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# PHASE I ENVIRONMENTAL SITE ASSESSMENT
# 3005 PACKARD ROAD
# ANN ARBOR, MICHIGAN 48108

*prepared for*

**DOWNRIVER COMMUNITY CONFERENCE**
**BROWNFIELD CONSORTIUM**
**15100 NORTHLINE ROAD**
**SOUTHGATE, MICHIGAN 48195**

**AND**

**WASHTENAW COUNTY TREASURER**
**200 NORTH MAIN STREET, SUITE 200**
**ANN ARBOR, MICHIGAN 48107**

**AKT PEERLESS PROJECT NO. 6588F-1-17**
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# PHASE I ENVIRONMENTAL SITE ASSESSMENT

## 3005 PACKARD ROAD
## ANN ARBOR, MICHIGAN 48108

## AKT PEERLESS PROJECT NO. 6588F-1-17

## 1.0 INTRODUCTION

The Downriver Community Conference Brownfield Consortium (DCCBC) (the Client) retained AKT Peerless Environmental & Energy Services (AKT Peerless) to conduct a Phase I Environmental Site Assessment (ESA) of 3005 Packard Road, Ann Arbor, Washtenaw County, Michigan (subject property). This Phase I ESA was conducted in accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries [(AAI), 40 CFR Part 312] and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process / Designation E 1527-05* (ASTM Standard Practice E 1527-05).

### 1.1 PURPOSE

The purpose of this Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify *recognized environmental conditions* (RECs)[1] and *historical recognized environmental conditions* (HRECs)[2] in connection with the subject property. Moreover, certain users of this Phase I ESA may be able to satisfy one of the environmental due diligence requirements to qualify for the bona fide prospective purchaser, contiguous landowner, or innocent landowner liability protections available under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the Small Business Liability and Brownfield Revitalization Act (Brownfield Amendments) of 2002. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs and HRECs in connection with the subject property.

### 1.2 SCOPE OF SERVICES

AKT Peerless' scope-of-services is based on its proposal PF-10897, dated May 20, 2010, and the

[1] ASTM's Standard Practice E 1527-05 defines the term recognized environmental condition (REC) as the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate (1) an existing release, (2) a past release, or (3) a material threat of a release of a hazardous substance or petroleum product into structures on the subject property or into the ground, groundwater, or surface water of the subject property.

[2] ASTM defines the term historical recognized environmental condition (HREC) as an environmental condition which in the past would have been considered an REC, but which may or may not be considered an REC currently. Neither HRECs nor RECs are intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

terms and conditions of that agreement. This Phase I ESA included the following:

- an inquiry of environmental conditions by an environmental professional.
- a review of specialized knowledge reported by the Client.
- a review of public and historical records, including those maintained by federal, state, tribal, and local government agencies.
- interviews with regulatory officials and personnel associated or knowledgeable with the subject property, including as appropriate past and present owners, or neighbors if the property is abandoned.
- a reconnaissance of the subject property and adjoining properties.

## 1.3 PROJECT RESOURCES

AKT Peerless referred to the following resources between May 20, 2010 and July 9, 2010 to complete its ESA:

- United States Environmental Protection Agency (USEPA), Region 5
- United States Geological Survey (USGS)
- United States Department of Agriculture (USDA) Soil Conservation Service
- Michigan Department of Natural Resources and Environment (MDNRE)
- Washtenaw County Environmental Health Department
- Ann Arbor Government Sources (e.g., assessing, building, fire, engineering departments, etc.)
- Environmental Data Resources, Inc. (EDR)
- Bresser's
- Interviews and Questionnaire Responses

## 1.4 SIGNIFICANT ASSUMPTIONS

During this Phase I ESA, AKT Peerless made the following significant assumptions:

- AKT Peerless assumed that the information provided by EDR in the regulatory database report is an accurate and complete representative summary of the information contained in the referenced regulatory agency records, except when such information is obviously contradicted by other data.
- AKT Peerless assumed that the information used to prepare this assessment that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives, or other secondary sources was an accurate and complete representative summary of the information possessed by those individuals, representatives, or sources.

## 1.5 LIMITATIONS AND EXCEPTIONS

A list of general limitations and exceptions typically encountered when completing Phase I ESAs

is provided in Appendix A. Along with the inherent limitations set forth in various sections of ASTM Standard Practice E 1527-05 and the USEPA All Appropriate Inquiry Standard, the accuracy and completeness of this report may also be limited by the following project specific facts or conditions:

- AKT Peerless was unable to identify the first developed use of the subject property and was therefore unable to achieve the historical research objectives identified in the ASTM Standard even after reviewing the standard historical sources identified in the ASTM Standard that were reasonably ascertainable and likely to be useful. However, this data failure is not considered likely to have a material impact upon the findings and conclusions of this report. Therefore, this data failure is not considered to be a significant data gap.
- Due to data failure, AKT Peerless was unable to obtain specific information about the former commercial building(s) located on the subject property from at least 1937 until between 1963 and 1966 (i.e., construction/demolition dates, specific operations, utilities, etc.).

