, Section 300.415(b) (2). Paragraph (b) (2) of 40 CFR Section 300.415 lists factors to be considered when determining the appropriateness of a potential removal action at a Site. Potential site-related threats to human health and the environment were evaluated based on the criteria listed in 40 CFR, Sections 261.20 through 261.24. Factors that are applicable to the Site are discussed below.

### **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants**

Two of the drum samples had a pH less than 2 SUs, indicating corrosivity. Drums, containers and totes with no secondary containment are located inside the Site building. There were several signs of trespassing and vandalism at the Site. Overall, the potential for exposure to potentially hazardous substances stored at the Site is high.

### **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release**

Samples RT-D002 and RT-D007 - have pH values of 1.96 and 0.27, respectively. Both samples are strong acids and exceed the Title 40 CFR Section 261.22 pH criteria of <2 for hazardous corrosive characterization. Near the loading dock on the west end of building #53, three totes with a UN1760 label were located. This label indicates that the drums potentially contain phosphoric acid. Several poly totes with UN1824 label were located adjacent to the acid totes (Photo #12). The UN1824 label indicates that the drums potentially contain sodium hydroxide, which is a strong base. Vandalism and or deteriorating drums and containers could release the contents and lead to the mixing of acids and bases.

### **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

Hydrated lime was stored in several bags near an open garage door of the loading dock in Building #53. pH results showed that the lime material was basic in nature. If rain water and snow melt gets in through

the open garage door, the lime material may readily be dissolved in the water. The resulting basic run-off water can potentially flow to other parts of the building.

## 6. SUMMARY

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On November 16 and 17, 2011 and December 14, 2011, U.S. EPA and START conducted a site assessment at the Rock-Tenn Site in Otsego, Michigan. Field screening tests were conducted to analyze several drums found in the building prior to sampling. During sampling, liquid drum and surface soil samples were collected and submitted for pH, flashpoint, total and TCLP VOCs and SVOCs, and PCB analyses.

Sample analytical results were evaluated against the criteria of characteristics of hazardous waste (40 CFR, Sections 261.20 through 261.24). Drums and totes containing acidic compounds and drum, totes and bags containing basic compounds were observed in the Site building and may pose a threat of release. Clear signs of trespassing and vandalism are also observed inside and outside the Site building.

## REFERENCES

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1. MLIVE.com, 2011. Internet Address accessed on December 29, 2011.  
“[http://www.mlive.com/news/kalamazoo/index.ssf/2011/07/rock-tenn\\_paper\\_mill\\_to\\_go\\_up.html](http://www.mlive.com/news/kalamazoo/index.ssf/2011/07/rock-tenn_paper_mill_to_go_up.html)”
2. The Allegan County News, 2011. Internet Address accessed on December 29, 2011.  
“[http://www.allegannews.com/articles/2011/09/26/ue\\_news/2.txt](http://www.allegannews.com/articles/2011/09/26/ue_news/2.txt)”

**APPENDIX A**  
**PHOTOGRAPHIC LOG**



**Photograph No.:** 1                      **Photographer:** Caitlin Ruza                      **Orientation:** West  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                      **Date:** December 14, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Cogswell Property Sign located at east entrance of the Site property.



**Photograph No.:** 2                      **Photographer:** Naren Babu                      **Orientation:** North  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Broken glass in doorway of facility.



**Photograph No.:** 3                      **Photographer:** Naren Babu                      **Orientation:** North  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Broken glass in doorway and graffiti on glass door.



**Photograph No.:** 4                      **Photographer:** Naren Babu                      **Orientation:** West  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** View of small paint containers; one of them was sampled for flashpoint



**Photograph No.:** 5                      **Photographer:** Naren Babu                      **Orientation:** Looking Down  
**TDD Number:** TO-01-11-11-0027                      **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Poly Drum with acid material; pH test showed a result below 2



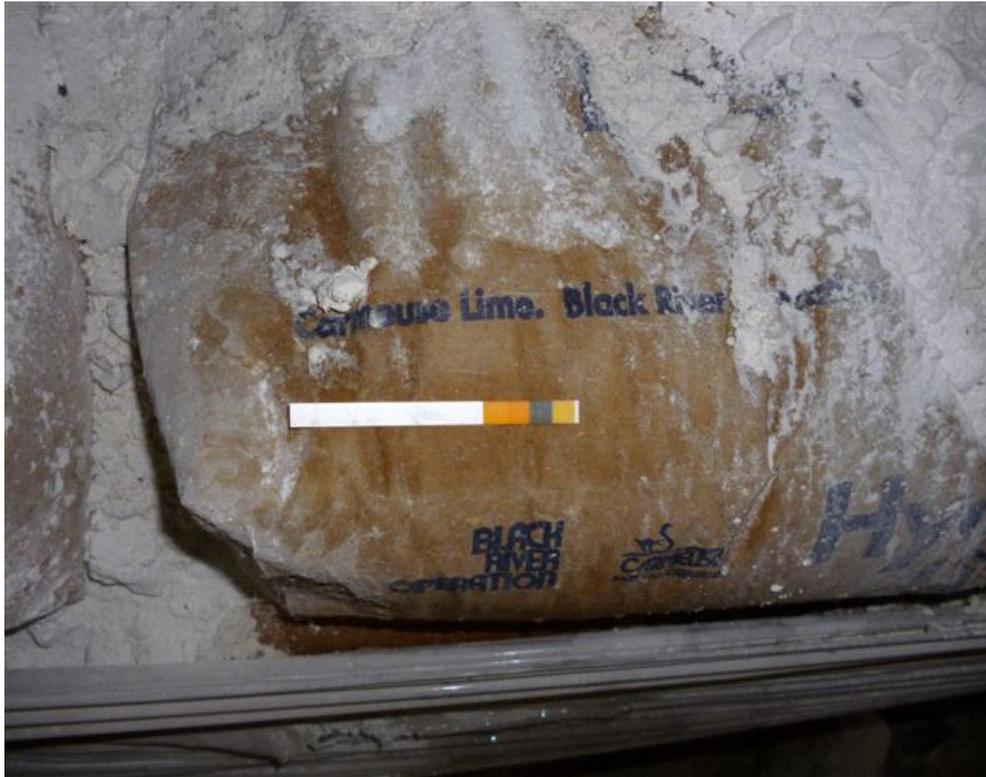
**Photograph No.:** 6                      **Photographer:** Naren Babu                      **Orientation:** Southwest  
**TDD Number:** TO-01-11-11-0027                      **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Poly tote that had high VOC readings



**Photograph No.:** 7                      **Photographer:** Naren Babu                      **Orientation:** West  
**TDD Number:** TO-01-11-11-0027                      **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** View of a label showing that a drum was sold to Rock-Tenn



**Photograph No.:** 8                      **Photographer:** Naren Babu                      **Orientation:** North  
**TDD Number:** TO-01-11-11-0027                      **Contract:** EP-S5-10-10, OTIE                      **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** View of the hydrated lime stored near the garage door.



**Photograph No.:** 9                                   **Photographer:** Naren Babu                                   **Orientation:** Looking Down  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                                   **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** View of the hydrated lime with pH strip



**Photograph No.:** 10                                   **Photographer:** Naren Babu                                   **Orientation:** Looking Down  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                                   **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Acid and Base Drums stored next to each other.



**Photograph No.:** 11                                   **Photographer:** Naren Babu                                   **Orientation:** East  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                                   **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Drums with crude motor oil.



**Photograph No.:** 12                                   **Photographer:** Naren Babu                                   **Orientation:** Southwest  
**TDD Number:** TO-01-11-11-0027   **Contract:** EP-S5-10-10, OTIE                                   **Date:** November 16, 2011  
**Site Name & Location:** Rock-Tenn Site, Allegan County, Michigan.  
**Subject:** Basic totes with corrosive label 1824.

**APPENDIX B**

**VALIDATED LABORATORY ANALYTICAL RESULTS**



## MEMORANDUM

**Date:** January 3, 2011

**To:** Naren Babu, Project Manager, OTIE  
Superfund Technical Assessment and Response Team (START) for Region 5

**Prepared by:** Renea Anglin, START chemist for Region 4

**QA/QC** Keely Meadows

**Concurrence by:**

**Subject:** Data Validation for  
Rock-Tenn Site Assessment

Project TDD No. TO-01-11-11-0027

Laboratory: Spectrum Analytical, Inc. in Tampa, Florida.  
Sample Delivery Group (SDG): 3504582

### 1.0 INTRODUCTION

The START chemist for Region 4 validated analytical data for 1 soil sample for ignitability, 1 soil sample volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), toxicity characteristic leaching procedure (TCLP) VOCs, and TCLP SVOCs, 1 soil sample for polychlorinated biphenyls (PCBs), 6 soil samples for pH, and 1 water sample for VOCs. Samples were collected for the Rock-Tenn Site Assessment on November 17, 2011. The samples were analyzed under SDG 3504582 by Spectrum Analytical, Inc. of Tampa, Florida, using U.S. Environmental Protection Agency (U.S. EPA) methods 8260B, 1311/8260B, 8270C, 1311/8270C, 8082, and 9045. One sample was subcontracted to Spectrum Analytical Rhode Island and analyzed for flashpoint by 1010OL.

Laboratory data were validated using guidelines set forth in the U.S. EPA Contract Laboratory Program National Functional Guidelines (NFG) for Organic Data Review (EPA-540-R-08-01, June 2008) and applicable methodologies. The purpose of the chemical data quality evaluation process is to assess the usability of data for the project decision-making process.

Organic and wet chemistry data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- Blank results
- Surrogate recoveries
- Matrix spike and Matrix Spike Duplicate (MS/MSD) recovery results
- Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) recovery results

Section 2.0 of this memorandum discusses the results of organic data validation. Section 3.0 of this memorandum discusses the results of wet chemistry validation. Section 4.0 presents an overall assessment of the data. The attachment to this memorandum contains the laboratory reporting forms as well as START's handwritten data qualifications where warranted.

## **2.0 ORGANIC DATA VALIDATION RESULTS**

The results of START's organic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted (see attachment):

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

### **2.1 SOIL SAMPLES BY METHOD 8260B**

#### ***2.1.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice by the laboratory. No discrepancies were noted.

#### ***2.1.2 SAMPLE PRESERVATION AND HOLDING TIME***

VOC samples were analyzed within holding time criteria. No discrepancies were noted.

#### ***2.1.3 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. A laboratory method blank sample (120111MBLK32) was run with this SDG.

No discrepancies were noted.

#### ***2.1.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds (System Monitoring Compounds). Surrogate spike compounds included Dibromofluoromethane, Toluene-d8, 4-Bromofluorobenzene, and 1,2-Dichloroethane-d4.

No discrepancies were noted.

#### ***2.1.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSDs are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this SDG.

### ***2.1.6 LCS/LCSD RECOVERY RESULTS***

Data for the LCS/LCSD is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS/LCSD is fortified with the full list of VOCs and analyzed with each batch of samples. The LCS/LCSD accuracy performance is measured by Percent Recovery (%R).

LCS/LCSD recoveries were within limits.

### ***2.1.7 GENERAL LABORATORY OBSERVATIONS***

The laboratory noted that sample RT-D003 was diluted due to the matrix. Therefore, elevated reporting limits are provided.

## **2.2 TCLP SAMPLES BY METHOD 1311/8260B**

### ***2.2.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice by the laboratory.

No discrepancies were noted.

### ***2.2.2 SAMPLE PRESERVATION AND HOLDING TIME***

Samples were analyzed within holding time criteria. No discrepancies were noted.

### ***2.2.3 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. A laboratory method blank sample (120111TBLK32) was run with this SDG.

No laboratory method blank detects were noted.

### ***2.2.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds (System Monitoring Compounds). Surrogate spike compounds included Dibromofluoromethane, Toluene-d8, 4-Bromofluorobenzene, and 1,2-Dichloroethane-d4.

No discrepancies were noted.

### ***2.2.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSDs are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this SDG.

### ***2.2.6 LCS RECOVERY RESULTS***

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS is fortified with the full list of VOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS/LCSD recoveries were within limits.

## **2.3 SOIL SAMPLES BY METHOD 8270C**

### ***2.3.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice.

No discrepancies were noted.

### ***2.3.2 SAMPLE PRESERVATION AND HOLDING TIME***

SVOC samples were analyzed within holding time criteria. No discrepancies were noted.

### ***2.3.3 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. One laboratory method blank sample (10905MB) was run with this SDG.

No laboratory method blank detects were noted.

### ***2.3.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. Surrogate spike compounds included 2-Fluorophenol, Phenol-d5, Nitrobenzene-d5, 2-Fluorobiphenyl, 2,4,6-Tribromophenol, and Terphenyl-d14.

No discrepancies were noted.

### ***2.3.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this SDG.

### ***2.3.6 LCS RECOVERY RESULTS***

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS were fortified with the full list of SVOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS recovery of 109052LCS for 4,6-Dinitro-2-methylphenol was biased low at 0% and the recovery for Benzidine was biased low at 0%. The LCSD had a Benzidine recovery of 0% as well. The RPD for 4,6-

Dinitro-2-methylphenol was outside of QC limits at 200%. Therefore, 4,6-Dinitro-2-methylphenol was qualified as estimated and flagged “J” in sample RT-D003 and Benzidine was flagged as “R”.

### ***2.3.7 GENERAL LABORATORY OBSERVATIONS***

The laboratory noted that the extract for sample RT-D003 would not reduce below a final volume 10ml. Therefore, elevated reporting limits are provided. The final volume of the method blank, LCS and LCSD were adjusted to 10ml to match the sample. This resulted in the Benzidine and 4,6-Dinitro-2-methylphenol being diluted out below the reporting limit.

## **2.4 TCLP SAMPLES BY METHOD 1311/8270C**

### ***2.4.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice.

No discrepancies were noted.

### ***2.4.2 SAMPLE PRESERVATION AND HOLDING TIME***

Samples were analyzed within holding time criteria.

No discrepancies were noted.

### ***2.4.3 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. A laboratory method blank sample (108600MB) was run with this SDG.

No laboratory method blank detects were noted.

### ***2.4.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. Surrogate spike compounds included 2-Fluorophenol, Phenol-d5, Nitrobenzene-d5, 2-Fluorobiphenyl, 2,4,6-Tribromophenol, and Terphenyl-d14.

Sample RT-D003 had biased low recoveries for 2-Fluorophenol (3.2%), and Phenol-d5 (2.4%). The failures were attributed to matrix interference and the sample was not re-extracted. Therefore, the laboratory director, Mr. Brian Spann, was contacted about the surrogate recoveries. He said the recoveries of the other surrogates in the sample indicated that the sample had the correct pH adjustments during the extraction process and that the sample matrix itself was the reason for the low surrogate recoveries. Samples that show difficulties during the regular 8270 analysis often exhibit difficulties during TCLP analysis as well and are therefore not re-extracted if the surrogates are low. The regular 8270 analysis of this sample produced an extract that would not reduce past 10mL and the TCLP extract chromatogram showed several large interfering peaks with these two surrogates. The lab provided a copy of the chromatogram and discussed the surrogate expected response time. Upon review of the chromatogram in detail, there were significant amounts of non-target compounds in the area of the surrogates. Therefore, 1,4-Dichlorobenzene, 2-

Methylphenol, Hexachloroethane, and 4-Methylphenol were marked as UJ since they are associated with the failing surrogates.

#### ***2.4.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this SDG.

#### ***2.4.6 LCS RECOVERY RESULTS***

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS were fortified with the full list of SVOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS recovery for 2,4-Dinitrotoulene was biased low at 66.3%. Since 2,4-Dinitrotoluene was not detected in the sample associated with the LCS, no further action was taken.

### **2.5 SOIL SAMPLES BY METHOD 8082**

#### ***2.5.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice.

#### ***2.5.2 SAMPLE PRESERVATION AND HOLDING TIME***

Samples were shipped on ice and were analyzed within holding time criteria. No discrepancies were noted.

#### ***2.5.3 BLANK RESULTS***

The purpose of laboratory blank analysis is to determine the existence and magnitude of contamination resulting from laboratory activities. A laboratory method blank sample (109048MB) was run with this SDG.

No laboratory method blank detects were noted.

#### ***2.5.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. The surrogate spike compound included Decachlorobiphenyl.

The surrogate was within limits for samples analyzed in this SDG.

#### ***2.5.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this analysis.

### ***2.5.6 LCS RECOVERY RESULTS***

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS was fortified and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS/LCSD recoveries and RPDs were within limits.

## **2.6 WATER SAMPLES BY METHOD 8260B**

### ***2.6.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. One water sample (a trip blank) was collected on November 17, 2011 and were received on ice by the laboratory. No discrepancies were noted.

### ***2.6.2 SAMPLE PRESERVATION AND HOLDING TIME***

The VOC sample was analyzed within holding time criteria. No discrepancies were noted.

### ***2.6.3 BLANK RESULTS***

The purpose of laboratory (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. Laboratory method blank sample (112011BLK62) was run with this SDG.

The laboratory method blank sample had trace contamination of 1,3-Dichlorobenzene (0.24 ug/L) and 1,4-Dichlorobenzene (0.32 ug/L). No action was taken to qualify for this deficiency in the associated soil sample since it was not detected.

The sample RT-TRIP1 had trace contamination of methylene chloride (2.1 ug/L). No action was taken to qualify for this deficiency in the associated soil sample since it was not detected.

### ***2.6.4 SURROGATE RECOVERIES***

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds (System Monitoring Compounds). Surrogate spike compounds included Dibromofluoromethane, Toluene-d8, 4-Bromofluorobenzene, and 1,2-Dichloroethane-d4.

No discrepancies were noted.

### ***2.6.5 MS/MSD RECOVERY RESULTS***

Data for MS/MSDs are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this SDG.

### ***2.6.6 LCS RECOVERY RESULTS***

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS is fortified with the full list of VOCs and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS/LCSD recoveries and RPDs were within limits.

## **3.0 WET CHEMISTRY DATA VALIDATION RESULTS**

The results of START's wet chemistry data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted:

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.
- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

### **3.1 SOIL SAMPLES BY METHOD 9045 (pH)**

#### ***3.1.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on November 17, 2011 and were received on ice.

#### ***3.1.2 SAMPLE PRESERVATION AND HOLDING TIME***

Samples were analyzed within the holding time criteria. No discrepancies were noted.

#### ***3.1.3 BLANK RESULTS***

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A laboratory method blank sample for method 9045 (pH) is not required.

#### ***3.1.4 LCS RECOVERY RESULTS***

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

The LCS/LCSD recoveries were within acceptable recovery limits.

#### ***3.1.5 MS/MSD RECOVERY RESULTS***

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

A MS/MSD was not requested for this SDG.

### ***3.1.6 SAMPLE DUPLICATE***

For tests where the addition of spiking material is impractical, samples are run in duplicate and the relative percent difference (RPD) of the two readings is compared. The duplicate analysis provides information about the reproducibility or precision of the laboratory analysis.