Subject to the general limitations and exceptions listed in Appendix A and the referenced terms and conditions, AKT Peerless accepts responsibility for the competent performance of its duties in executing this assignment and preparing this report in accordance with the normal standards of the profession, but disclaims any responsibility for consequential damages.

Should additional information become available to the Client that differs significantly from our understanding of conditions presented in this report, AKT Peerless requests that such information be forwarded immediately to our attention so that we may reassess the conclusions provided herein and amend this project's scope of services as necessary and appropriate.

### 1.6 SPECIAL TERMS AND CONDITIONS

To the best of AKT Peerless' knowledge, no special terms or conditions apply to the preparation of this Phase I ESA.

### 1.7 USER RELIANCE

AKT Peerless performed this Phase I ESA for the benefit of the Client and Washtenaw County Treasurer (a User and property owner). AKT Peerless acknowledges that these parties may rely on the contents and conclusions presented in this report. Unless stated otherwise in writing, AKT Peerless makes no other warranty, representation, or extension of reliance upon the findings of this report to any other entity or third party.

## 2.0 USER AND/OR CLIENT PROVIDED INFORMATION

AKT Peerless submitted a questionnaire to the Washtenaw County Treasurer (User and property owner) requesting information about the subject property and this Phase I ESA. Mr. Ben Kraft completed the questionnaire on behalf of the Washtenaw County Treasurer. The following subsections summarize the information Mr. Kraft provided to AKT Peerless.

## 2.1 TITLE RECORDS

The Washtenaw County Treasurer did not provide recorded land title records to AKT Peerless.

## 2.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

The Washtenaw County Treasurer did not report any: (1) environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state, or local law; or (2) activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls, that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state, or local law. However, as discussed in Section 4.3.2, a Restrictive Covenant was filed for the subject property on March 16, 1998.

## 2.3 KNOWLEDGE OF THE USER

The Washtenaw County Treasurer did not report specialized knowledge or experience, actual knowledge, or commonly known or reasonable ascertainable information that is material to identifying recognized environmental conditions in connection with the subject property, except as conveyed during interviews which indicated the subject property has been operated as a gasoline fueling station. Additional information pertaining to this former operation is provided in Sections 4.3.1, 4.3.2, and 4.5.

## 2.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The Client did not report knowledge of, or reason to anticipate, a reduction in the value of the subject property for environmental issues.

## 2.5 REASON FOR PERFORMING THIS PHASE I ESA

According to the Client, this Phase I ESA was conducted to market the subject property to potential purchasers.

# 3.0 SUBJECT PROPERTY DESCRIPTION

## 3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located in the southwest quarter of Section 2 in Ann Arbor (T.3S., R.6E.), Washtenaw County, Michigan. The subject property is situated at the northeast corner of Packard and Platt Roads. It consists of an irregularly-shaped parcel that contains approximately 0.50 acres. The Washtenaw County Treasurer is the current owner of the subject property. The subject property's parcel identification number is 09-12-02-325-011.

Refer to Figure 1, Subject Property Location Map; Figure 2, Topographic Location Map; Figure 3, Parcel Map; and Figure 4, Subject Property Map. The legal description of the subject property is presented in Appendix B. Photographs taken during AKT Peerless' subject property reconnaissance are provided in Appendix C.

## 3.2 SUBJECT PROPERTY AND VICINITY CHARACTERISTICS

The subject property is currently developed as a commercial property and is located in an area of Ann Arbor that is characterized by commercial and residential properties, surface roadways, etc.

## 3.3 DESCRIPTION OF STRUCTURES AND OTHER IMPROVEMENTS

General information regarding the on-site building (the subject building) is presented in the following table:

| General Construction | Interior Finish: | Square Ft. | Construction and Other Improvement Dates |
|---|---|---|---|
| 1-story; composite roof; wood roof joists and deck; concrete block bearing walls, with wood and steel supports; slab-on-grade concrete foundation; concrete exterior with metal panels; no basement | concrete, resilient floor tiles (RFTs), ceramic floor tiles, drywall, wallboard, linoleum paint, vinyl baseboards, drop-in acoustic ceiling tiles (ACTs), wood, metal, glass, etc. | ~ 1,860 SF | constructed in 1966/1967; remodeled/renovations in 1987/1988 and 1995 |

The interior of the subject building consists of a general retail sales area, cooler/freezer room, storage room, and restroom. Exterior portions of the subject property contain three out-of-service dispenser islands covered with an aluminum canopies, an out-of-service underground storage tank (UST), asphalt and concrete-paved driveways and parking areas, concrete walkways and landscaped areas (grass).

## 3.4 CURRENT USE OF THE SUBJECT PROPERTY

The subject property currently is not used for any significant or obvious purpose. The subject property is zoned Fringe Commercial District (C-3). Past uses of the subject property are described in Section 4.5.

## 3.5 UTILITIES AND MUNICIPAL SERVICES

AKT Peerless identified the type and supplier of utilities provided to the subject property. These services are described in the following table:

| Utility / Service | Type | Utility Company or Municipality | Comments/Historical Services |
|---|---|---|---|
| heat | natural gas | MichCon (DTE Energy) | natural gas has been provided since the current development in 1966/1967; historical services not identified for former commercial structure(s) |
| municipal waste | none generated | not applicable | solid waste is not currently generated at the subject property |

| Utility / Service | Type | Utility Company or Municipality | Comments/Historical Services |
|---|---|---|---|
| potable water | municipal | City of Ann Arbor | municipal drinking water has been provided since at least 1957; historical services not identified for former commercial structure(s) |
| electricity | electric lines | DTE Energy | electricity has been provided since at least 1957; historical services not identified for former commercial structure(s) |
| sewage disposal | municipal | City of Ann Arbor | municipal sewage utilities have been provided since the current development in 1966/1967; historical services not identified for former commercial structure(s) |
| storm water | county | Washtenaw County | enclosed county storm drain system is in use; unknown connection date |

Additional information regarding the referenced heat, water, and sewage utilities is presented in Section 4.4.

## 3.6 CURRENT USES OF THE ADJOINING PROPERTIES

The following table describes the current uses of the adjoining properties, identified occupants, and noteworthy observations of environmental concern, if any, that were noted during AKT Peerless' recent reconnaissance of the adjoining properties.

| Direction | Address | Current Use / Occupant | Potential Concerns |
|---|---|---|---|
| east | 3031 Packard Road | commercial / Wash & Dry | drycleaners |
| south/southeast | 3000-3022 Packard Road | commercial strip mall / Little Caesars, Bombay Groceries, Binh's Place, Makkara Sushi, Groom & Go, K&K Cleaners | drycleaners |
| southwest | 3050 Platt Road | commercial / Rite Aid | none observed |
| west (from north to south) | 2976 Cascade Road | residential / Carleton Court Apartments | none observed |
| | 2995 Packard Road | commercial / BP | gasoline fueling station |
| north (from west to east) | 2881 Platt Road | medical / Azilia Westfall D.D.S (dental office) | none observed |
| | 2898 Elmwood | residential dwelling | none observed |

Based on AKT Peerless' visual observations, the current uses of the adjoining properties do not appear to pose a direct environmental threat to the subject property, except for the eastern and southern adjoining drycleaners and western adjoining gasoline fueling station. Additional information about the potential environmental concerns posed by those uses is presented in Sections 4.3.1, 4.3.2 and 4.3.3.

## 4.0 RECORDS REVIEW

The objective of the records review is to evaluate reasonably ascertainable databases, historical records, and physical setting records to help identify recognized environmental conditions at the subject property and, to the extent identifiable, at surrounding properties.

## 4.1 PHYSICAL SETTING SOURCES

AKT Peerless reviewed geological survey maps for geologic, hydrologic, and topographic conditions that may affect potential contaminant migration to the subject property.

### 4.1.1 Topography and Area Hydrogeology

According to the USGS' *Topographic Map of the Ypsilanti West Quadrangle*, which was published in 1967 and was photorevised in 1983, the subject property is situated between 820 and 800 feet above the National Geodetic Vertical Datum (NGVD). The subject property's topography appears relatively flat with a slight decline to the west/northwest.
According to previous environmental investigations of the subject property (Section 4.3.2), groundwater has been encountered at depths ranging from 6-13 feet below ground surface (bgs). Groundwater was encountered throughout the subject property.

Typically, the water table aquifer flows toward a major drainage feature or in the same direction as the drainage basin. The Swift Drain, which flows to the northeast toward the Huron River, is located approximately 1,500 feet southeast of the subject property; therefore, groundwater flow is anticipated to be in a northeasterly direction. According to previous environmental investigation, the lateral groundwater flow at the subject property is reportedly varied due to the presence of fill and USTs/piping.