A sample duplicate was performed on RT-D002. The RPD was within acceptable limits.

## **3.2 SOIL SAMPLES BY METHOD 1010- FLASHPOINT CLOSED CUP**

### ***3.2.1 SAMPLE HANDLING***

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Samples were collected on November 17, 2011 and were received on ice. Samples were subcontracted to the Rhode Island Division. Samples were shipped and received on November 22, 2011. No discrepancies were noted.

### ***3.2.2 SAMPLE PRESERVATION AND HOLDING TIME***

Samples were analyzed within the holding time criteria. No discrepancies were noted.

### ***3.2.3 BLANK RESULTS***

The assessment of blank analysis results is to determine the existence and magnitude of contamination resulting from laboratory and/or field activities. A method blank is not required with this analysis.

### ***3.2.4 LCS RECOVERY RESULTS***

The LCS serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. The LCS is fortified with each analyte of interest and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

No LCS/LCSD is required to be performed with this analysis.

### ***3.2.5 MS/MSD RECOVERY RESULTS***

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The MS/MSD accuracy performance is measured by %R.

No MS/MSD was requested for these analyses for this SDG.

### ***3.2.6 SAMPLE DUPLICATE***

For tests where the addition of spiking material is impractical, samples are run in duplicate and the RPD of the two readings is compared. The duplicate analysis provides information about the reproducibility or precision of the laboratory analysis.

A sample duplicate was performed on RT-D001. The RPD was within acceptable limits.

#### **4.0 OVERALL ASSESSMENT OF DATA**

The analytical results meet the data quality objectives defined by the applicable method and validation guidance documentation. The analytical data is usable and acceptable as reported by the laboratory.

**ATTACHMENT**  
**SUMMARY OF VALIDATED ANALYTICAL RESULTS**  
**AND**  
**CHAIN-OF-CUSTODY**

## PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D008

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458208 Lab File ID: 58208.D

Sample wt/vol: 1.01 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 10 Date Extracted: 11/30/11

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1440

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 30     | U | 13  | 30 |
| 11096-82-5 | Aroclor-1260 | 30     | U | 6   | 30 |
| 11104-28-2 | Aroclor-1221 | 30     | U | 12  | 30 |
| 11141-16-5 | Aroclor-1232 | 30     | U | 20  | 30 |
| 53469-21-9 | Aroclor-1242 | 30     | U | 11  | 30 |
| 12672-29-6 | Aroclor-1248 | 30     | U | 11  | 30 |
| 11097-69-1 | Aroclor-1254 | 30     | U | 9.4 | 30 |



## PCB ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2 EPA Sample No. 109048MB

Lab Code: PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 109048MB Lab File ID: 7463MB.D

Sample wt/vol: 1.03 Units: G Date Received: 11/30/11

Concentrated Extract Volume: 10 Date Extracted: 11/30/11

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1305

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 29     | U | 13  | 29 |
| 11096-82-5 | Aroclor-1260 | 29     | U | 5.9 | 29 |
| 11104-28-2 | Aroclor-1221 | 29     | U | 12  | 29 |
| 11141-16-5 | Aroclor-1232 | 29     | U | 19  | 29 |
| 53469-21-9 | Aroclor-1242 | 29     | U | 11  | 29 |
| 12672-29-6 | Aroclor-1248 | 29     | U | 11  | 29 |
| 11097-69-1 | Aroclor-1254 | 29     | U | 9.2 | 29 |

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/

RT-D002

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458202

Level:(low/med) LOW Date Received: 11/18/2011

PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: PH

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 1.96          |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_

Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:  
\_\_\_\_\_  
\_\_\_\_\_

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/

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|---------|
| RT-D003 |
|---------|

  
 Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582  
 Matrix: SOIL Lab Sample ID: 350458203  
 Level:(low/med) LOW Date Received: 11/18/2011  
 PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: *PH*

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 9.8           |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_  
 Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:  
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 \_\_\_\_\_

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/ RT-D004  
 Lab Code: PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582  
 Matrix: SOIL Lab Sample ID: 350458204  
 Level:(low/med) LOW Date Received: 11/18/2011  
 PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: *PH*

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 10.5          |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_

Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/

RT-D005

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458205

Level:(low/med) LOW Date Received: 11/18/2011

PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: *PH*

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 10.5          |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_

Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/

RT-D006

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458206

Level:(low/med) LOW Date Received: 11/18/2011

PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: *PH*

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 12            |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_

Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/

|         |
|---------|
| RT-D007 |
|---------|

  
 Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582  
 Matrix: SOIL Lab Sample ID: 350458207  
 Level:(low/med) LOW Date Received: 11/18/2011  
 PercentSolids: 0 Station ID: \_\_\_\_\_

CONCENTRATION UNITS: *PH*

| CAS NO. | ANALYTE | Concentration | C | Q | M   |  | MDL | RL |
|---------|---------|---------------|---|---|-----|--|-----|----|
| 1-00-6  | pH      | 0.27          |   |   | N/A |  |     |    |

Color Before: \_\_\_\_\_ Clarity Before: \_\_\_\_\_ Texture : \_\_\_\_\_

Color After : \_\_\_\_\_ Clarity After: \_\_\_\_\_ Artifacts: \_\_\_\_\_

Comments:

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## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 58203.D

Sample wt/vol: 1.29 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 10 Date Extracted: 11/28/11

Level:(low/med) LOW Date Analyzed: 12/02/11 Time: 1629

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: OTHER Station ID: \_\_\_\_\_ Method: 8270

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.  | ANALYTE                      | RESULT | Q | MDL   | RL     |
|----------|------------------------------|--------|---|-------|--------|
| 62-75-9  | N-Nitrosodimethylamine       | 41400  | U | 11000 | 41400  |
| 111-44-4 | Bis(2-chloroethyl)ether      | 41900  | U | 10400 | 41900  |
| 108-95-2 | Phenol                       | 207000 | U | 10100 | 207000 |
| 95-57-8  | 2-Chlorophenol               | 41900  | U | 10700 | 41900  |
| 541-73-1 | 1,3-Dichlorobenzene          | 41900  | U | 9460  | 41900  |
| 106-46-7 | 1,4-Dichlorobenzene          | 41900  | U | 9770  | 41900  |
| 95-50-1  | 1,2-Dichlorobenzene          | 41900  | U | 8840  | 41900  |
| 108-60-1 | 2,2'-Oxybis(1-chloropropane) | 41900  | U | 34100 | 41900  |
| 67-72-1  | Hexachloroethane             | 41900  | U | 7750  | 41900  |
| 621-64-7 | N-Nitroso-di-n-propylamine   | 41900  | U | 9460  | 41900  |
| 98-95-3  | Nitrobenzene                 | 41900  | U | 9300  | 41900  |
| 78-59-1  | Isophorone                   | 41900  | U | 9150  | 41900  |
| 88-75-5  | 2-Nitrophenol                | 41900  | U | 11200 | 41900  |
| 105-67-9 | 2,4-Dimethylphenol           | 41400  | U | 8840  | 41400  |
| 111-91-1 | Bis(2-chloroethoxy)methane   | 41400  | U | 8840  | 41400  |
| 120-83-2 | 2,4-Dichlorophenol           | 41400  | U | 11600 | 41400  |
| 120-82-1 | 1,2,4-Trichlorobenzene       | 41900  | U | 8990  | 41900  |
| 106-47-8 | 4-Chloroaniline              | 41900  | U | 9770  | 41900  |
| 87-68-3  | Hexachlorobutadiene          | 41900  | U | 8990  | 41900  |
| 59-50-7  | 4-Chloro-3-methylphenol      | 41900  | U | 8680  | 41900  |
| 77-47-4  | Hexachlorocyclopentadiene    | 103000 | U | 6200  | 103000 |
| 88-06-2  | 2,4,6-Trichlorophenol        | 41400  | U | 10500 | 41400  |
| 91-58-7  | 2-Chloronaphthalene          | 41900  | U | 10300 | 41900  |
| 131-11-3 | Dimethylphthalate            | 41900  | U | 9150  | 41900  |
| 606-20-2 | 2,6-Dinitrotoluene           | 41900  | U | 7750  | 41900  |
| 51-28-5  | 2,4-Dinitrophenol            | 208000 | U | 34100 | 208000 |

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## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code : PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 58203.D

Sample wt/vol: 1.29 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 10 Date Extracted: 11/28/11

Level:(low/med) LOW Date Analyzed: 12/02/11 Time: 1629

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: OTHER Station ID: \_\_\_\_\_ Method: 8270

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.   | ANALYTE                    | RESULT | Q              | MDL   | RL     |
|-----------|----------------------------|--------|----------------|-------|--------|
| 121-14-2  | 2,4-Dinitrotoluene         | 41900  | U              | 7600  | 41900  |
| 100-02-7  | 4-Nitrophenol              | 103000 | U              | 8220  | 103000 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 41900  | U              | 7910  | 41900  |
| 84-66-2   | Diethylphthalate           | 41900  | U              | 7910  | 41900  |
| 534-52-1  | 4,6-Dinitro-2-methylphenol | 41900  | U <sup>J</sup> | 41200 | 41900  |
| 86-30-6   | N-Nitrosodiphenylamine     | 41400  | U              | 9770  | 41400  |
| 101-55-3  | 4-Bromophenyl-phenylether  | 41900  | U              | 7600  | 41900  |
| 118-74-1  | Hexachlorobenzene          | 41400  | U              | 8220  | 41400  |
| 87-86-5   | Pentachlorophenol          | 41900  | U              | 20600 | 41900  |
| 84-74-2   | Di-n-butylphthalate        | 41900  | U              | 6820  | 41900  |
| 92-87-5   | Benzidine                  | 104000 | U <sup>R</sup> | 93000 | 104000 |
| 85-68-7   | Butylbenzylphthalate       | 41900  | U              | 9770  | 41900  |
| 91-94-1   | 3,3'-Dichlorobenzidine     | 41900  | U              | 9150  | 41900  |
| 117-81-7  | Bis(2-ethylhexyl)phthalate | 41900  | U              | 12900 | 41900  |
| 117-84-0  | Di-n-octylphthalate        | 41900  | U              | 8990  | 41900  |
| 122-66-7  | 1,2 Diphenylhydrazine      | 41900  | U              | 10300 | 41900  |

## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
109051MB

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 109051MB Lab File ID: 7464MB.D

Sample wt/vol: 1.1 Units: G Date Received: 11/28/11

Concentrated Extract Volume: 10 Date Extracted: 11/28/11

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1813

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: OTHER Station ID: \_\_\_\_\_ Method: 8270

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.  | ANALYTE                      | RESULT | Q | MDL   | RL     |
|----------|------------------------------|--------|---|-------|--------|
| 62-75-9  | N-Nitrosodimethylamine       | 48500  | U | 12900 | 48500  |
| 111-44-4 | Bis(2-chloroethyl)ether      | 49100  | U | 12200 | 49100  |
| 108-95-2 | Phenol                       | 242000 | U | 11800 | 242000 |
| 95-57-8  | 2-Chlorophenol               | 49100  | U | 12500 | 49100  |
| 541-73-1 | 1,3-Dichlorobenzene          | 49100  | U | 11100 | 49100  |
| 106-46-7 | 1,4-Dichlorobenzene          | 49100  | U | 11400 | 49100  |
| 95-50-1  | 1,2-Dichlorobenzene          | 49100  | U | 10400 | 49100  |
| 108-60-1 | 2,2'-Oxybis(1-chloropropane) | 49100  | U | 40000 | 49100  |
| 67-72-1  | Hexachloroethane             | 49100  | U | 9090  | 49100  |
| 621-64-7 | N-Nitroso-di-n-propylamine   | 49100  | U | 11100 | 49100  |
| 98-95-3  | Nitrobenzene                 | 49100  | U | 10900 | 49100  |
| 78-59-1  | Isophorone                   | 49100  | U | 10700 | 49100  |
| 88-75-5  | 2-Nitrophenol                | 49100  | U | 13100 | 49100  |
| 105-67-9 | 2,4-Dimethylphenol           | 48500  | U | 10400 | 48500  |
| 111-91-1 | Bis(2-chloroethoxy)methane   | 48500  | U | 10400 | 48500  |
| 120-83-2 | 2,4-Dichlorophenol           | 48500  | U | 13600 | 48500  |
| 120-82-1 | 1,2,4-Trichlorobenzene       | 49100  | U | 10500 | 49100  |
| 106-47-8 | 4-Chloroaniline              | 49100  | U | 11400 | 49100  |
| 87-68-3  | Hexachlorobutadiene          | 49100  | U | 10500 | 49100  |
| 59-50-7  | 4-Chloro-3-methylphenol      | 49100  | U | 10200 | 49100  |
| 77-47-4  | Hexachlorocyclopentadiene    | 121000 | U | 7270  | 121000 |
| 88-06-2  | 2,4,6-Trichlorophenol        | 48500  | U | 12400 | 48500  |
| 91-58-7  | 2-Chloronaphthalene          | 49100  | U | 12100 | 49100  |
| 131-11-3 | Dimethylphthalate            | 49100  | U | 10700 | 49100  |
| 606-20-2 | 2,6-Dinitrotoluene           | 49100  | U | 9090  | 49100  |
| 51-28-5  | 2,4-Dinitrophenol            | 244000 | U | 40000 | 244000 |
| 121-14-2 | 2,4-Dinitrotoluene           | 49100  | U | 8910  | 49100  |

## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2 EPA Sample No. 109051MB

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 109051MB Lab File ID: 7464MB.D

Sample wt/vol: 1.1 Units: G Date Received: 11/28/11

Concentrated Extract Volume: 10 Date Extracted: 11/28/11

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1813

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: OTHER Station ID: \_\_\_\_\_ Method: 8270

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.   | ANALYTE                    | RESULT | Q | MDL    | RL     |
|-----------|----------------------------|--------|---|--------|--------|
| 100-02-7  | 4-Nitrophenol              | 121000 | U | 9640   | 121000 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 49100  | U | 9270   | 49100  |
| 84-66-2   | Diethylphthalate           | 49100  | U | 9270   | 49100  |
| 534-52-1  | 4,6-Dinitro-2-methylphenol | 49100  | U | 48400  | 49100  |
| 86-30-6   | N-Nitrosodiphenylamine     | 48500  | U | 11400  | 48500  |
| 101-55-3  | 4-Bromophenyl-phenylether  | 49100  | U | 8910   | 49100  |
| 118-74-1  | Hexachlorobenzene          | 48500  | U | 9640   | 48500  |
| 87-86-5   | Pentachlorophenol          | 49100  | U | 24200  | 49100  |
| 84-74-2   | Di-n-butylphthalate        | 49100  | U | 8000   | 49100  |
| 92-87-5   | Benzidine                  | 122000 | U | 109000 | 122000 |
| 85-68-7   | Butylbenzylphthalate       | 49100  | U | 11400  | 49100  |
| 91-94-1   | 3,3'-Dichlorobenzidine     | 49100  | U | 10700  | 49100  |
| 117-81-7  | Bis(2-ethylhexyl)phthalate | 49100  | U | 15100  | 49100  |
| 117-84-0  | Di-n-octylphthalate        | 49100  | U | 10500  | 49100  |
| 122-66-7  | 1,2 Diphenylhydrazine      | 49100  | U | 12100  | 49100  |

## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 58203T.D

Sample wt/vol: 500 Units: ML Date Received: 11/18/11

Concentrated Extract Volume: 1 Date Extracted: 11/23/11

Level:(low/med) LOW Date Analyzed: 11/23/11 Time: 1734

PercentSolids: 0 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SEPF Station ID: \_\_\_\_\_ Method: 8270 TCLP

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

| CAS NO.  | ANALYTE               | RESULT | Q              | MDL     | RL    |
|----------|-----------------------|--------|----------------|---------|-------|
| 110-86-1 | Pyridine              | 0.008  | U              | 0.0042  | 0.008 |
| 106-46-7 | 1,4-Dichlorobenzene   | 0.008  | U $\checkmark$ | 0.0054  | 0.008 |
| 95-48-7  | 2-Methylphenol        | 0.008  | U $\checkmark$ | 0.0052  | 0.008 |
| 67-72-1  | Hexachloroethane      | 0.008  | U $\checkmark$ | 0.0052  | 0.008 |
| 106-44-5 | 4-Methylphenol        | 0.02   | U $\checkmark$ | 0.0122  | 0.02  |
| 98-95-3  | Nitrobenzene          | 0.008  | U              | 0.002   | 0.008 |
| 87-68-3  | Hexachlorobutadiene   | 0.008  | U              | 0.005   | 0.008 |
| 88-06-2  | 2,4,6-Trichlorophenol | 0.008  | U              | 0.00168 | 0.008 |
| 95-95-4  | 2,4,5-Trichlorophenol | 0.008  | U              | 0.0068  | 0.008 |
| 121-14-2 | 2,4-Dinitrotoluene    | 0.008  | U              | 0.0056  | 0.008 |
| 118-74-1 | Hexachlorobenzene     | 0.008  | U              | 0.00082 | 0.008 |
| 87-86-5  | Pentachlorophenol     | 0.02   | U              | 0.0028  | 0.02  |



## SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2 EPA Sample No. 108600MB

Lab Code: PEL Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 108600MB Lab File ID: 7409MB.D

Sample wt/vol: 480 Units: ML Date Received: 11/21/11

Concentrated Extract Volume: 1 Date Extracted: 11/23/11

Level:(low/med) LOW Date Analyzed: 11/23/11 Time: 1647

PercentSolids: 0 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: SEPF Station ID: \_\_\_\_\_ Method: 8270 TCLP

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L**TCLP Analysis**

| CAS NO.  | ANALYTE               | RESULT  | Q | MDL      | RL      |
|----------|-----------------------|---------|---|----------|---------|
| 110-86-1 | Pyridine              | 0.00833 | U | 0.00438  | 0.00833 |
| 106-46-7 | 1,4-Dichlorobenzene   | 0.00833 | U | 0.00562  | 0.00833 |
| 95-48-7  | 2-Methylphenol        | 0.00833 | U | 0.00542  | 0.00833 |
| 67-72-1  | Hexachloroethane      | 0.00833 | U | 0.00542  | 0.00833 |
| 106-44-5 | 4-Methylphenol        | 0.0208  | U | 0.0127   | 0.0208  |
| 98-95-3  | Nitrobenzene          | 0.00833 | U | 0.00208  | 0.00833 |
| 87-68-3  | Hexachlorobutadiene   | 0.00833 | U | 0.00521  | 0.00833 |
| 88-06-2  | 2,4,6-Trichlorophenol | 0.00833 | U | 0.00175  | 0.00833 |
| 95-95-4  | 2,4,5-Trichlorophenol | 0.00833 | U | 0.00708  | 0.00833 |
| 121-14-2 | 2,4-Dinitrotoluene    | 0.00833 | U | 0.00583  | 0.00833 |
| 118-74-1 | Hexachlorobenzene     | 0.00833 | U | 0.000854 | 0.00833 |
| 87-86-5  | Pentachlorophenol     | 0.0208  | U | 0.00292  | 0.0208  |