AKT Peerless' research did not identify a known groundwater recharge area on or near the subject property, or groundwater supply wells on the subject property. Groundwater from the area of the subject property does not serve as the primary drinking water source for properties in Ann Arbor, which obtains its municipal water from the Ann Arbor Water Treatment Plant. Public sources of information do not identify main aquifers below the subject property. AKT Peerless observed 12 groundwater monitoring wells on the subject property. Refer to Section 4.3.2 for further information pertaining to these wells.

### 4.1.2 Area Geology and Soils

According to the MDNR Geological Survey Division's *Bedrock Geology of Southern Michigan* (1987), bedrock beneath the subject property is classified as Coldwater Shale of an unassigned group, which is included in the Kinderhookian Series within the Mississippian System of the Paleozoic Era. The depth to bedrock beneath the subject property was not readily available prior to the completion of this Phase I ESA.

According to the Michigan Geological Survey Division's publication, *Quaternary Geology of Southern Michigan*, soils in the area are end moraines of fine-textured till. These soils are described as gray, grayish brown or reddish brown, nonsorted glacial debris; matrix is

dominantly clay, clay loam, or silty clay loam texture, variable amounts of cobbles and boulders. Occurring in narrow linear belts of hummocky relief marking former stillstands of ice-sheet margin. Includes small area of ground moraine as well as outwash. Soil thickness tends to be somewhat greater than adjacent ground moraine areas. Typically, end moraines of fine-textured till are associated with low to moderate hydraulic permeability and may allow the movement of contaminants through groundwater.

According to the USDA's *Soil Survey of Washtenaw County, Michigan* (1977), soil at the subject property is classified as belonging to the Morley-Blount association. These soils are described as "*nearly level to steep, well drained to somewhat poorly drained soils that have a moderately fine textured and fine textured subsoil and moderately fine textured underlying material; on moraines and till plains.*" As indicated on Photo Sheet 33 of the soil survey, subject property soils are described as belonging to Nappanee silty clay loam, 2 to 6 percent slopes (NaB).

AKT Peerless did not obtain other information about the subject property's soil during this Phase I ESA, except as described in previous environmental investigations of the subject property (Section 4.3.2) which indicated soil encountered at the subject property consisted of interbedded clays and sands. A continuous confining clay layer was not encountered.

## 4.2 STANDARD ENVIRONMENTAL RECORD SOURCES

AKT Peerless retained EDR to provide current environmental database information compiled by a variety of federal and state regulatory agencies. The purpose of obtaining this data was to evaluate potential environmental risks associated with the subject property, adjoining sites, and other sites that are (1) identified on target lists, and (2) within varying distances of up to one mile from the subject property. AKT Peerless reviewed the following federal and state databases for such listings within the indicated search radii.

| Type | Regulatory Agency Database | Approximate Minimum Search Distance |
|---|---|---|
| Federal | National Priority List (NPL) | 1 mile |
| Federal | De-listed National Priority List (DNPL) | ½ mile |
| Federal | Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) | ½ mile |
| Federal | CERCLIS No Further Remediation Action Planned (NFRAP) Site List | ½ mile |
| Federal | Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) Facilities List | 1 mile |
| Federal | RCRA non-CORRACTS Treatment, Storage or Disposal (TSD) Facilities List | ½ mile |
| Federal | RCRA Generators List | subject property and adjoining properties |
| Federal | Institutional Control / Engineering Control Registries* | subject property |
| Federal | Environmental Response and Notification System (ERNS) | subject property |
| State & | Hazardous Waste Sites (HWS) (equivalents to NPL and CERCLIS) | 1 mile |

| Type | Regulatory Agency Database | Approximate Minimum Search Distance |
|---|---|---|
| Tribal | | |
| State & Tribal | Solid Waste Facilities/Landfill Sites (SWLF) | ½ mile |
| State & Tribal | Historical Landfill Site (HIST LF) | ½ mile |
| State & Tribal | Leaking Underground Storage Tank (LUST) List | ½ mile |
| State & Tribal | Registered Underground Storage Tank (UST) List | subject property and adjoining properties |
| State & Tribal | Institutional Control / Engineering Control Registries* | subject property |
| State & Tribal | Brownfield Sites | ½ mile |
| State | Baseline Environmental Assessment (BEA) Sites | ½ mile |
| Either | Unmappable Database Listings (a.k.a. Orphan Sites) | database-dependent |

* Neither the US EPA nor Michigan Tribal Governments nor the State of Michigan maintains registries of sites with Institutional Controls / Engineering Controls in the subject property area.