Handwritten signature and date: 12-19-11

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 458203M.D

Sample wt/vol: 1.1 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1915

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 500

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.  | ANALYTE                  | RESULT | Q | MDL  | RL    |
|----------|--------------------------|--------|---|------|-------|
| 75-71-8  | Dichlorodifluoromethane  | 4540   | U | 1360 | 4540  |
| 74-87-3  | Chloromethane            | 4540   | U | 864  | 4540  |
| 75-01-4  | Vinyl chloride           | 4540   | U | 1360 | 4540  |
| 74-83-9  | Bromomethane             | 4540   | U | 2730 | 4540  |
| 75-00-3  | Chloroethane             | 4540   | U | 1680 | 4540  |
| 75-69-4  | Trichlorofluoromethane   | 4540   | U | 1000 | 4540  |
| 75-35-4  | 1,1-Dichloroethene       | 4540   | U | 773  | 4540  |
| 74-88-4  | Methyl iodide            | 4540   | U | 3410 | 4540  |
| 75-15-0  | Carbon disulfide         | 4540   | U | 3410 | 4540  |
| 75-09-2  | Methylene chloride       | 11400  | U | 2730 | 11400 |
| 156-60-5 | trans-1,2-Dichloroethene | 4540   | U | 886  | 4540  |
| 75-34-3  | 1,1-Dichloroethane       | 4540   | U | 773  | 4540  |
| 67-64-1  | Acetone                  | 22700  | U | 2950 | 22700 |
| 594-20-7 | 2,2-Dichloropropane      | 4540   | U | 1340 | 4540  |
| 156-59-2 | cis-1,2-Dichloroethene   | 4540   | U | 1410 | 4540  |
| 74-97-5  | Bromochloromethane       | 4540   | U | 2040 | 4540  |
| 78-93-3  | 2-Butanone               | 22700  | U | 3180 | 22700 |
| 67-66-3  | Chloroform               | 4540   | U | 1230 | 4540  |
| 71-55-6  | 1,1,1-Trichloroethane    | 4540   | U | 2270 | 4540  |
| 56-23-5  | Carbon tetrachloride     | 4540   | U | 1360 | 4540  |
| 563-58-6 | 1,1-Dichloropropene      | 4540   | U | 932  | 4540  |
| 71-43-2  | Benzene                  | 4540   | U | 1140 | 4540  |
| 107-06-2 | 1,2-Dichloroethane       | 4540   | U | 2270 | 4540  |
| 79-01-6  | Trichloroethene          | 4540   | U | 1000 | 4540  |
| 108-05-4 | Vinyl acetate            | 4540   | U | 3410 | 4540  |
| 78-87-5  | 1,2-Dichloropropane      | 4540   | U | 1430 | 4540  |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 458203M.D

Sample wt/vol: 1.1 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1915

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 500

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.     | ANALYTE                   | RESULT | Q | MDL  | RL    |
|-------------|---------------------------|--------|---|------|-------|
| 74-95-3     | Dibromomethane            | 4540   | U | 1500 | 4540  |
| 75-27-4     | Bromodichloromethane      | 4540   | U | 727  | 4540  |
| 10061-01-5  | cis-1,3-Dichloropropene   | 4540   | U | 954  | 4540  |
| 108-10-1    | 4-Methyl-2-pentanone      | 22700  | U | 3640 | 22700 |
| 108-88-3    | Toluene                   | 4540   | U | 659  | 4540  |
| 10061-02-6  | trans-1,3-Dichloropropene | 4540   | U | 2270 | 4540  |
| 79-00-5     | 1,1,2-Trichloroethane     | 4540   | U | 1860 | 4540  |
| 127-18-4    | Tetrachloroethene         | 4540   | U | 2110 | 4540  |
| 142-28-9    | 1,3-Dichloropropane       | 4540   | U | 1230 | 4540  |
| 591-78-6    | 2-Hexanone                | 22700  | U | 2950 | 22700 |
| 124-48-1    | Dibromochloromethane      | 4540   | U | 1040 | 4540  |
| 106-93-4    | 1,2-Dibromoethane         | 4540   | U | 1860 | 4540  |
| 108-90-7    | Chlorobenzene             | 4540   | U | 795  | 4540  |
| 630-20-6    | 1,1,1,2-Tetrachloroethane | 4540   | U | 1680 | 4540  |
| 100-41-4    | Ethylbenzene              | 4540   | U | 1570 | 4540  |
| 179601-23-1 | m,p-Xylene                | 9090   | U | 1540 | 9090  |
| 95-47-6     | o-Xylene                  | 4540   | U | 795  | 4540  |
| 100-42-5    | Styrene                   | 4540   | U | 636  | 4540  |
| 75-25-2     | Bromoform                 | 4540   | U | 1040 | 4540  |
| 98-82-8     | Isopropylbenzene          | 4540   | U | 1360 | 4540  |
| 108-86-1    | Bromobenzene              | 4540   | U | 2500 | 4540  |
| 79-34-5     | 1,1,2,2-Tetrachloroethane | 4540   | U | 1340 | 4540  |
| 96-18-4     | 1,2,3-Trichloropropane    | 4540   | U | 2730 | 4540  |
| 103-65-1    | n-Propylbenzene           | 4540   | U | 1540 | 4540  |
| 95-49-8     | 2-Chlorotoluene           | 4540   | U | 1090 | 4540  |
| 106-43-4    | 4-Chlorotoluene           | 4540   | U | 1180 | 4540  |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 458203M.D

Sample wt/vol: 1.1 Units: G Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1915

PercentSolids: 100 decanted : \_\_\_\_\_ Dilution Factor: 500

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.   | ANALYTE                     | RESULT | Q | MDL  | RL    |
|-----------|-----------------------------|--------|---|------|-------|
| 108-67-8  | 1,3,5-Trimethylbenzene      | 4540   | U | 1180 | 4540  |
| 98-06-6   | tert-Butylbenzene           | 4540   | U | 1540 | 4540  |
| 95-63-6   | 1,2,4-Trimethylbenzene      | 4540   | U | 1000 | 4540  |
| 135-98-8  | sec-Butylbenzene            | 4540   | U | 1450 | 4540  |
| 541-73-1  | 1,3-Dichlorobenzene         | 11400  | U | 1020 | 11400 |
| 106-46-7  | 1,4-Dichlorobenzene         | 11400  | U | 1480 | 11400 |
| 99-87-6   | 4-Isopropyltoluene          | 4540   | U | 1610 | 4540  |
| 104-51-8  | n-Butylbenzene              | 4540   | U | 1410 | 4540  |
| 95-50-1   | 1,2-Dichlorobenzene         | 11400  | U | 1270 | 11400 |
| 96-12-8   | 1,2-Dibromo-3-chloropropane | 11400  | U | 6360 | 11400 |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 11400  | U | 1430 | 11400 |
| 87-68-3   | Hexachlorobutadiene         | 4540   | U | 2730 | 4540  |
| 91-20-3   | Naphthalene                 | 11400  | U | 3410 | 11400 |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 11400  | U | 1390 | 11400 |
| 1634-04-4 | Methyl tert-butyl ether     | 4540   | U | 977  | 4540  |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-TRIP1

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 350458209 Lab File ID: 582-09.D

Sample wt/vol: 5 Units: ML Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2339

PercentSolids: 0 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.  | ANALYTE                  | RESULT | Q | MDL  | RL  |
|----------|--------------------------|--------|---|------|-----|
| 75-71-8  | Dichlorodifluoromethane  | 1      | U | 0.17 | 1   |
| 74-87-3  | Chloromethane            | 1      | U | 0.32 | 1   |
| 75-01-4  | Vinyl chloride           | 1      | U | 0.18 | 1   |
| 74-83-9  | Bromomethane             | 1      | U | 0.43 | 1   |
| 75-00-3  | Chloroethane             | 1      | U | 0.72 | 1   |
| 75-69-4  | Trichlorofluoromethane   | 1      | U | 0.4  | 1   |
| 75-35-4  | 1,1-Dichloroethene       | 0.5    | U | 0.19 | 0.5 |
| 74-88-4  | Methyl iodide            | 1      | U | 0.74 | 1   |
| 75-15-0  | Carbon disulfide         | 1      | U | 0.19 | 1   |
| 75-09-2  | Methylene chloride       | 2.1    | J | 0.66 | 5   |
| 156-60-5 | trans-1,2-Dichloroethene | 0.5    | U | 0.33 | 0.5 |
| 75-34-3  | 1,1-Dichloroethane       | 1      | U | 0.15 | 1   |
| 67-64-1  | Acetone                  | 10     | U | 1.3  | 10  |
| 594-20-7 | 2,2-Dichloropropane      | 1      | U | 0.6  | 1   |
| 156-59-2 | cis-1,2-Dichloroethene   | 0.5    | U | 0.19 | 0.5 |
| 74-97-5  | Bromochloromethane       | 1      | U | 0.17 | 1   |
| 78-93-3  | 2-Butanone               | 4      | U | 2    | 4   |
| 67-66-3  | Chloroform               | 0.5    | U | 0.16 | 0.5 |
| 71-55-6  | 1,1,1-Trichloroethane    | 1      | U | 0.14 | 1   |
| 56-23-5  | Carbon tetrachloride     | 0.5    | U | 0.14 | 0.5 |
| 563-58-6 | 1,1-Dichloropropene      | 1      | U | 0.3  | 1   |
| 71-43-2  | Benzene                  | 0.5    | U | 0.17 | 0.5 |
| 107-06-2 | 1,2-Dichloroethane       | 0.5    | U | 0.15 | 0.5 |
| 79-01-6  | Trichloroethene          | 0.5    | U | 0.19 | 0.5 |
| 108-05-4 | Vinyl acetate            | 1      | U | 0.18 | 1   |
| 78-87-5  | 1,2-Dichloropropane      | 1      | U | 0.15 | 1   |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-TRIP1

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 350458209 Lab File ID: 582-09.D

Sample wt/vol: 5 Units: ML Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2339

PercentSolids: 0 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.     | ANALYTE                   | RESULT | Q | MDL  | RL  |
|-------------|---------------------------|--------|---|------|-----|
| 74-95-3     | Dibromomethane            | 1      | U | 0.4  | 1   |
| 75-27-4     | Bromodichloromethane      | 0.5    | U | 0.15 | 0.5 |
| 10061-01-5  | cis-1,3-Dichloropropene   | 1      | U | 0.4  | 1   |
| 108-10-1    | 4-Methyl-2-pentanone      | 4      | U | 1    | 4   |
| 108-88-3    | Toluene                   | 1      | U | 0.14 | 1   |
| 10061-02-6  | trans-1,3-Dichloropropene | 1      | U | 0.3  | 1   |
| 79-00-5     | 1,1,2-Trichloroethane     | 1      | U | 0.2  | 1   |
| 127-18-4    | Tetrachloroethene         | 0.5    | U | 0.21 | 0.5 |
| 142-28-9    | 1,3-Dichloropropane       | 0.4    | U | 0.3  | 0.4 |
| 591-78-6    | 2-Hexanone                | 4      | U | 0.48 | 4   |
| 124-48-1    | Dibromochloromethane      | 0.2    | U | 0.13 | 0.2 |
| 106-93-4    | 1,2-Dibromoethane         | 1      | U | 0.11 | 1   |
| 108-90-7    | Chlorobenzene             | 0.5    | U | 0.16 | 0.5 |
| 630-20-6    | 1,1,1,2-Tetrachloroethane | 0.5    | U | 0.14 | 0.5 |
| 100-41-4    | Ethylbenzene              | 0.5    | U | 0.22 | 0.5 |
| 179601-23-1 | m,p-Xylene                | 0.4    | U | 0.23 | 0.4 |
| 95-47-6     | o-Xylene                  | 0.5    | U | 0.5  | 0.5 |
| 100-42-5    | Styrene                   | 1      | U | 0.12 | 1   |
| 75-25-2     | Bromoform                 | 1      | U | 0.19 | 1   |
| 98-82-8     | Isopropylbenzene          | 0.5    | U | 0.14 | 0.5 |
| 108-86-1    | Bromobenzene              | 1      | U | 0.21 | 1   |
| 79-34-5     | 1,1,2,2-Tetrachloroethane | 1      | U | 0.13 | 1   |
| 96-18-4     | 1,2,3-Trichloropropane    | 1      | U | 0.35 | 1   |
| 103-65-1    | n-Propylbenzene           | 1      | U | 0.14 | 1   |
| 95-49-8     | 2-Chlorotoluene           | 1      | U | 0.25 | 1   |
| 106-43-4    | 4-Chlorotoluene           | 1      | U | 0.15 | 1   |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI RT-TRIP1

Lab Code : PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 350458209 Lab File ID: 582-09.D

Sample wt/vol: 5 Units: ML Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2339

PercentSolids: 0 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.   | ANALYTE                     | RESULT | Q | MDL  | RL  |
|-----------|-----------------------------|--------|---|------|-----|
| 108-67-8  | 1,3,5-Trimethylbenzene      | 1      | U | 0.14 | 1   |
| 98-06-6   | tert-Butylbenzene           | 1      | U | 0.2  | 1   |
| 95-63-6   | 1,2,4-Trimethylbenzene      | 1      | U | 0.13 | 1   |
| 135-98-8  | sec-Butylbenzene            | 1      | U | 0.1  | 1   |
| 541-73-1  | 1,3-Dichlorobenzene         | 2      | U | 0.15 | 2   |
| 106-46-7  | 1,4-Dichlorobenzene         | 3      | U | 0.15 | 3   |
| 99-87-6   | 4-Isopropyltoluene          | 1      | U | 0.14 | 1   |
| 104-51-8  | n-Butylbenzene              | 1      | U | 0.16 | 1   |
| 95-50-1   | 1,2-Dichlorobenzene         | 1      | U | 0.25 | 1   |
| 96-12-8   | 1,2-Dibromo-3-chloropropane | 2      | U | 1    | 2   |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 1      | U | 0.4  | 1   |
| 87-68-3   | Hexachlorobutadiene         | 0.5    | U | 0.36 | 0.5 |
| 91-20-3   | Naphthalene                 | 5      | U | 0.5  | 5   |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 2      | U | 0.16 | 2   |
| 1634-04-4 | Methyl tert-butyl ether     | 1      | U | 0.5  | 1   |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
112011BLK62

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code: PEL Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 112011BLK62 Lab File ID: BLK62.D

Sample wt/vol: 5 Units: ML Date Received: 11/30/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2314

PercentSolids: 0 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.  | ANALYTE                  | RESULT | Q | MDL  | RL  |
|----------|--------------------------|--------|---|------|-----|
| 75-71-8  | Dichlorodifluoromethane  | 1      | U | 0.17 | 1   |
| 74-87-3  | Chloromethane            | 1      | U | 0.32 | 1   |
| 75-01-4  | Vinyl chloride           | 1      | U | 0.18 | 1   |
| 74-83-9  | Bromomethane             | 1      | U | 0.43 | 1   |
| 75-00-3  | Chloroethane             | 1      | U | 0.72 | 1   |
| 75-69-4  | Trichlorofluoromethane   | 1      | U | 0.4  | 1   |
| 75-35-4  | 1,1-Dichloroethene       | 0.5    | U | 0.19 | 0.5 |
| 74-88-4  | Methyl iodide            | 1      | U | 0.74 | 1   |
| 75-15-0  | Carbon disulfide         | 1      | U | 0.19 | 1   |
| 75-09-2  | Methylene chloride       | 5      | U | 0.66 | 5   |
| 156-60-5 | trans-1,2-Dichloroethene | 0.5    | U | 0.33 | 0.5 |
| 75-34-3  | 1,1-Dichloroethane       | 1      | U | 0.15 | 1   |
| 67-64-1  | Acetone                  | 10     | U | 1.3  | 10  |
| 594-20-7 | 2,2-Dichloropropane      | 1      | U | 0.6  | 1   |
| 156-59-2 | cis-1,2-Dichloroethene   | 0.5    | U | 0.19 | 0.5 |
| 74-97-5  | Bromochloromethane       | 1      | U | 0.17 | 1   |
| 78-93-3  | 2-Butanone               | 4      | U | 2    | 4   |
| 67-66-3  | Chloroform               | 0.5    | U | 0.16 | 0.5 |
| 71-55-6  | 1,1,1-Trichloroethane    | 1      | U | 0.14 | 1   |
| 56-23-5  | Carbon tetrachloride     | 0.5    | U | 0.14 | 0.5 |
| 563-58-6 | 1,1-Dichloropropene      | 1      | U | 0.3  | 1   |
| 71-43-2  | Benzene                  | 0.5    | U | 0.17 | 0.5 |
| 107-06-2 | 1,2-Dichloroethane       | 0.5    | U | 0.15 | 0.5 |
| 79-01-6  | Trichloroethene          | 0.5    | U | 0.19 | 0.5 |
| 108-05-4 | Vinyl acetate            | 1      | U | 0.18 | 1   |
| 78-87-5  | 1,2-Dichloropropane      | 1      | U | 0.15 | 1   |
| 74-95-3  | Dibromomethane           | 1      | U | 0.4  | 1   |



## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
112011BLK62

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 112011BLK62 Lab File ID: BLK62.D

Sample wt/vol: 5 Units: ML Date Received: 11/30/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2314

PercentSolids: 0 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.     | ANALYTE                   | RESULT | Q | MDL  | RL  |
|-------------|---------------------------|--------|---|------|-----|
| 75-27-4     | Bromodichloromethane      | 0.5    | U | 0.15 | 0.5 |
| 10061-01-5  | cis-1,3-Dichloropropene   | 1      | U | 0.4  | 1   |
| 108-10-1    | 4-Methyl-2-pentanone      | 4      | U | 1    | 4   |
| 108-88-3    | Toluene                   | 1      | U | 0.14 | 1   |
| 10061-02-6  | trans-1,3-Dichloropropene | 1      | U | 0.3  | 1   |
| 79-00-5     | 1,1,2-Trichloroethane     | 1      | U | 0.2  | 1   |
| 127-18-4    | Tetrachloroethene         | 0.5    | U | 0.21 | 0.5 |
| 142-28-9    | 1,3-Dichloropropane       | 0.4    | U | 0.3  | 0.4 |
| 591-78-6    | 2-Hexanone                | 4      | U | 0.48 | 4   |
| 124-48-1    | Dibromochloromethane      | 0.2    | U | 0.13 | 0.2 |
| 106-93-4    | 1,2-Dibromoethane         | 1      | U | 0.11 | 1   |
| 108-90-7    | Chlorobenzene             | 0.5    | U | 0.16 | 0.5 |
| 630-20-6    | 1,1,1,2-Tetrachloroethane | 0.5    | U | 0.14 | 0.5 |
| 100-41-4    | Ethylbenzene              | 0.5    | U | 0.22 | 0.5 |
| 179601-23-1 | m,p-Xylene                | 0.4    | U | 0.23 | 0.4 |
| 95-47-6     | o-Xylene                  | 0.5    | U | 0.5  | 0.5 |
| 100-42-5    | Styrene                   | 1      | U | 0.12 | 1   |
| 75-25-2     | Bromoform                 | 1      | U | 0.19 | 1   |
| 98-82-8     | Isopropylbenzene          | 0.5    | U | 0.14 | 0.5 |
| 108-86-1    | Bromobenzene              | 1      | U | 0.21 | 1   |
| 79-34-5     | 1,1,2,2-Tetrachloroethane | 1      | U | 0.13 | 1   |
| 96-18-4     | 1,2,3-Trichloropropane    | 1      | U | 0.35 | 1   |
| 103-65-1    | n-Propylbenzene           | 1      | U | 0.14 | 1   |
| 95-49-8     | 2-Chlorotoluene           | 1      | U | 0.25 | 1   |
| 106-43-4    | 4-Chlorotoluene           | 1      | U | 0.15 | 1   |
| 108-67-8    | 1,3,5-Trimethylbenzene    | 1      | U | 0.14 | 1   |
| 98-06-6     | tert-Butylbenzene         | 1      | U | 0.2  | 1   |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
112011BLK62

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 112011BLK62 Lab File ID: BLK62.D

Sample wt/vol: 5 Units: ML Date Received: 11/30/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 11/30/11 Time: 2314

PercentSolids: 0 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO.   | ANALYTE                     | RESULT | Q | MDL  | RL  |
|-----------|-----------------------------|--------|---|------|-----|
| 95-63-6   | 1,2,4-Trimethylbenzene      | 1      | U | 0.13 | 1   |
| 135-98-8  | sec-Butylbenzene            | 1      | U | 0.1  | 1   |
| 541-73-1  | 1,3-Dichlorobenzene         | 0.24   | J | 0.15 | 2   |
| 106-46-7  | 1,4-Dichlorobenzene         | 0.32   | J | 0.15 | 3   |
| 99-87-6   | 4-Isopropyltoluene          | 1      | U | 0.14 | 1   |
| 104-51-8  | n-Butylbenzene              | 1      | U | 0.16 | 1   |
| 95-50-1   | 1,2-Dichlorobenzene         | 1      | U | 0.25 | 1   |
| 96-12-8   | 1,2-Dibromo-3-chloropropane | 2      | U | 1    | 2   |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 1      | U | 0.4  | 1   |
| 87-68-3   | Hexachlorobutadiene         | 0.5    | U | 0.36 | 0.5 |
| 91-20-3   | Naphthalene                 | 5      | U | 0.5  | 5   |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 2      | U | 0.16 | 2   |
| 1634-04-4 | Methyl tert-butyl ether     | 1      | U | 0.5  | 1   |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
120111MBLK32

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 120111MBLK32 Lab File ID: MBLK32.D

Sample wt/vol: 5 Units: G Date Received: 12/01/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1830

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 50

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.  | ANALYTE                  | RESULT | Q | MDL  | RL  |
|----------|--------------------------|--------|---|------|-----|
| 75-71-8  | Dichlorodifluoromethane  | 100    | U | 30   | 100 |
| 74-87-3  | Chloromethane            | 100    | U | 19   | 100 |
| 75-01-4  | Vinyl chloride           | 100    | U | 30   | 100 |
| 74-83-9  | Bromomethane             | 100    | U | 60   | 100 |
| 75-00-3  | Chloroethane             | 100    | U | 37   | 100 |
| 75-69-4  | Trichlorofluoromethane   | 100    | U | 22   | 100 |
| 75-35-4  | 1,1-Dichloroethene       | 100    | U | 17   | 100 |
| 74-88-4  | Methyl iodide            | 100    | U | 75   | 100 |
| 75-15-0  | Carbon disulfide         | 100    | U | 75   | 100 |
| 75-09-2  | Methylene chloride       | 250    | U | 60   | 250 |
| 156-60-5 | trans-1,2-Dichloroethene | 100    | U | 19.5 | 100 |
| 75-34-3  | 1,1-Dichloroethane       | 100    | U | 17   | 100 |
| 67-64-1  | Acetone                  | 500    | U | 65   | 500 |
| 594-20-7 | 2,2-Dichloropropane      | 100    | U | 29.5 | 100 |
| 156-59-2 | cis-1,2-Dichloroethene   | 100    | U | 31   | 100 |
| 74-97-5  | Bromochloromethane       | 100    | U | 45   | 100 |
| 78-93-3  | 2-Butanone               | 500    | U | 70   | 500 |
| 67-66-3  | Chloroform               | 100    | U | 27   | 100 |
| 71-55-6  | 1,1,1-Trichloroethane    | 100    | U | 50   | 100 |
| 56-23-5  | Carbon tetrachloride     | 100    | U | 30   | 100 |
| 563-58-6 | 1,1-Dichloropropene      | 100    | U | 20.5 | 100 |
| 71-43-2  | Benzene                  | 100    | U | 25   | 100 |
| 107-06-2 | 1,2-Dichloroethane       | 100    | U | 50   | 100 |
| 79-01-6  | Trichloroethene          | 100    | U | 22   | 100 |
| 108-05-4 | Vinyl acetate            | 100    | U | 75   | 100 |
| 78-87-5  | 1,2-Dichloropropane      | 100    | U | 31.5 | 100 |
| 74-95-3  | Dibromomethane           | 100    | U | 33   | 100 |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
120111MBLK32

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 120111MBLK32 Lab File ID: MBLK32.D

Sample wt/vol: 5 Units: G Date Received: 12/01/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1830

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 50

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.     | ANALYTE                   | RESULT | Q | MDL  | RL  |
|-------------|---------------------------|--------|---|------|-----|
| 75-27-4     | Bromodichloromethane      | 100    | U | 16   | 100 |
| 10061-01-5  | cis-1,3-Dichloropropene   | 100    | U | 21   | 100 |
| 108-10-1    | 4-Methyl-2-pentanone      | 500    | U | 80   | 500 |
| 108-88-3    | Toluene                   | 100    | U | 14.5 | 100 |
| 10061-02-6  | trans-1,3-Dichloropropene | 100    | U | 50   | 100 |
| 79-00-5     | 1,1,2-Trichloroethane     | 100    | U | 41   | 100 |
| 127-18-4    | Tetrachloroethene         | 100    | U | 46.5 | 100 |
| 142-28-9    | 1,3-Dichloropropane       | 100    | U | 27   | 100 |
| 591-78-6    | 2-Hexanone                | 500    | U | 65   | 500 |
| 124-48-1    | Dibromochloromethane      | 100    | U | 23   | 100 |
| 106-93-4    | 1,2-Dibromoethane         | 100    | U | 41   | 100 |
| 108-90-7    | Chlorobenzene             | 100    | U | 17.5 | 100 |
| 630-20-6    | 1,1,1,2-Tetrachloroethane | 100    | U | 37   | 100 |
| 100-41-4    | Ethylbenzene              | 100    | U | 34.5 | 100 |
| 179601-23-1 | m,p-Xylene                | 200    | U | 34   | 200 |
| 95-47-6     | o-Xylene                  | 100    | U | 17.5 | 100 |
| 100-42-5    | Styrene                   | 100    | U | 14   | 100 |
| 75-25-2     | Bromoform                 | 100    | U | 23   | 100 |
| 98-82-8     | Isopropylbenzene          | 100    | U | 30   | 100 |
| 108-86-1    | Bromobenzene              | 100    | U | 55   | 100 |
| 79-34-5     | 1,1,2,2-Tetrachloroethane | 100    | U | 29.5 | 100 |
| 96-18-4     | 1,2,3-Trichloropropane    | 100    | U | 60   | 100 |
| 103-65-1    | n-Propylbenzene           | 100    | U | 34   | 100 |
| 95-49-8     | 2-Chlorotoluene           | 100    | U | 24   | 100 |
| 106-43-4    | 4-Chlorotoluene           | 100    | U | 26   | 100 |
| 108-67-8    | 1,3,5-Trimethylbenzene    | 100    | U | 26   | 100 |
| 98-06-6     | tert-Butylbenzene         | 100    | U | 34   | 100 |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2 EPA Sample No. 120111MBLK32  
 Lab Code: PEL Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: 3504582  
 Matrix: SOIL Lab Sample ID: 120111MBLK32 Lab File ID: MBLK32.D  
 Sample wt/vol: 5 Units: G Date Received: 12/01/11  
 Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_  
 Level:(low/med) HIGH Date Analyzed: 12/01/11 Time: 1830  
 PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 50  
 Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260  
 GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_  
 Column(1): DB-624 ID: 0.18 (mm)  
 CONCENTRATION UNITS: UG/KG

| CAS NO.   | ANALYTE                     | RESULT | Q | MDL  | RL  |
|-----------|-----------------------------|--------|---|------|-----|
| 95-63-6   | 1,2,4-Trimethylbenzene      | 100    | U | 22   | 100 |
| 135-98-8  | sec-Butylbenzene            | 100    | U | 32   | 100 |
| 541-73-1  | 1,3-Dichlorobenzene         | 250    | U | 22.5 | 250 |
| 106-46-7  | 1,4-Dichlorobenzene         | 250    | U | 32.5 | 250 |
| 99-87-6   | 4-Isopropyltoluene          | 100    | U | 35.5 | 100 |
| 104-51-8  | n-Butylbenzene              | 100    | U | 31   | 100 |
| 95-50-1   | 1,2-Dichlorobenzene         | 250    | U | 28   | 250 |
| 96-12-8   | 1,2-Dibromo-3-chloropropane | 250    | U | 140  | 250 |
| 120-82-1  | 1,2,4-Trichlorobenzene      | 250    | U | 31.5 | 250 |
| 87-68-3   | Hexachlorobutadiene         | 100    | U | 60   | 100 |
| 91-20-3   | Naphthalene                 | 250    | U | 75   | 250 |
| 87-61-6   | 1,2,3-Trichlorobenzene      | 250    | U | 30.5 | 250 |
| 1634-04-4 | Methyl tert-butyl ether     | 100    | U | 21.5 | 100 |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI EPA Sample No. RT-D003

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: SOIL Lab Sample ID: 350458203 Lab File ID: 458203T.D

Sample wt/vol: 0.5 Units: ML Date Received: 11/18/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1939

PercentSolids: 0 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260 TCLP

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

**TCLP Analysis**

| CAS NO.  | ANALYTE              | RESULT | Q | MDL    | RL    |
|----------|----------------------|--------|---|--------|-------|
| 75-01-4  | Vinyl chloride       | 0.01   | U | 0.0018 | 0.01  |
| 75-35-4  | 1,1-Dichloroethene   | 0.005  | U | 0.0019 | 0.005 |
| 78-93-3  | 2-Butanone           | 0.04   | U | 0.02   | 0.04  |
| 67-66-3  | Chloroform           | 0.005  | U | 0.0016 | 0.005 |
| 56-23-5  | Carbon tetrachloride | 0.005  | U | 0.0014 | 0.005 |
| 71-43-2  | Benzene              | 0.005  | U | 0.0017 | 0.005 |
| 107-06-2 | 1,2-Dichloroethane   | 0.005  | U | 0.0015 | 0.005 |
| 79-01-6  | Trichloroethene      | 0.005  | U | 0.0019 | 0.005 |
| 127-18-4 | Tetrachloroethene    | 0.005  | U | 0.0021 | 0.005 |
| 108-90-7 | Chlorobenzene        | 0.005  | U | 0.0016 | 0.005 |

## VOLATILE ORGANIC ANALYSIS DATA SHEET

Lab Name: Spectrum Analytical, Inc. Contract: ROCK-TENN SA OTSEGO, MI/2 EPA Sample No. 120111TBLK32

Lab Code: PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504582

Matrix: WATER Lab Sample ID: 120111TBLK32 Lab File ID: TBLK32.D

Sample wt/vol: 0.5 Units: ML Date Received: 12/01/11

Concentrated Extract Volume: 5 Date Extracted: \_\_\_\_\_

Level:(low/med) LOW Date Analyzed: 12/01/11 Time: 1806

PercentSolids: 0 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: PURGETRAP Station ID: \_\_\_\_\_ Method: 8260 TCLP

GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_\_

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: MG/L

**TCLP Analysis**

| CAS NO.  | ANALYTE              | RESULT | Q | MDL    | RL    |
|----------|----------------------|--------|---|--------|-------|
| 75-01-4  | Vinyl chloride       | 0.01   | U | 0.0018 | 0.01  |
| 75-35-4  | 1,1-Dichloroethene   | 0.005  | U | 0.0019 | 0.005 |
| 78-93-3  | 2-Butanone           | 0.04   | U | 0.02   | 0.04  |
| 67-66-3  | Chloroform           | 0.005  | U | 0.0016 | 0.005 |
| 56-23-5  | Carbon tetrachloride | 0.005  | U | 0.0014 | 0.005 |
| 71-43-2  | Benzene              | 0.005  | U | 0.0017 | 0.005 |
| 107-06-2 | 1,2-Dichloroethane   | 0.005  | U | 0.0015 | 0.005 |
| 79-01-6  | Trichloroethene      | 0.005  | U | 0.0019 | 0.005 |
| 127-18-4 | Tetrachloroethene    | 0.005  | U | 0.0021 | 0.005 |
| 108-90-7 | Chlorobenzene        | 0.005  | U | 0.0016 | 0.005 |





## MEMORANDUM

**Date:** January 12, 2011

**To:** Naren Babu, Project Manager, OTIE  
Superfund Technical Assessment and Response Team (START) for Region 5

**Prepared by:** Renea Anglin, START chemist for Region 4

**QA/QC** Keely Meadows

**Concurrence by:**

**Subject:** Data Validation for  
Rock-Tenn Site Assessment

Project TDD No. TO-01-11-0027

Laboratory: Spectrum Analytical, Inc. in Tampa, Florida.  
Sample Delivery Group (SDG): 3504792

### 1.0 INTRODUCTION

The START chemist for Region 4 validated analytical data for 3 soil samples and 1 duplicate for polychlorinated biphenyls (PCBs). Samples were collected for the Rock-Tenn Site Assessment on December 14, 2011. The samples were analyzed under SDG 3504792 by Spectrum Analytical, Inc. of Tampa, Florida, using U.S. Environmental Protection Agency (U.S. EPA) method 8082.

Laboratory data were validated using guidelines set forth in the U.S. EPA Contract Laboratory Program National Functional Guidelines (NFG) for Organic Data Review (EPA-540-R-08-01, June 2008) and applicable methodologies. The purpose of the chemical data quality evaluation process is to assess the usability of data for the project decision-making process.

Organic data validation consisted of a review of the following QC audits:

- Chain of custody and sample receipt forms review
- Sample preservation and holding time
- Blank results
- Surrogate recoveries
- Matrix spike and Matrix Spike Duplicate (MS/MSD) recovery results
- Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) recovery results

Section 2.0 of this memorandum discusses the results of organic data validation. Section 3.0 presents an overall assessment of the data. The attachment to this memorandum contains the laboratory reporting forms as well as START's handwritten data qualifications where warranted.

### 2.0 ORGANIC DATA VALIDATION RESULTS

The results of START's organic data validation are summarized below by QC audit reviewed. The data qualifiers listed below were applied to sample analytical results where warranted (see attachment):

- J – The analyte was detected. The reported concentration was considered estimated.
- U – The analyte was not detected.

- UJ – The analyte was not detected. The reporting limit was considered estimated.

After the START project staff received the data packages, they were inventoried for completeness and then reviewed according to matrix-specific protocols and data quality objectives established for the project.

## **2.1 SOIL SAMPLES BY METHOD 8082**

### **2.1.1 SAMPLE HANDLING**

Chain of custody documentation and sample receipt forms were reviewed to ensure requested analyses were performed and that samples arrived at the laboratory intact. Soil samples were collected on December 14, 2011 and were received on ice.

### **2.1.2 SAMPLE PRESERVATION AND HOLDING TIME**

Samples were shipped on ice and were analyzed within holding time criteria. No discrepancies were noted.

### **2.1.3 BLANK RESULTS**

The purpose of laboratory blank analysis is to determine the existence and magnitude of contamination resulting from laboratory activities. A laboratory method blank sample (111334MB) was run with this SDG. No laboratory method blank detects were noted.

### **2.1.4 SURROGATE RECOVERIES**

Laboratory performance on individual samples is established by means of fortifying each sample with surrogate compounds. The surrogate spike compound included Decachlorobiphenyl.

The surrogate was within limits for samples analyzed in this SDG.

### **2.1.5 MS/MSD RECOVERY RESULTS**

Data for MS/MSD are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis.

No MS/MSD samples were requested for this analysis.

### **2.1.6 LCS RECOVERY RESULTS**

Data for the LCS is generated to provide information on the accuracy of the analytical method and on the laboratory performance. The LCS was fortified and analyzed with each batch of samples. The LCS accuracy performance is measured by %R.

LCS recoveries were within QC limits.

### **2.1.7 FIELD DUPLICATES**

Data for field duplicates were collected and analyzed for chemical constituents to measure the cumulative uncertainty (i.e., precision) of the sample collection, splitting, handling, storage, preparation and analysis operations, as well as natural sample heterogeneity that is not eliminated through simple mixing in the field.

Field duplicates are two samples prepared by mixing a volume of sample and splitting it into two separate sample containers that are labeled as individual field samples.

Sample RT-S002 had a duplicate collected (RT-S002-D). Sample RT-S002 showed a detection for AR1260 between the MDL and RL and the duplicate did not. Results are qualified as estimated and flagged as J and UJ, respectively.

### **3.0 OVERALL ASSESSMENT OF DATA**

The analytical results meet the data quality objectives defined by the applicable method and validation guidance documentation. The analytical data is usable and acceptable as reported by the laboratory.

**ATTACHMENT**  
**SUMMARY OF VALIDATED ANALYTICAL RESULTS**  
**AND**  
**CHAIN-OF-CUSTODY**

## PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK - TENN SA / 2010101- RT-S001

Lab Code: PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504792

Matrix: SOIL Lab Sample ID: 350479201 Lab File ID: 79201.D

Sample wt/vol: 33.95 Units: G Date Received: 12/15/11

Concentrated Extract Volume: 10 Date Extracted: 12/16/11

Level:(low/med) LOW Date Analyzed: 12/18/11 Time: 1824

PercentSolids: 80.4 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 36     | U | 16  | 36 |
| 11096-82-5 | Aroclor-1260 | 9.9    | J | 7.4 | 36 |
| 11104-28-2 | Aroclor-1221 | 36     | U | 14  | 36 |
| 11141-16-5 | Aroclor-1232 | 36     | U | 24  | 36 |
| 53469-21-9 | Aroclor-1242 | 36     | U | 13  | 36 |
| 12672-29-6 | Aroclor-1248 | 36     | U | 13  | 36 |
| 11097-69-1 | Aroclor-1254 | 36     | U | 11  | 36 |

Handwritten signature and date: 1-12-12

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK - TENN SA / 2010101- RT-S002

Lab Code : PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504792

Matrix: SOIL Lab Sample ID: 350479202 Lab File ID: 79202.D

Sample wt/vol: 33.98 Units: G Date Received: 12/15/11

Concentrated Extract Volume: 10 Date Extracted: 12/16/11

Level:(low/med) LOW Date Analyzed: 12/18/11 Time: 1909

PercentSolids: 84.6 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 34     | U | 15  | 34 |
| 11096-82-5 | Aroclor-1260 | 12     | J | 7   | 34 |
| 11104-28-2 | Aroclor-1221 | 34     | U | 14  | 34 |
| 11141-16-5 | Aroclor-1232 | 34     | U | 23  | 34 |
| 53469-21-9 | Aroclor-1242 | 34     | U | 13  | 34 |
| 12672-29-6 | Aroclor-1248 | 34     | U | 13  | 34 |
| 11097-69-1 | Aroclor-1254 | 34     | U | 11  | 34 |

*Handwritten signature and date: 11-22-12*

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK - TENN SA / 2010101- RT-S002-D

Lab Code : PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504792

Matrix: SOIL Lab Sample ID: 350479203 Lab File ID: 79203.D

Sample wt/vol: 33.96 Units: G Date Received: 12/15/11

Concentrated Extract Volume: 10 Date Extracted: 12/16/11

Level:(low/med) LOW Date Analyzed: 12/18/11 Time: 1924

PercentSolids: 83.2 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q          | MDL | RL |
|------------|--------------|--------|------------|-----|----|
| 12674-11-2 | Aroclor-1016 | 35     | U          | 15  | 35 |
| 11096-82-5 | Aroclor-1260 | 35     | U <i>J</i> | 7.1 | 35 |
| 11104-28-2 | Aroclor-1221 | 35     | U          | 14  | 35 |
| 11141-16-5 | Aroclor-1232 | 35     | U          | 23  | 35 |
| 53469-21-9 | Aroclor-1242 | 35     | U          | 13  | 35 |
| 12672-29-6 | Aroclor-1248 | 35     | U          | 13  | 35 |
| 11097-69-1 | Aroclor-1254 | 35     | U          | 11  | 35 |

*Handwritten signature and date: 1-12-12*

## PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: Spectrum Analytical, Inc. Contract: ROCK - TENN SA / 2010101- RT-S003

Lab Code : PEL Case No. \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504792

Matrix: SOIL Lab Sample ID: 350479204 Lab File ID: 79204.D

Sample wt/vol: 33.4 Units: G Date Received: 12/15/11

Concentrated Extract Volume: 10 Date Extracted: 12/16/11

Level:(low/med) LOW Date Analyzed: 12/18/11 Time: 1939

PercentSolids: 85.7 decanted : \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 34     | U | 15  | 34 |
| 11096-82-5 | Aroclor-1260 | 72     |   | 7   | 34 |
| 11104-28-2 | Aroclor-1221 | 34     | U | 14  | 34 |
| 11141-16-5 | Aroclor-1232 | 34     | U | 23  | 34 |
| 53469-21-9 | Aroclor-1242 | 34     | U | 13  | 34 |
| 12672-29-6 | Aroclor-1248 | 34     | U | 13  | 34 |
| 11097-69-1 | Aroclor-1254 | 34     | U | 11  | 34 |

Handwritten signature and date: 1-12-12

## PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.  
111334MB

Lab Name: Spectrum Analytical, Inc. Contract: ROCK - TENN SA / 2010101-101

Lab Code : PEL Case No.: \_\_\_\_\_ SAS No: \_\_\_\_\_ SDG No.: 3504792

Matrix: SOIL Lab Sample ID: 111334MB Lab File ID: 7707MB.D

Sample wt/vol: 33.99 Units: G Date Received: 12/16/11

Concentrated Extract Volume: 10 Date Extracted: 12/16/11

Level:(low/med) LOW Date Analyzed: 12/18/11 Time: 1608

PercentSolids: 100 decanted : ( \_\_\_\_\_ Dilution Factor: 1

Extraction: SONC Station ID: \_\_\_\_\_ Method: 8082

GPC Cleanup : ( Y/N ) N pH: \_\_\_\_\_

Column(1): STX-CLP1 ID: 0.32 (mm)

CONCENTRATION UNITS: UG/KG

| CAS NO.    | ANALYTE      | RESULT | Q | MDL | RL |
|------------|--------------|--------|---|-----|----|
| 12674-11-2 | Aroclor-1016 | 29     | U | 13  | 29 |
| 11096-82-5 | Aroclor-1260 | 29     | U | 5.9 | 29 |
| 11104-28-2 | Aroclor-1221 | 29     | U | 12  | 29 |
| 11141-16-5 | Aroclor-1232 | 29     | U | 19  | 29 |
| 53469-21-9 | Aroclor-1242 | 29     | U | 11  | 29 |
| 12672-29-6 | Aroclor-1248 | 29     | U | 11  | 29 |
| 11097-69-1 | Aroclor-1254 | 29     | U | 9.2 | 29 |

Handwritten signature and date: 1-12-12

**APPENDIX J**

**Additional MDEQ FOIA Information**



JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
KALAMAZOO DISTRICT OFFICE

1/5/09



STEVEN E. CHESTER  
DIRECTOR

January 5, 2009

CERTIFIED MAIL – 7005 1160 000 6980 0773  
RETURN RECEIPT REQUESTED

Cogswell Property, LLC  
Attention: Mr. Michael Davis, Sole Member  
431 Helen Avenue  
Otsego, MI 49078

CERTIFIED MAIL – 7005 1160 000 6980 0780  
RETURN RECEIPT REQUESTED

Cogswell Property, LLC  
Attention: Mr. Michael Davis, Sole Member  
6901 Cogswell Street  
Romulus, MI 48174

Dear Mr. Davis:

**SUBJECT:** Demand Letter #1 for the Performance of Response Activities at:  
Former Rock-Tenn Property, 431 Helen Avenue, Otsego, Allegan County.  
Specifically: Uncontrolled Release of Oils to the Ground

The Department of Environmental Quality (DEQ) is sending this Demand Letter to advise Cogswell Property, LLC (Cogswell) of conditions that are present at or associated with the former Rock-Tenn property located at 431 Helen Avenue (Property) and that are regulated under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). This letter also serves as the DEQ's request that Cogswell take actions to comply with Part 201.

On March 13, 2008, staff of the DEQ's Remediation and Redevelopment Division (RRD) conducted an inspection of the Property. During that inspection, staff observed transformers in the process of being dismantled, a path of spilled oils across pavement, and areas of visibly oil-stained soils.

On May 22, 2008, the DEQ-RRD sent a certified letter to Cogswell, regarding conditions that were present at the Property that are regulated under Part 201; specifically, the uncontrolled release of oils to the ground. That letter also served as the DEQ's notification that Cogswell is required to undertake response activities necessary to prevent, minimize, or mitigate injury or unacceptable risk to the public health, safety, welfare, or the environment, consistent with

Part 201 and the Part 201 Rules. That letter required a written response within thirty (30) days.

On July 16, 2008, the DEQ-RRD received a written response from Cogswell. In that letter, Cogswell stated, in pertinent part:

*"Tests will be performed to evaluate the contaminated soils."*

*"Once tests are confirmed, the soil will be properly disposed of.  
Our proposed timeframe to complete the cleanup is 30 to 60 days."*

On December 29, 2008, DEQ staff inspected the site, and confirmed that the affected soils had not been excavated and disposed. Furthermore, the DEQ has not received any communication, confirming that the soils were analyzed, excavated, and properly disposed.

Observations made during the previously-described inspections determined that hazardous substances are present in areas of the Property that may be in concentrations that exceed the requirements of Section 20120a(1)(a) or (17) of the NREPA, and Part 7 of the Part 201 Rules of the NREPA. Any area of the Property where a hazardous substance in concentrations that exceed these requirements or criteria has been released, deposited or disposed of, or otherwise comes to be located; and any other area, place, or property where a hazardous substance in concentrations that exceed these requirements or criteria comes to be located as a result of the migration of the hazardous substances from the Property (collectively, the Facility), constitutes a "facility" that is regulated under Part 201.

A person,<sup>1</sup> who owned or operated the Facility at the time of the disposal or release of a hazardous substance and is responsible for an activity causing the disposal or release of the hazardous substance is liable under Section 20126, is required by Sections 20107a and 20114 of the NREPA and the Part 201 Rules to undertake due care and other response activities at the facility. Pursuant to Section 20126a of the NREPA, persons who are liable for the Facility under Section 20126 of the NREPA are jointly and severally liable for all costs of response activities, and any accrued interest on these costs, that are lawfully incurred by the State of Michigan (state) relating to the selection and implementation of response activities required by Part 201, including, but not limited to, Sections 20107a, 20114, 20118, 20120a, 20120b, 20120c, and 20120d of the NREPA; and the Part 201 Rules, and for damages for the full value of injury to, destruction of, or loss of natural resources. Certain exemptions or defenses to liability may apply.

Dismantling of transformers and other equipment on or around March 13, 2008, resulted in a release of oils to the ground. According to records obtained by the staff of the DEQ from the Allegan County Equalization Department [Liber/page number 3036/463],

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<sup>1</sup> Section 301(g) of Part 3, Definitions, of the NREPA defines a "person" as an individual, partnership, corporation, association, governmental entity, or other legal entity.

Cogswell Property LLC (Cogswell) owned at that time, and presently owns, the Property at this Facility. Additionally, based on Cogswell's July 15, 2008, letter, and records obtained by the Department of Labor and Economic Growth, Cogswell Property, LLC was, and is, an operator in the State of Michigan. Therefore, Cogswell is liable as a person who is responsible for an activity that caused a release or threat of release of a hazardous substance at the Facility.

As the owner and operator of the Facility who is liable under Section 20126 of the NREPA, Cogswell is affirmatively obligated to perform the response activities specified in Sections 20107a and 20114 and the Part 201 Rules, and is legally liable for any response activity costs the state incurs at the Facility. Pursuant to Section 20114(1)(a) through (g) and the Part 201 Rules, Cogswell is required to do all of the following:

- Determine the nature and extent of the release at the Facility.
- Report the release to the DEQ within 24 hours after obtaining knowledge of the release, if the amount released was a reportable quantity established under 40 CFR 302.4 and 302.6 (July 1, 2001).
- Immediately stop or prevent the release at the source.
- Immediately implement source control or removal measures to remove or contain hazardous substances that were released after June 5, 1995.
- Immediately assure that all persons whose water supplies are contaminated or immediately threatened by contamination have alternate water service.
- Immediately identify and eliminate any threat of fire or explosion or any direct contact hazards, and notify local fire officials upon identification.
- Immediately initiate removal of a hazardous substance that is in a liquid phase, that is not dissolved in water, and that has been released; and remove reasonably recoverable free-phase liquid on an ongoing basis.
- Immediately mitigate or eliminate acutely toxic releases, either direct or through venting groundwater, to surface water.
- Immediately mitigate or eliminate surficial contamination that is acutely toxic to humans or wildlife.
- Diligently pursue response activities necessary to achieve the cleanup criteria specified in Part 201 and the rules promulgated thereunder.<sup>2</sup>

Additionally, pursuant to Section 20107a, as the current owner or operator of the Property, Cogswell is required to: (1) undertake measures as are necessary to prevent exacerbation of the existing contamination; (2) exercise due care by undertaking

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<sup>2</sup> In addition, if the DEQ determines that the release at this Facility was grossly negligent or intentional, pursuant to Section 20118(5) of the NREPA, the liable person will be required to attain a degree of cleanup that complies with R 299.5705(5) or R 299.5705(6) of the Part 201 Rules, unless attaining that degree of control is technically infeasible, or the adverse environmental impact of implementing a remedial action to satisfy these rules would exceed the environmental benefit of the remedial action.

response activities necessary to mitigate unacceptable exposure to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use of the Facility in a manner that protects the public health and safety; (3) take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that foreseeably could result from those acts or omissions; and (4) comply with Part 10 of the Part 201 Rules. The DEQ hereby requests that Cogswell implement measures, as appropriate, at the Facility to comply with these requirements.

Compliance with Cogswell's affirmative obligation to diligently pursue response activities at the facility includes conducting response activities in a manner and according to a schedule which is responsive to known and reasonably anticipated threats to the public health, safety, or welfare or to the environment. Therefore, the DEQ requests Cogswell to:

1. Perform a remedial investigation to assess environmental conditions in order to select an appropriate remedial action that adequately addresses those conditions to protect the public health, safety, welfare, and the environment, consistent with Part 201 and its rules.
2. Undertake interim response activities based on the factors provided in the Part 201 Rules.
3. Perform a remedial action to address all releases of hazardous substances in all environmental media at the Facility consistent with Sections 20118, 20120a, 20120b, and 20120d, and the Part 201 Rules.

Please immediately provide a letter to the address indicated below, that expresses Cogswell's written commitment to remediate the impacted on-site soils, in accordance with Sections 20107a and 20114(1) and the Part 201 Rules at the Facility. This written commitment should include a description of the response activities Cogswell will take at the Facility and a schedule acceptable to the DEQ for performing those response activities to comply with Sections 20107a and 20114(1) of the NREPA and the Part 201 Rules. The written response shall be submitted to the following address:

Mr. Ben A. Zimont, Project Manager  
Kalamazoo District Office  
Remediation and Redevelopment Division  
Department of Environmental Quality  
7953 Adobe Road  
Kalamazoo, MI 49009-5025  
Telephone: 269-567-3532  
Fax: 269-567-9440

If Cogswell fails to submit the required Section 20114(1)(h) plans within the time frames specified above, the DEQ will consider Cogswell to be in violation of Part 201 and its rules.

Please be advised that the state has incurred, and may continue to incur, costs for performing response activities at the Facility. Interest on these response activity costs shall begin to accrue on the date Cogswell receives this Demand Letter. To avoid liability for any interest that will accrue on these costs, Cogswell may arrange to reimburse these costs to the DEQ upon its receipt of this Demand Letter by contacting Mr. Zimont at the address or telephone number indicated above within thirty (30) days of the date of this Demand Letter. Mr. Zimont will then make arrangements to send Cogswell an invoice and directions on making payment for these costs to the DEQ.

Please also be advised that if Cogswell does not perform the response activities required by Part 201 and its rules, the state may take enforcement action to compel compliance with Part 201 and to seek civil fines pursuant to Part 201 and Part 31, Water Resources, of the NREPA. Section 20137(1)(e) and (f) of the NREPA provide for a civil fine of \$1,000 to \$10,000 for each day of violation of Part 201 or the Part 201 Rules. In addition, pursuant to Section 20114a(1), a person, who after June 5, 1995, is responsible for an activity causing a release in excess of the concentrations that satisfy the criteria established pursuant to Section 20120a(1)(a) through (e), as appropriate for the use of the property, is subject to a civil fine as provided in Part 201, unless a fine or penalty has already been imposed for the release under another part of the NREPA and unless that person has made a good faith effort to prevent the release and to comply with the provisions of Part 201.

The files used to prepare this Demand Letter are located at the DEQ's Kalamazoo District Office. If a representative of Cogswell wishes to review these files or has questions regarding this Demand Letter, please write or phone Mr. Zimont at the address above. For more information on environmental remediation in Michigan, including Part 201 and its rules, guidance, and reporting forms, please refer to [www.michigan.gov/deq](http://www.michigan.gov/deq), and click on: Land/Land Cleanup.

Sincerely,



David O'Donnell, District Supervisor  
Kalamazoo District Office  
Remediation and Redevelopment Division  
269-567-3525

cc: Ms. Patricia McKay, DEQ  
Mr. Philip L. Schrantz, DEQ  
Det-Sgt. William Ford, DEQ  
Mr. Ben Zimont, DEQ

U.S. Postal Service  
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(Domestic Mail Only, No Insurance, Government Property)

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| Restricted Delivery Fee<br>(Endorsement Required) | —              |
| <b>Total Postage &amp; Fees</b>                   | <b>\$ 5.32</b> |

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 City, State, ZIP+4

**COGSWELL PROPERTY LLC**  
**ATTN: MR MICHAEL DAVIS**  
**431 HELEN AVENUE**  
**OTSEGO MI 49078-1037**

| SENDER: COMPLETE THIS SECTION  | COMPLETE THIS SECTION ON DELIVERY   |
|--|---|
| <ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul> | <p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>x <i>Brian Klein</i></p> <p>B. Received by (Printed Name) <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>Brian Klein</p> <p>C. Date of Delivery</p> <p>1/20/09</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If YES, enter delivery address below</p> <p>JAN 21 2009</p> |
| <p>1. Article Addressed to:</p> <p><b>COGSWELL PROPERTY LLC</b><br/> <b>ATTN: MR MICHAEL DAVIS</b><br/> <b>431 HELEN AVENUE</b><br/> <b>OTSEGO MI 49078-1037</b></p>   | <p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail</p> <p><input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>   |
| <p>2. Article Number<br/> <small>(Transfer from service label)</small></p> <p>7005 1160 0000 6980 0773</p>   | <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>   |



3. Name, address and telephone number of the property owner or operator submitting the notice:

Name: Rock-Tenn Company  
Address: 504 Thrasher St.  
City/State: Norcross, Georgia 30071  
Telephone number: 770-448-2193

4. Name, address and telephone number of a contact person familiar with the content of the notice:

Name: Michael L. Robinson  
Address: 900 Fifth Third Center, 111 Lyon St. NW  
City/State: Grand Rapids, MI 49503-2487  
Telephone: 616-752-2128

5. If this Notice is provided pursuant to R 299.51017, provide the address and other location information for the adjacent property onto which contamination has migrated. If this Notice is provided pursuant to R 299.5522, provide the address and other location information for each property onto which contamination has migrated.

Address: 1728 106<sup>th</sup> Avenue  
City/State: Otsego, MI 49078  
Property Tax ID number: 03-17-022-002-10  
Other: Otsego Mini-Storage, LLC  
Notified? No  Yes  Date: 9/19/03

Address:   
City/State:   
Property Tax ID number:   
Other:   
Notified? No  Yes  Date:

Address:   
City/State:   
Property Tax ID number:   
Other:   
Notified? No  Yes  Date:

Address:   
City/State:   
Property Tax ID number:   
Other:   
Notified? No  Yes  Date:

Address:   
City/State:   
Property Tax ID number:   
Other:   
Notified? No  Yes  Date:

Address:   
City/State:   
Property Tax ID number:   
Other:   
Notified? No  Yes  Date:

(Attach additional pages as needed)

6. Complete the Table on Page 3 of this Form for each hazardous substance which has migrated, or is likely to have migrated, beyond the property boundary at a concentration that exceeds a Generic Residential Cleanup Criterion developed by the DEQ pursuant to MCL 324.20120a(1). Complete and attach additional copies of Page 3, if necessary, to list all hazardous substances that must be reported. Include a scaled map or drawing that shows the location of sampling points identified on the Table on Page 3.

~~See attached~~

7. Provide a summary of the information which shows that contamination is emanating from, or has emanated from, and is present beyond the boundary of the source property at a concentration which exceeds that allowed by MCL 324.20120a(1)(a). This summary shall identify the environmental media affected, specific hazardous substances, and the concentrations of those hazardous substances in all affected environmental media at the property boundary and in any sample locations beyond the property boundary. The summary shall also describe the basis for the conclusion that the contamination is emanating, has emanated, or is present beyond the boundary of the source property, including whether the conclusion is based on groundwater analytical data or fate and transport modeling, both, or neither.

~~See attached~~

8. If the person making this notice has reason to believe that a migrating hazardous substance has affected, or is likely to affect, a private or public water supply, then that water supply must be identified here:

~~Not applicable~~

- |   | YES                                 | NO                                  |
|---|-------------------------------------|-------------------------------------|
| 9. Is this notice being submitted within the timeframes established under R 299.5522 and/or R 299.51017, as applicable?                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 10. Is this notice in addition to a notice submitted prior to <i>December 21, 2002</i> ? (R 299.51017(4)(c))                            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 11. Is this notice related to an oil and gas well permit (R 299.51017(2))?  | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 12. Is this notice related to an easement (R 299.51017(3))?<br>(NOTE: All easement grantors <i>must</i> receive this notice.)           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 13. Has a surface water been affected (R 299.51017(1) and R 299.5522(2))?<br>(If yes, please identify the affected surface water body.) | <input type="checkbox"/>            | <input type="checkbox"/>            |

~~The Kalamazoo River may be affected.~~

**CERTIFICATION:**

*With my signature below, I certify that I am the owner of the facility or that I am legally authorized to execute this notice on behalf of the owner or operator named on this form, and that to the best of my knowledge and belief the above representations are complete and accurate. I understand that intentionally submitting false information to the DEQ is a felony and may result in fines up to \$25,000 for each violation.*

Signature   
(Owner or person legally authorized to bind the person making this report)

Date 9/19/03

Name (Typed or Printed) Troy M. Cumings

Title (Typed or Printed) Attorney for Rock-Tenn Company



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
REMEDIATION AND REDEVELOPMENT DIVISION

**NOTICE OF MIGRATION OF CONTAMINATION**

(Under the authority of Part 201, Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, (NREPA) and the Rules promulgated thereunder)

See item 6 on Page 2 of this Form for instructions to be used in completing this Table. Attach additional pages if necessary. The information to be included in each column of the Table is:

- Column A Name of hazardous substance.
- Column B Chemical Abstract Service (CAS) Number for the hazardous substance.
- Column C Sample location for Column C (relate to label on map).
- Column D Maximum hazardous substance concentration measured on the property, expressed parts per billion (e.g. ug/L or ug/Kg). Report maximum concentration separately for each environmental medium.
- Column E Environmental medium in which concentration reported in Column C was measured (e.g., soil or groundwater).
- Column F Distance from point of maximum measured concentration (Column D) to property boundary, in direction of contaminant migration, if direction is known or can reasonably be inferred. If direction is unknown, list distance to nearest property boundary.
- Column G Direction of contaminant migration, if known.
- Column H Sample location for Column I (relate to label on map).
- Column I Concentration closest to property boundary, if known. If a concentration lower than the maximum concentration reported in Column C has been measured at a point closer to the property boundary in the direction of contaminant migration, use Column I to list the concentration that was measured closest to the property boundary in the direction of contaminant migration.
- Column J Environmental medium for measurement reported in Column I, if applicable.

| A                   | B          | C                     | D                       | E                            | F                             | G                      | H                       | I                      | J                            |
|---------------------|------------|-----------------------|-------------------------|------------------------------|-------------------------------|------------------------|-------------------------|------------------------|------------------------------|
| Hazardous Substance | CAS Number | Maximum Concentration | Sample Location for "C" | Environmental Medium for "C" | Distance to Property Boundary | Direction of Migration | Sample Location for "I" | Boundary Concentration | Environmental Medium for "I" |
| Boron               | 7440428    | 660                   | MW-3                    | GW                           | 50 ft                         | Southw<br>st           | MW-3                    | 660                    | GW                           |
| Iron                | 7439896    | 5600                  | MW-3                    | GW                           | 50 ft                         | Southw<br>st           | MW-3                    | 5600                   | GW                           |
| Manganese           | 7439965    | 190                   | MW-4                    | GW                           | 30 ft                         | Southw<br>st           | MW-4                    | 190                    | GW                           |
| Thallium            | 7440280    | 9.8B                  | MW-4                    | GW                           | 30 ft                         | Southw<br>st           | MW-4                    | 9.8B                   | GW                           |
|                     |            |                       |                         |                              |                               |                        |                         |                        |                              |
|                     |            |                       |                         |                              |                               |                        |                         |                        |                              |

Total Number Samples Collected: 4 Total Number of Samples Exceeding Criteria: 4

**ADDRESSES FOR SUBMITTALS  
TO DEPARTMENT OF ENVIRONMENTAL QUALITY**

**All Upper Peninsula counties:**

Remediation and Redevelopment Division  
(RRD)  
Upper Peninsula District Office  
K.I. Sawyer International Airport and  
Business Center  
420 Fifth Street  
Gwinn, Michigan 49855-9198  
(906) 346-8300

**Benzie, Grand Traverse, Lake, Leelanau,  
Manistee, Mason, Osceola, and Wexford  
counties:**

RRD  
Cadillac District Office  
120 W. Chapin St.  
Cadillac, Michigan 49601  
(231) 775-3960

**Alcona, Alpena, Antrim, Charlevoix,  
Cheboygan, Crawford, Emmet, Kalkaska,  
Missaukee, Montmorency, Oscoda, Otsego,  
Presque Isle, and Roscommon counties:**

RRD  
Gaylord Field Office  
1732 West M-32  
P.O. Box 667  
Gaylord, Michigan 49735-0667  
(989) 731-4920

**Arenac, Bay, Clare, Gladwin, Huron, Iosco,  
Isabella, Midland, Ogemaw, Saginaw, Sanilac,  
and Tuscola counties:**

RRD  
Saginaw Bay District Office  
503 N. Euclid Ave., Suite 1  
Bay City, Michigan 48706-2965  
(989) 686-8025

**Barry, Ionia, Kent, Mecosta, Montcalm,  
Muskegon, Newaygo, Oceana, and Ottawa  
counties:**

RRD  
Grand Rapids District Office  
245 Colrain, SW  
Wyoming, Michigan 49548-1013  
(616) 246-1720

**Clinton, Eaton, Genesee, Gratiot, Ingham,  
Lapeer, Livingston, and Shiawassee counties:**

RRD  
Lansing District Office  
P.O. Box 30426  
525 W. Allegan Street  
Lansing, Michigan 48909  
(517) 335-6010

**Macomb, Oakland, St. Clair, and Wayne  
counties (except City of Detroit):**

RRD  
Southeast Michigan District Office  
38980 Seven Mile Road  
Livonia, Michigan 48152-1006  
(734) 953-8905

**(City of Detroit, Hamtramck and Highland Park)**

RRD  
Detroit Office  
3058 W. Grand Blvd.  
Cadillac Place, Suite 2-300  
Detroit, Michigan 48207  
(313) 456-4700

**Hillsdale, Jackson, Lenawee, Monroe, and  
Washtenaw counties:**

RRD  
Jackson District Office  
Jackson State Office Building  
301 E. Louis Glick Highway  
Jackson, Michigan 49201-1556  
(517) 780-7690

**Allegan, Berrien, Branch, Calhoun, Cass,  
Kalamazoo, St. Joseph, and Van Buren  
counties:**

RRD  
Kalamazoo District Office  
7953 Adobe Road  
Kalamazoo, Michigan 49009  
(269) 567-3500

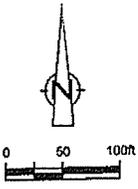
Item 7 to Notice of Migration of Contamination

Rock-Tenn Company

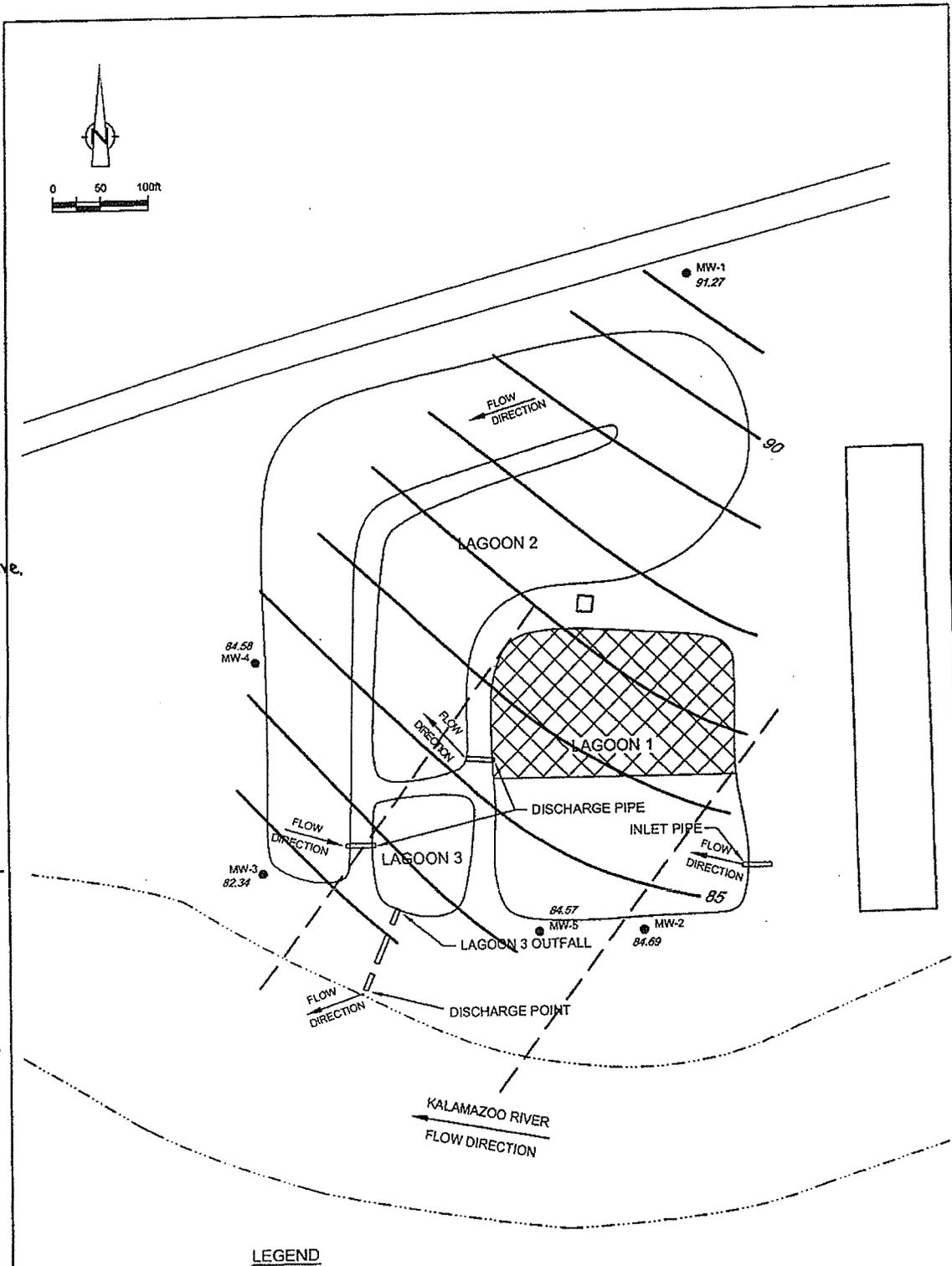
In conjunction with the closure of the wastewater treatment lagoons at the Rock-Tenn Company (RTC) Otsego mill, groundwater monitoring wells have been installed in the western portion of the mill property. Monitoring wells MW-3 and MW-4 are located near the western property boundary and three additional wells, MW-1, MW-2, and MW-5 are located around the wastewater lagoons to establish groundwater flow direction.

The most recent comprehensive groundwater monitoring rounds were conducted for the 5 wells in January and June 2001. Based on the groundwater flow at the mill, groundwater in the area of the lagoon is to the southwest as shown on figure 1, attached. Based on the groundwater flow direction, the only potential adjacent property that could be impacted by any potential contaminants in the groundwater from the RTC Otsego mill is the property immediately west of the mill.

Two groundwater sampling rounds from the 5 monitoring wells were completed in January and June 2001. Based on the list of analytes requested by the Michigan Department of Environmental Quality (MDEQ) only boron, iron, manganese, and thallium exceeded the generic residential/commercial groundwater criteria. Thallium was also detected in the background wells indicating that the naturally occurring concentration is a factor, and thallium was also detected in the laboratory blank, which resulted in qualified data. As a precautionary measure, a sample was collected from the residential from the property immediately west of the mill and was analyzed for boron, iron, and manganese. None of these analytes were detected in the residential well sample.



1728 106<sup>th</sup> Ave.  
 Otsego, MI  
 Tax id #:  
 0317-022-  
 002-10



- LEGEND**
- MONITORING WELL LOCATION
  - 85.00 GROUNDWATER ELEVATION IN FEET (1/10/02)  
(SITE SPECIFIC DATUM)
  - GROUNDWATER CONTOUR
  - DIRECTION OF GROUNDWATER FLOW
  - ▨ SURGE BASIN

figure 1

GROUNDWATER FLOW DIAGRAM  
 OTSEGO MILL LAGOON CLOSURE  
 ROCK-TENN COMPANY  
 Otsego, Michigan



Kate,

Per my discussions with Mr. Bill Creal, MDEQ, the lagoon closure plan has been revised and is being submitted in draft form for your review. The purpose of this revision is to provide appropriate measures to address the potential discharge of resuspended PCBs. These measures are highlighted below.

First, water will be withdrawn from each lagoon using a floating "skimmer" inlet. The discharge of water into a lagoon will be conducted using a header system to limit the discharge velocities and potential agitation.

Next, Rock-Tenn has proposed to increase the efficiency of the bag filters by replacing the 10 microns filters with 5 micron filters. This change has been made in order to provide MDEQ with further assurance of adequate solids control. As discussed in an August 4, 1999 PCB Migration Assessment performed by Conestoga-Rovers & Associates, scientific literature related to PCB migration concludes that PCBs are very insoluble in water and have a very high affinity for adsorption to organic materials. Accordingly, leaching of PCBs from the lagoon sludges, which are over 90% organic material, would not be expected to occur. Therefore, if solids in the wastewater discharge are adequately controlled there should be no measurable concentrations of PCBs at the quantification limit. Properly collected lagoon effluent samples analyzed by both Rock-Tenn and MDEQ in the past support this position.

Finally, Rock-Tenn has proposed a sampling program that will be implemented to monitor lagoon wastewater for potential PCB content during lagoon dewatering (see Section 2.1). This sampling program is being proposed as an alternative to the two-stage activated carbon treatment system previously requested by MDEQ in paragraph 21.b of the draft consent order. It is requested that paragraph 21.b be modified to read, "Rock-Tenn shall take appropriate measures to address the potential discharge of resuspended PCBs, as outlined in the conceptual plan submitted to MDEQ." The remaining portion of this paragraph should be deleted.

Please have the appropriate personnel review the revised plan and provide me with your comments.

Rock-Tenn is eager to finalize plans for both the lagoon closure project and the new wastewater treatment system and begin this work as soon as possible.

Thank you!

Mike

(See attached file: lagoon closure plan rev Jan 6 00.doc)

CC: Anne Pulley, Frank Ballo, Kate Thompson, Larry ...

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## 1.0 BACKGROUND

The existing wastewater treatment system at the Rock-Tenn Company facility in Otsego, Michigan consists of three lagoons linked in series. The location of this facility is shown in Figure 1.1. The ultimate discharge is to the Kalamazoo River under an existing National Pollution Discharge Elimination System (NPDES) permit. Rock-Tenn intends to replace this treatment system with a new chemical/physical system and to close the existing lagoons.

The existing three-stage lagoon wastewater treatment system consists of a primary aeration/settling lagoon (Lagoon 1), a secondary settling lagoon (Lagoon 2), and a polishing lagoon (Lagoon 3). As shown in Figure 1.2, the lagoons are of varying shapes, encompassing a total area of approximately 225,000 square feet or about 5 acres. The dimensions of each lagoon are given in Table 1.1.

The lagoons contain varying depths of wastewater undergoing treatment by aeration and settling. The water flows by gravity from Lagoon 1 through Lagoons 2 and 3 and is ultimately discharged into the Kalamazoo River. These lagoons also contain various depths of sludge resulting from the treatment of the wastewater. This sludge exists in two layers. The upper layer is a "loose" unconsolidated sludge, transitioning into the lower "dense" sludge that has been consolidated over time by the weight of the overlying material. The layering is shown in Figure 1.3.

The closure of these lagoons will be accomplished after the construction and shakedown of the new wastewater treatment plant. At that time, the closure of the lagoons will require four basic steps:

1. The remaining wastewater in the lagoons will be discharged under conditions of NPDES permit;
2. The sludge will be allowed to dewater in-place naturally;
3. A non-engineered earthen cover will be placed upon dewatered sludge, and;
4. A vegetative cover will be constructed over the stabilized lagoons.

The purpose of this report is to present the conceptual work plan for the closure of the existing lagoons.

## 2.0 PROPOSED WORK PLAN

### 2.1 PHASE I - WASTEWATER TREATMENT AND REMOVAL

The current wastewater treatment system would remain in place and function until the new treatment system is in full-scale operation after a shakedown period of approximately 2 to 3 months. When the wastewater stream is diverted permanently, the piping connecting the three lagoons would be plugged. The water in Lagoon 1 would be withdrawn and pumped into Lagoon 2. Water removal in Lagoon 1 would continue until the water surface was just above the sludge level. At this time, the pumping operation would be transferred to Lagoon 2 and resumed as before with all waters being transferred into Lagoon 3. When the water surface in Lagoon 2 was just above the sludge level, pumping of Lagoon 3 would begin.

Tests for PCB content have been conducted for both the wastewater and the lagoon sludge. These tests show that the wastewater does not contain PCBs, but that some strata in the lagoon sludges do contain PCBs. During the water transfer operations, appropriate measures will be taken to prevent the agitation of solids in the lagoons and the possible transfer of solids from one lagoon to another. Water will be withdrawn from each lagoon using a floating "skimmer" inlet. The discharge of water into a lagoon will be conducted using a header system to limit discharge velocities and potential agitation. All pumped water will be passed through a 5-micron bag filter to remove suspended solids that may have been introduced by these activities.

After cessation of discharge of process water into the lagoons, a sample of the discharge after the bag filter will be collected for every 2,500,000 gallons of water transferred from lagoon to lagoon. These samples will be tested for PCB content. Should PCBs above the level of quantification be identified, transfer of water will be immediately ceased and corrective measures will be taken to prevent the transfer of solids containing PCBs above quantification levels. If five consecutive samples are not above the level of quantification for PCBs, then PCB sampling of the bag filter discharge will cease. Due to the estimated wastewater residence time of approximately 22 days in the lagoons, the majority of incidental solids will settle out of the wastewater. There also should be ample time to control any solids containing detected PCBs prior to final discharge.

Waters from Lagoon 3 would be discharged into the Kalamazoo River under the current conditions of the NPDES permit. The filtered solids will be placed back into the lagoon currently being dewatered or into a dewatered, but not yet covered, lagoon.

During the water pumping and transfer operations, the current aeration system would be operated in all lagoons containing wastewater. The continued operation of the aeration system will prevent the generation of odors as well as continue the treatment of the wastewater. The pumping rate

will be controlled to allow for the current wastewater retention times of each lagoon to be maintained.

The purpose of this phase is to allow the removal of free waters from the lagoons in preparation for closure. Discharges through Outfall 001 into the Kalamazoo River will be conducted under the conditions of the existing NPDES permit.

## 2.2 PHASE II - LAGOON SLUDGE DEWATERING

As the wastewater has been removed from each lagoon down to the level of the top of the sludge, dewatering activities will be commenced even as treatment and pumping continues in the other lagoons. For effective dewatering, the lagoons will be covered to minimize the entrance of rainwater and snowmelt into the sludge. The membrane will also provide a level of odor control. *NOISE?*

A perforated poly vinyl chloride (PVC) pipe will be weighted and placed in the sludge during the water removal phase. This piping will be connected to a self-priming pump to allow removal of any free water. This water would be pumped through a 5-micron bag filter to remove any remaining suspended solids and discharged through Outfall 001 in accordance with NPDES permit limitations. All solids will be ultimately placed back into the lagoon system.

The temporary barrier cover will be made of durable material, as consolidation and drainage of the sludge will continue for a significant period of time. A flexible reinforced membrane with ultraviolet (UV) protection (Griffolyn TX-1200 or equivalent) will be used to provide the necessary barrier to rainwater and snow melt. Any water collecting on the surface of the cover could be considered to be clean and could be discharged directly or used for Site irrigation. Some water could be allowed to pond on the surface of the cover to provide wind protection and to also provide weight for further consolidation of the sludge.

*WE KNOW  
OF VOC'S  
PRESENT*

Vents will be provided to allow any gases resulting from degradation of the organic sludge to be released. An activated carbon canister would be provided on each vent pipe. The proposed activities will not increase the release of particulates or volatile organic compounds from the lagoons above the current rates. This system will be exempt from the permit requirements of the Air Pollution Control Rules of Michigan pursuant to Rule 290 and Rule 285.

We estimate that the dewatering of the sludge will require between 9 and 12 months to reach acceptable moisture content. A typical cross-section of a pond with temporary cover and drainage system is shown in Figure 2.1.

### 2.3 PHASE III - COMMON FILL PLACEMENT

After sufficient water has been removed from the sludge to allow low ground pressure equipment to work on the surface, placement of the common fill will begin. The purpose of this step is to provide a stable foundation for the final cover. We anticipate that in some areas of the lagoons, significant pore space water will remain in the sludge. In these areas, the sludge will not provide an adequate support to the final cover without further measures.

In areas where the sludge has sufficient strength to support the cover, common fill will be placed above the membrane and construction of the cover will proceed. Ponded water above the membrane will be considered to be uncontaminated as it will not have come into contact with either wastewater or sludge. This water will be handled as clean water on Site. During placement of the common fill, the membrane will be perforated to allow for drainage of any water that may infiltrate through the final cover. This step is necessary to prevent the formation of a trapped pool of infiltrated water. Gas venting and drainage pipes will be removed prior to placement of the common fill, as they will serve no further purpose.

In those areas where the dewatered sludge has insufficient strength to directly support the weight of the common fill, a geogrid/geotextile will be placed over the membrane. These materials will provide the additional strength and stability necessary to support the weight of the final cover.

Placement of the common fill will begin with the placement of an aggregate layer immediately above the membrane or geotextile. This layer will be approximately 6 inches in thickness and will provide the necessary working surface for the placement of the common fill. The common fill will be comprised of sandy soils from the surrounding area. The common fill will be placed in lifts and compacted. The placement of lifts will continue until final grades have been met. The cover will be sufficiently sloped to maintain surface water drainage.

A 6-inch topsoil layer will be placed over the sandy soil to support vegetative growth. The cover will be graded to maintain surface water drainage. Upon completion of the soil cover, a vegetative layer comprised of sod-forming grasses will be established. A typical cross section of the completed lagoons is shown in Figure 2.2.

### 3.0 SCHEDULE

Upon approval of the Work Plan by Michigan Department of Environmental Quality (MDEQ) and after completion of the shakedown period for the new wastewater treatment system, construction of the project would begin. The proposed work schedule is shown on Figure 3.1. We anticipate that the solidification and closure can be accomplished with a 24-month time frame.

TABLE 1.1

PHYSICAL CHARACTERISTICS OF LAGOONS  
 OTSEGO MILL LAGOON CLOSURE  
 ROCK-TENN COMPANY  
 OTSEGO, MICHIGAN

| Lagoon | Length<br>(ft) | Width<br>(ft) | Total Ave.<br>Depth<br>(ft) | Ave. Water<br>Depth<br>(ft) | Total Water<br>Volume<br>(gal) | Wastewater<br>Detention Time<br>(Days) | Sludge<br>Thickness<br>(ft) |
|--------|----------------|---------------|-----------------------------|-----------------------------|--------------------------------|--|-----------------------------|
| 1      | 250            | 290           | 13.5                        | 11                          | 8,910,000                      | 19.8                                   | 2.5                         |
| 2      | 100            | 1386          | 7.5                         | 1.5                         | 2,565,000                      | 5.7                                    | 6.0                         |
| 3      | 110            | 120           | 8.5                         | 1.5                         | 135,000                        | 0.3                                    | 7.0                         |
| Totals |                |               |                             |                             | 11,610,000                     |  |                             |

## GENERAL RESPONSES

1. Rock-Tenn Company acquired the Otsego mill ("the facility") in 1988. Accordingly, Rock-Tenn has only limited information regarding historical discharges of hazardous substances at the facility, and most of the information possessed by Rock-Tenn pertaining to the Allied Paper Inc./Portage Creek/Kalamazoo River site ("the Site") has been obtained from public sources, including the Department of Natural Resources ("DNR"). In addition, Rock-Tenn has already provided to DNR a copy of a recent environmental assessment performed at the site (the "CRA Report"). Accordingly, pursuant to a discussion with Mr. Scott Cornelius, as reflected in a letter dated April 17, 1995, Rock-Tenn is providing below information pertaining to its operations of the Otsego mill and what it knows of the operations of former owners. In the event DNR requires additional information, Rock-Tenn understands that such information will be separately requested.

2. Rock-Tenn objects to the definition of "materials" on the grounds that it is overly broad, burdensome, and not reasonably likely to lead to the discovery of information bearing on impacts to or at the site. In its responses below, Rock-Tenn has limited the term "materials" to apply to hydraulic fluids, heat transfer fluids, transformer oils, capacitor oils, secondary fiber, hazardous wastes, solid wastes, materials containing PCBs, and waste oils.



# ROCK-TENN COMPANY

Gregory L. King  
Director, Risk Management

via UPS Next Business Day

May 26, 1995

Mr. Scott Cornelius  
Michigan Department of Natural Resources  
Environmental Response Division  
Superfund Section  
301 S. Capitol  
Lansing, MI 48933

RE: Response to Request for Information Pursuant to Section 10d(i) of the Michigan Environmental Response Act (MERA), 1982 PA307, as Amended for Allied Paper, Inc./Portage/Creek Kalamazoo River, (MERA ID# 390051) in Kalamazoo and Allegan Counties, Michigan

Dear Mr. Cornelius:

Rock-Tenn Company received a Request for Information from the Michigan Department of Natural Resources on March 20, 1995. Rock-Tenn Company requested a 30 day extension on its responses on April 17, 1995 at which time it also submitted a two phase PCB evaluation report. An additional extension was requested on May 17, 1995 allowing Rock-Tenn Company to submit its response on May 26, 1995.

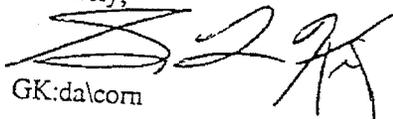
Attached you will find Rock-Tenn Company's responses to the information request as well as all supporting records and documents found to be relevant to the questions.

Rock-Tenn Company reserves the right to supplement its response should additional information become available as research continues.

Should the State wish to contact any current or past employees mentioned in the responses or supporting documentation for the purpose of clarifications, inquiry or further research, Rock-Tenn Company requests that it be directed through myself.

If you have any questions, please contact me at 404/368-7667.

Sincerely,

  
GK:dalcom

Enclosure

cc: Michelle Yiu  
Lever Stewart  
Edward A. Kazmarek - Long, Aldridge & Norman



3. The responses below were prepared by Mr. Gregory L. King,  
Director of Risk Management. Other persons consulted were:

Ms. Michelle Yiu  
Manager of Quality Control  
Rock-Tenn Company - Otsego Mill  
431 Helen Avenue  
Otsego, MI 49078

Edward A. Kazmarek  
Long, Aldridge & Norman  
303 Peachtree Street, Suite 5300  
Atlanta, GA 30308

Where the responses below are based directly on documents, those  
documents are identified and provided in connection with the response.

## RESPONSES TO INQUIRIES

1. List the Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Identification Numbers of the Respondent, if any, and identify the corresponding units, facilities, or vessels assigned these numbers.

Rock-Tenn's EPA RCRA Identification Number for the Otsego mill is: MID 042492561. No other units, facilities, or vessels associated with the Otsego mill have their own RCRA Identification Numbers.

2. Describe the acts or omissions of any persons, other than your employees, agents or those persons with whom you had a contractual relationship, that may have caused the release or threat of release of hazardous substances at the facility.

In addition:

- a. Describe all precautions that you took against foreseeable acts or omissions of any such third parties including, but not limited to, the MacSimBar Company, United Biscuit Company, Waldorf Paper Products, Hoerner Boxes, Inc., Hoerner Waldorf Corporation, and Mead Corporation and the consequences that could foreseeably result from such acts or omissions.
- b. Describe the care you exercised with respect to the hazardous substances found at the facility.

Response. Rock-Tenn incorporates General Statement #1 above, and states that no additional response is required to this inquiry at this time. Rock-Tenn objects to subparts (a) and (b) of this inquiry to the extent they imply that Rock-Tenn had any relationships with the indicated companies such that "precautions" were necessary, appropriate, or even feasible, all of which Rock-Tenn denies.

3. Identify all persons, including Respondent's employees, who have knowledge, information or documents about the generation, use, purchase, treatment, storage, disposal or other handling of materials at or transportation of materials to the property.

Response. Rock-Tenn incorporates its General Response #2. In addition, Rock-Tenn objects to this inquiry on the grounds that the breadth of the inquiry is sufficient to encompass a large and indeterminable number of mill employees. Subject to those objections, Rock-Tenn identifies:

Mr. Gregory L. King  
Director of Risk Management  
Rock-Tenn Company  
Post Office Box 4098  
504 Thrasher Street  
Norcross, Georgia 30071

Ms. Michelle Yiu  
Manager of Quality Control  
Rock-Tenn Company - Otsego Mill  
431 Helen Avenue  
Otsego, MI 49078

4. Describe all arrangements that Respondent may have or may have had with each of the following persons: the MacSimBar Company, United Biscuit Company, Waldorf Paper Products, Hoerner Boxes, Inc., Hoerner Waldorf Corporation, and Mead Corporation.

Response. Rock-Tenn has no arrangements with MacSimBar Company, United Biscuit Company, Waldorf Paper Products, Hoerner Boxes, or Hoerner Waldorf Corporation relevant to the site. When Rock-Tenn acquired the Otsego mill facility in 1988, it did so pursuant to an Asset Purchase Agreement with

Mead Corporation. A copy of that agreement is provided herewith and incorporated by reference. (See RKTN 1000001 et seq.)

5. For each and every current owner, operator, lessor or lessee of any portion of the property:
  - a. Identify such person or company and the nature of their activities at the property.
  - b. Describe the portion of the property, owned, operated or leased by each such person and state the dates during which each portion was owned, operated, or leased.

Response. Rock-Tenn is the only current owner/operator of the Otsego mill.

- c. Provide copies of all documents evidencing or relating to such ownership, operation or lease, including, but not limited to, purchase and sale agreements, deeds, leases, etc.

Response. Copies of the responsive documents are enclosed. See response # 4.

6. Identify all persons, including yourself, who owned, operated, or had control over the underground storage tank systems (USTs) which are located or were formerly located at the property and describe the nature of that ownership, operation or control, including, but not limited to: the person(s) who was responsible for or controlled access to the USTs when deliveries of petroleum products were made as well as at other times, who was responsible for maintaining inventory records for products stored in the USTs, and who was responsible for USTs maintenance. Include a copy of any documents, contracts, agreements, etc. which document these arrangements.

Response. Rock-Tenn incorporates its General Response #1. Subject that response, both Rock-Tenn and Mead are within the scope of the above

activities. There are no longer USTs on the property. (See RKTN 1011000 et seq.)

7. Identify all persons, including yourself, who may have delivered and installed USTs and ancillary equipment or may have given, sold, transferred or delivered any material, including petroleum products, to the property. In addition, describe the nature of the materials that may have been given, sold, transferred or delivered to the property.

Response. Rock-Tenn incorporates its General Responses #1 and #2.

See also, response # 6 above. Subject to those responses, Rock-Tenn identifies the following persons and materials:

Rock-Tenn Company has record of purchasing the following products in bulk and drums for storage above ground:

| <u>Material</u>                | <u>Supplier</u>           |
|--------------------------------|---------------------------|
| Mobil DTE-26 - Hydraulic Oil   | Diamond Oil               |
| Amoco 1000 Fluid Hydraulic Oil | Ridderman Oil             |
| Energac Hydraulic Fluid        | Kendall Industrial Supply |

Rock-Tenn also stores #6 Fuel Oil on site as a secondary boiler fuel source. No fuel oil has been purchased since Rock-Tenn Company's purchase of the site from Mead. No supplier information could be located on the oil the storage tank. Rock-Tenn has small quantities of numerous lubricants and related materials on hand.

8. Describe the past and present physical characteristics of the property and the locations of these characteristics including, but not limited to, the following:

- a. Surface structures (e.g., buildings, tanks, etc.).

Response. The surface structures are depicted on the enclosed drawing.

- b. Wastewater, wastewater treatment sludge, and stormwater conveyances (e.g., piping, floor drains, sumps) and treatment and handling structures (e.g., clarifiers, lagoons, settling pits), including any by-passes to the system and all historical and current outfalls.

Response. Conveyances and structures are depicted on the enclosed drawing.

- c. Power generating equipment, electrical supply equipment, and their associated cooling system equipment (e.g., boilers, transformers, capacitors, compressors, blowers, heat exchangers).

Response. Electrical and other equipment are depicted on the enclosed drawing.

- d. Deinking process equipment.

Response. To the best of Rock-Tenn's knowledge, the Otsego mill has not engaged in operations involving deinking.

- e. Underground storage tank systems and ancillary pipelines and equipment, including, but not limited to:

- the location, number, type, size, age, and the past and present contents of each tank and its associated piping. Include a copy of proof of registration for the USTs.

- information on any tank tightness testing conducted on USTs at the property, including the methods used to test the USTs, the results of all tank tightness testing, whether any USTs were shown to be leaking as a result of these tests, and any actions taken to address leaking USTs that may have been identified, including the repair and the nature of any repairs made to USTs.

- information on any USTs that may have been removed, the condition and final disposition of USTs that were removed, and any notifications regarding UST removal that were provided to any local or state agencies, including the State Police Fire Marshal.

Response. To the best of Rock-Tenn's knowledge, there are no UST's at the Otsego Mill. Information found regarding past USTs and associated pipes and equipment locations are depicted on the enclosed drawing. Documents located reflecting registration, testing, and removal of the USTs are enclosed. (See RKTN 1011000 et seq.)

- f. Other underground structures including, but not limited to, utilities, trenches, sanitary sewer systems, septic tank(s), and subsurface disposal field(s).

Response. Other known underground structures are depicted on the enclosed drawing.

- g. Groundwater production wells, including copies of drilling and boring logs, documenting the use(s) and period(s) of time of such use(s) for each groundwater production well.

Response. All information found regarding groundwater production wells is enclosed. (See RKTN 1010000 et seq.)

- h. Any and all additions, demolitions or changes of any kind to physical structures on, under or about the property, or to the property itself (e.g., excavation work) and state the dates on which such changes occurred.

Response. The enclosed drawing depicts the facility buildings. Building numbers 24 through 32 are no longer present and were abandoned and razed at

a date unknown to Rock-Tenn. Rock-Tenn has constructed no additions since its acquisition of the site:

9. Provide copies of any and all historical and current maps and figures of the property.

Response. The most recent dated drawing Rock-Tenn is in possession of is from the early 1970s. Historical drawings of the facility, to the extent Rock-Tenn is in possession of such, are enclosed.

10. For each and every prior owner, operator, lessor or lessee of any portion of the property known to you:

- a. Identify such person and the nature of their operation at the property.
- b. Describe the portion of the property owned, operated or leased by each such person and state the dates during which each portion was owned, operated or leased.
- c. Provide copies of all documents evidencing or relating to such ownership, operation or lease including, but not limited to, purchase and sale agreements, deeds, leases, etc.
- d. Provide all evidence that hazardous substances were released or threatened to be released at the property during the period they owned, operated, or leased the property.
- e. Provide copies of any environmental site assessments or other kinds of environmental reports regarding the property.

Response. Rock-Tenn has previously supplied to DNR a recent environmental assessment. In addition, Rock-Tenn has provided pursuant to its response to Inquiry #4 the sales agreement in its possession, and has provided

pursuant to its response to Inquiry #9 the historical drawings in its possession.

Pursuant to General Statement #1 above, no additional response is required to this inquiry at this time.

11. Provide all existing technical or analytical information about the facility, including, but not limited to, data and documents containing information related to soil, groundwater, surface water, geology, hydrogeology, or air quality on and about the facility, and;

Response. Rock-Tenn incorporates its General Response #1. Except for stack monitoring results for the facility boilers, which are not relevant to the subject inquiry, Rock-Tenn has no air quality data on or about the facility. By way of further response, enclosed are documents reflecting prior geological work done on the site by Mead Corporation in connection with its landfill construction and operation. In addition, Rock-Tenn states that some data responsive to this inquiry is present in the environmental assessment previously provided to DNR.

- a. Suppliers and sources of secondary fiber, including the types of secondary fiber purchased.

Response. Rock-Tenn objects to this inquiry on the grounds that it is overly broad, burdensome, and not likely to lead to the discovery of information relevant to the presence of hazardous materials at the site. Rock-Tenn is providing inbound truck reports of all incoming secondary fiber for years beginning 1987 to present excluding the year 1991 which cannot be located. All

documents are attached. (See RKTN 1100000 et seq. and RKTN 1200000 et seq.)

- b. Past and present discharges of wastewater, stormwater, and cooling water, including NPDES and non-NPDES permitted discharges to, but not limited to the following: the Kalamazoo River, the Otsego Wastewater Treatment Plant, and groundwater.

Response. All documentation found relating to past and present discharges of wastewater, stormwater, and cooling water is enclosed.

- c. Past and present use and disposal of PCBs and PCB items, including, but not limited to transformer oils, capacitor oils, hydraulic fluids, heat transfer fluids, waste oils for dust control, and carbonless copy paper in the secondary fiber stream.

Response. Rock-Tenn incorporates its General Response #1. Rock-Tenn Company chemically destroyed PCB containing transformer oil containing 53 ppm PCB in 1992. The removal was performed by S.D. Meyers and the disposal documentation is attached. (See RKTN 1017000) Information pertaining to past use of such items at the Otsego mill occurs in the CRA environmental assessment, previously submitted.

- d. Past and present sampling results for wastewater, wastewater treatment sludge, non-contact and contact cooling water, stormwater, sediment, oil, and fluids.

Response. All past and present sampling results are attached.

(See RKTN 1005000 et seq. and RKTN 1006000 et seq.)

- e. Past and present sampling results for PCBs in the secondary fiber stock input and in the final product produced by the facility. This includes, but is not limited to, reports submitted to the United States Food and Drug Administration, Recycled Paperboard

Technical Association, and Boxboard Research & Development Association.

Response. One test was found to have been performed by Mead Corporation in on or about 11/20/81. The results of this analysis are attached. (See RKTN 101401 to 1014003)

- f. Past environmental site assessments or other kinds of environmental reports regarding the property.

Response. Rock-Tenn previously provided DNR a copy of its own environmental assessment. Past environmental site assessments and other environmental reports are enclosed. (See RKTN 1008000 et seq. and RKTN 1016001 et seq.)

- g. Any and all deinking processes which were used at the facility from 1957 to 1971.

Response. To the best of Rock-Tenn's knowledge, the Otsego mill has not engaged in operations involving deinking.

- h. Application of wastewater treatment sludge and spent liquor to on-site and/or off-site roads, driveways, parking lots, and farm land. Include location(s) and date(s) of such application(s).

Response. To the best of Rock-Tenn's knowledge, no such operations have occurred in connection with the Otsego mill.

- i. Names of any and all hydraulic fluids and heat transfer fluids used presently or in the past by the facility.

Response. Rock-Tenn Company currently uses the following hydraulic fluids at the Otsego Mill-Mobil DTE-26, Amoco 1000 Fluid, and Enerpac Fluid. All heat transfer fluids used in transformers are non-pcb containing provided through service conducted by S. D. Meyers Company  
180 South Avenue  
Tallmadge, OH 44278

12. Do you know or have reason to know of any prior, on-going or planned investigations of the wastewater, wastewater treatment sludge, non-contact and contact cooling water, stormwater, sediment, oil, fluids, soil, groundwater, surface water, geology, or hydrogeology or air quality on or about the facility? If so:
- a. Describe the nature and scope of these investigations.
  - b. Identify the persons who are conducting or will conduct these investigations.
  - c. Describe the purpose of the investigations.
  - d. State the dates of such investigations.
  - e. Describe as precisely as possible the locations at the facility where such investigations are taking or will take place.

Response. A copy of an environmental assessment performed by CRA has been previously provided to DNR. Prior investigations were conducted for Mead, and copies of those studies, to the extent they are in Rock-Tenn's possession, are provided. As to other investigations, Rock-Tenn responds as follows: Rock-Tenn Company has agreed to conduct a study of its wastewater treatment system as a condition of its NPDES permit renewal. The start date, scope, or details of the study are undetermined at this time. (See RKTN 1016001 et seq.)

13. Identify all persons, including yourself, who may have given, sold, transferred or delivered any materials or items, including to the MacSimBar Company, United Biscuit Company, Waldorf Paper Products, Hoerner Boxes, Inc., Hoerner Waldorf Corporation, Mead Corporation, or Rock-Tenn Company, In addition:
- State the dates on which each such person may have given, sold, transferred or delivered such material or item.
  - Describe the materials or items that may have been given, sold, transferred or delivered, including type of material, quantity, chemical content, physical state, quantity by volume and weight, and other characteristics, including results of any PCB analyses.
  - Describe the intended purpose of each sale, transfer or delivery of material or item.
  - Describe the source of or process that produced the materials or items that may have been sold, transferred or delivered.
  - Describe all efforts taken by such persons to determine what would actually be done with the materials or items that may have been sold, transferred or delivered after such materials or items had been sold, transferred or delivered.

Response. Rock-Tenn incorporates its General Response #2. Subject to that response, Rock-Tenn states that it has never delivered materials to any of the listed companies, nor has any person ever delivered materials to the Otsego mill during Rock-Tenn's ownership.

14. Did you acquire any portion of the property after the disposal or placement of the hazardous substances on, in, or at the property? Describe all of the facts on which you base the answer to this question.

Response. Rock-Tenn acquired the Otsego mill in 1988. To the best of Rock-Tenn's knowledge, wastewater treatment sludges (mostly fiber)

containing low levels of PCBs were disposed of in a landfill on the property by one or more former owners of the facility prior to 1988.

15. At the time you acquired each parcel of the property, did you know or have reason to know that any hazardous substance was disposed of on, in, or at the property? Describe all investigations of the property you undertook prior to acquiring the property and all of the facts on which you base the answer to this question.

Response. Rock-Tenn was aware when it acquired the facility in 1988 that the paper industry, and the Otsego facility in particular, may have used recycled PCB-bearing papers and that such papers produced fiber and other waste materials that could contain low-levels of PCB. Rock-Tenn was also aware that such use of PCBs had been discontinued long before 1988 and were not ordinarily present in waste paper feedstock thereafter. As a result, it was not expected that ongoing operation of the Otsego facility would cause a release of PCBs or other hazardous substances. Rock-Tenn undertook due diligence in connection with its acquisition of the facility in 1988, including a review of the records of the Mead Corporation. No indication was obtained at that time, nor is there any indication at the present time, that the property or operations of the Otsego mill, after Rock-Tenn's acquisition, were or could be a source of the release of PCBs or other hazardous substances.

16. Did you acquire the property by inheritance or bequest? Describe all facts on which you base the answer to this question.

Response. The property was not acquired by inheritance or bequest.

17. Describe all leaks, spills or releases or threats of release of any kind into the environment of any hazardous substances that have occurred or may occur at or from the property including, but not limited to:
- a. When such releases occurred or may occur.
  - b. How the release occurred or may occur.
  - c. What hazardous substances were released or may be released.
  - d. What amount of each such hazardous substance was so released.
  - e. Where such releases occurred or may occur.
  - f. Any and all activities undertaken in response to each such release or threatened release.
  - g. Any and all investigations of the circumstances, nature, extent or location of each such release or threatened release, including the results of any wastewater, wastewater treatment sludge, non-contact and contact cooling water, spent liquor, stormwater, sediment, oil, fluids, vacuum pump seal water, soil, groundwater, surface water, or air testing that was undertaken.
  - h. All persons with information relating to subparts a. through g. of this inquiry.

Response. Rock-Tenn objects to this inquiry on the grounds that the request to describe all "threatened releases" is vague, ambiguous, and not susceptible to a meaningful answer. Subject to that objection, other than potential releases identified in the CRA report, Rock-Tenn Company only identified one other release of a hazardous substance, #6 Fuel Oil, which occurred on June 6, 1986. No material left the property. A Mead memo documenting the incident is enclosed. Rock-Tenn also incorporates its

responses pertaining to wastewater discharges. See response numbers 11(b) and 12.

18. If any release or threatened release identified in response to inquiry number seventeen (#17) occurred into any subsurface disposal system or floor drain inside or under any buildings located on the property, further identify:
- a. Where precisely the disposal system or floor drains and associated pipelines are presently and were formerly located.
  - b. When the disposal system or floor drains and associated pipelines were installed.
  - c. How and for what purpose the disposal system or floor drains and associated pipelines were and are used.
  - d. How and when such disposal system, floor drains, and associated pipelines were replaced, repaired or otherwise changed.

Response. No release of material identified in the response to question #17 occurred into any subsurface disposal system or floordrain.

19. Identify all persons, including yourself, who may have manufactured, given, sold, transferred, delivered or otherwise handled materials. In addition:

Response. Rock-Tenn incorporates its General Responses #1 and #2, above. Subject to those general responses, Rock-Tenn states that it has handled materials at the Otsego facility: The particular response pertaining to its own handling of materials is below.

- a. Describe in complete detail all arrangements pursuant to which such persons may have handled such items or materials.
- b. State the dates on which such persons may have handled each such items or materials.

- c. State the amounts of such items or materials that may have been handled on each such date.
- d. Identify the persons to whom such items or materials may have been given, sold, transferred or delivered.
- e. Describe the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid), and quantity (volume and weight) of all such items or materials and describe all tests, analyses, and results of such tests and analyses concerning such items or materials.
- f. State whether any of the items or materials identified in subpart e. of this inquiry, exhibit any of the characteristics of a hazardous waste as defined in Act 64, Rule 299.9212.
- g. State whether any of the items or materials identified in subpart e. of this inquiry, are listed as defined in Rules 299.9213 and 299.9214 of Act 64.
- h. Describe the nature of the operations that were the source of the release of such items or materials.
- i. Provide copies of all documents (including, but not limited to, invoices, receipts, manifests, shipping papers, customer lists, and contracts) which may reflect, show or evidence the giving, sale, transfer or delivery, or other arrangements under which the giving, sale, transfer or delivery of any item or materials to the property took place.
- j. Describe the type, condition, number, and all markings on the containers in which the items or materials were contained when they were handled.

Response. Rock-Tenn incorporates its responses to inquiries 11(a), 11(c), and 11(i). As to hazardous waste, information relevant to this inquiry for the period 1988 to the present can be located in the attached manifests for disposal of regulated wastes. (See RKTN 1009001 et seq.) (See

also response to inquiry #1) All solvent materials were generated in parts washers and through maintenance activities. Spent solvents are manifested as hazardous wastes and their handling and disposal is reflected in the previously identified documents. Boiler ash from the facility's gas fire boiler was generated through maintenance conducted on the boiler in July, 1991. This ash was found to be non-hazardous and eligible for disposal in a Type 2 landfill. Except as described on the manifests, Rock-Tenn has no information as to how particular drums or containers were marked. As a general matter, all containers would have been labeled per the regulations at the time pertaining to disposal of regulated materials.

20. Identify all persons, including yourself, who may have transported materials to the property. Such persons will hereinafter be referred to as "Transporters."

Response. Rock-Tenn incorporates its General Responses #1 and #2.

Subject to those general responses, Rock-Tenn states that it has not transported materials to the Otsego facility.

21. For each such Transporter, state whether it accepted materials including municipal solid waste from a municipality or arranged with a municipality, by contract or otherwise, to accept materials from any source. If so, describe the nature, quantity, and source of all materials accepted and transported to the property.

Response. [Not applicable. See Response to Inquiry #20, above.]

22. For each such Transporter, further identify:

- a. In general terms, the nature and quantity of all nonhazardous materials transported to the property.
- b. The nature of the hazardous materials transported to the property, including the chemical content, characteristics, and physical state (e.g., solid, liquid).
- c. Whether any of the hazardous materials identified in subpart b. of this question, exhibit any of the characteristics of a hazardous waste as defined in Rule 299.9212 of Act 64.
- d. Whether any of the hazardous materials identified in subpart b. of this inquiry are listed wastes as defined in Rules 299.9213 and 299.9214 of Act 64.
- e. The persons from whom the Transporter accepted hazardous materials.
- f. Every date on which the Transporter transported the hazardous materials to the property.
- g. The owners of the hazardous materials which were accepted for transportation by the Transporter.
- h. The quantity weight and volume of hazardous materials taken to the property by the Transporter.
- i. All tests, analyses, analytical results, and manifests concerning each hazardous material accepted for transportation to the property.
- j. The precise locations on the property to which each hazardous material was transported.
- k. Who selected the property as the location to which each the Transporter would take each hazardous substance.
- l. Who selected the location on the property to which the Transporter would take each hazardous material.
- m. The amount paid to each Transporter for accepting the hazardous materials for transportation, the method of payment, and the identity of the person who paid each Transporter.

- n. Where the persons identified in subpart g. of this inquiry intended to have such hazardous substances transported and all documents or other information (oral and written) evidencing their intent.
- o. All locations through which such hazardous substances were trans-shipped, stored or held prior to final treatment or disposal.
- p. What activities transpired with regard to the hazardous materials after they were transported to the property (e.g., treatment, storage or disposal).
- q. The final disposition of each of the hazardous materials brought to the property.
- r. The measures taken by the person who gave the hazardous materials to the Transporters to determine what the Transporters would actually do with the hazardous materials they accepted.
- s. The type, number, and condition of containers in which the hazardous materials were contained when they were accepted by the Transporters and when they were left at the property, and any other labels, numbers or other markings on the containers.

Response. [Not applicable. See Response to Inquiry #20, above.]

23. Identify all persons, including yourself, who may have:
- a. Disposed of or treated materials at the property.
  - b. Arranged for the disposal or treatment of materials at the property.
  - c. Arranged for the transportation of materials to the property (either directly or through trans-shipment points) for disposal or treatment. Such person will hereinafter be referred to as "generators."
  - d. Disposed of materials used or produced at the property off-site.

Response. Rock-Tenn incorporates its General Responses #1 and #2 above. Subject to those general responses, Rock-Tenn states that it has not

disposed of materials at the Otsego facility. As shown in the CRA Report previously furnished to DNR, an assessment conducted at the facility shows low levels of PCB-bearing fiber disposed of in an on-site landfill by one or more former owners of the facility. Rock-Tenn incorporates its response to inquiry # 14. As to off-site disposal of "materials", Rock-Tenn incorporates its response to inquiries 17 and 19. By way of further response, Rock-Tenn has used the following solid waste haulers: Michigan Disposal and Browning Ferris Industries.

24. For each and every instance in which a generator performed any of the actions specified in subparts a.-d. of the previous inquiry:
- a. Identify the generator.
  - b. Identify the persons with whom the generator made such arrangements.
  - c. Identify all persons who may have directly or indirectly transported or otherwise brought any materials, including municipal solid waste, to the facility.
  - d. State every date on which each generator made such arrangements.
  - e. Describe the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid), and quantity (volume and weight) of all hazardous materials involved in each such arrangement.
  - f. State whether any of the hazardous materials identified in subpart e. of this inquiry, exhibit any of the characteristics of a hazardous waste as defined in Rule 299.9212 of Act 64.
  - g. State whether any of the hazardous materials identified in subpart e. of this inquiry are listed wastes as defined in Rules 299.9213 and 299.9214 of Act 64.

- h. State whether any of the items or materials identified in subpart e. of this inquiry are subject to regulation under the federal Toxic Substances Control Act (TSCA), 42 USC 4365 et seq.
- i. With regard to hazardous materials identified in both subparts e. and h. above, provide copies of all documents and reports showing compliance with and/or violations of TSCA and of TSCA regulations, 40 CFR 761, including, but not limited to "Reports on Inspection to Determine Compliance with the Federal PCB Disposal and Marking Regulations."
- j. State whether any of the items or materials identified in subpart e. of this inquiry are subject to Critical Materials Register reporting requirement provisions under Act 293, P.A. of 1972, (an act amending Act 245, P.A. of 1929, MCL 323.1 et seq.).
- k. With regard to hazardous materials identified in both subparts e. and j. above, provide copies of all reports submitted to MDNR to comply with Act 293, P.A. of 1972 and Part 9 Rules of Act 245, P.A. of 1929, as amended, including but not limited to, "Critical Materials and Wastewater Reports" submitted to the MDNR.
- l. State whether any of the items or materials identified in subpart e. of this inquiry were or should have been the subject of any call to and/or response and report by the MDNR's Pollution Emergency Alerting System (PEAS) as required pursuant to the reportable quantities notification requirements of Act 64, Act 307 or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601 et seq. and regulations promulgated thereunder.
- m. With regard to hazardous materials identified in both subparts e. and l. above, provide copies of all memos, reports, or other documents pertaining to any and all PEAS call and response.
- n. In general terms, describe the nature and quantity of the nonhazardous materials involved in each such arrangement.
- o. Identify the owner of the hazardous materials involved in each such arrangement.

- p. Describe all tests, analyses, analytical results or manifests concerning each hazardous material involved in such transactions.
- q. Describe as precisely as possible any and all of the locations at which each hazardous material involved in such transaction actually was disposed of or treated.
- r. Identify the persons who selected the locations of the property at which the hazardous materials were to be disposed of or treated.
- s. Identify who selected the property as the location at which hazardous materials were to be disposed of or treated.
- t. State the amount paid in connection with each such arrangement, the method of payment, and the identity of the persons involved in each arrangement.
- u. Describe where the persons identified in subparts l. and m. of this inquiry intended to have the hazardous materials involved in each arrangement treated or disposed of and all documents or other information (written and oral) evidencing their intent.
- v. Describe all intermediate locations to which the hazardous materials involved in each arrangement were trans-shipped or at which they were stored or held any time prior to final treatment or disposal.
- w. Describe what was done to the hazardous materials once they were brought to the property.
- x. Describe the final disposition of each of the hazardous materials involved in each arrangement.
- y. Describe the measures taken by the generator to determine how and where treatment or disposal of the hazardous materials involved in each arrangement would actually take place.
- z. Describe the type, condition, and number of containers in which the hazardous materials were contained when they were disposed of, treated or transported for disposal or treatment, and describe any labels, numbers or other markings on the containers.

Response. Rock-Tenn incorporates its General Responses #1 and #2, above. Rock-Tenn also incorporates its response to inquiry #23. As to on-site activities, Rock-Tenn's knowledge as to the specific areas of this Inquiry are as set out in the CRA Report.

25. If you have reason to believe that other person may be able to provide a more detailed or complete response to any inquiry contained herein or who may be able to provide additional responsive documents, identify such persons and the additional information or documents they may have.

Response. Rock-Tenn Company believes that Mead Corporation may have additional information relevant to the site. Their world headquarters address is: Courthouse Plaza N.E., Dayton, OH 45463.

26. For each and every inquiry contained herein, if information or documents responsive to this Information Request are not in your possession, custody or control, then identify the persons from whom such information or documents may be obtained.

Response. Rock-Tenn Company found significant quantities of information on the Otsego Mill at the Plainwell office of the MDNR. Several volumes of information concerning studies conducted on the Kalamazoo River were present in DNR files as well as past permits and records.

GK:daKSS2