### 4.2.1 Subject Property and Occupant Listings

The EDR Report (Appendix D) does not identify the subject property or its known occupants on the referenced databases, except for the following:

- Sunoco Inc, at 3005 Packard (former occupant), was identified on the federal RCRA Non-Generator list (does not presently generate hazardous waste). According to the EDR Report, this former occupant did not report TSD Activities and has no reported RCRA violations. This former occupant is also identified in the federal FINDS database (RCRA).
- Packard Mini Mart Inc, at 3005 Packard (former occupant), is identified on the state UST and LUST databases. According to the EDR Report, a 6,000-gallon gasoline UST, a 20,000-gallon gasoline UST, and a 1,000-gallon fuel oil UST (later converted to kerosene) were installed at the property in 1971 and were removed in 1994. In addition, a 20,000-gallon gasoline UST was installed in 1994 and is listed as currently in use (actually out-of-service). Specific details pertaining to these USTs are presented in the EDR Report. Furthermore, the EDR Report identifies a "Phantom" non-registered tank. Specific details pertaining to this UST were not identified in the EDR Report. A gasoline/kerosene confirmed release was reported for the subject property on September 15, 1994 and achieved a closed status on July 6, 1998.

AKT Peerless notes that a BEA was also filed for the subject property in 2006; however, the subject property was not identified in the EDR BEA database. Additional information about the presence of the subject property on the referenced databases is presented in Sections 4.3.1 and 4.3.2.

### 4.2.2 Adjoining and Nearby Sites

AKT Peerless' review of the referenced databases (including those on the orphan list) also considered the potential or likelihood of contamination from adjoining and nearby sites. To evaluate which of the adjoining and nearby sites identified in the EDR Report present an environmental risk to the subject property, AKT Peerless considered the following criteria:

- the type of database on which the site is identified.
- the topographic position of the identified site relative to the subject property.
- the direction and distance of the identified site from the subject property.
- local soil conditions in the subject property area.
- the known or inferred groundwater flow direction in the subject property area.
- the status of the respective regulatory agency-required investigation(s) of the identified site, if any.
- surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, rivers, lakes, and ditches) located between the identified site and the subject property.

Only those sites that are judged to present a potential environmental risk to the subject property are further evaluated by reviewing MDNRE file information. Using the referenced criteria, and based upon a review of readily available information contained within the EDR Report, AKT Peerless did not identify adjoining (i.e., bordering) or nearby sites (e.g., properties within a ¼-mile radius) listed in the EDR Report that were judged to present a potential environmental risk to the subject property, except for the following:

| Database | | | |
|---|---|---|---|
| **Database(s):** | **RCRA-CESQG, FINDS, UST** | **Distance:** | adjoining |
| **Name:** | Wash & Dry Laundromat, Wash and Dry | **Direction:** | east |
| **Address:** | 3031 Packard Road | **Elevation:** | 820 feet |
| **Section References:** | Refer to Section 4.3.3 for further information. | **Known/Inferred Groundwater Flow Direction:** | northeast |
| Wash and Dry is classified as a RCRA conditionally exempt small quantity generator (CESQG). This database includes facilities that generate (or have generated) 100 kilograms or less of hazardous waste per calendar month. According to the EDR Report, this occupant has not reported TSD activities, and has no reported RCRA violations. Wash and Dry is also identified in the federal FINDS database (RCRA).<br>Wash & Dry Laundromat is identified on the state UST database. According to the EDR Report, a dry cleaning solvent UST (capacity not reported) was installed in 1969 and was closed in place. | | | |

| Database | | | |
|---|---|---|---|
| **Database(s):** | **LUST, UST** | **Distance:** | adjoining |
| **Name:** | Packard Amoco | **Direction:** | west |
| **Address:** | 2995 Packard Road | **Elevation:** | 820 feet |
| **Section References:** | Refer to Section 4.3.2 for further information. | **Known/Inferred Groundwater Flow Direction:** | northeast |
| Packard Amoco is identified on the state UST database. According to the EDR Report, an 8,000-gallon gasoline UST, two 10,000-gallon gasoline USTs, and a 1,000-gallon used oil UST were removed from the site in 1990, a 45-gallon hoist oil tank was removed in 1989 and a second was removed in 1990. Two 10,000-gallon gasoline USTs and a 15,000-gallon gasoline UST were installed at the property in 1997 and are currently in use. A confirmed release was reported for the site in April 1989 and was closed in November 1996. | | | |

| Database | | | |
|---|---|---|---|
| **Database(s):** | **LUST, UST** | **Distance:** | ~200 feet |
| **Name:** | Sakstrups Towing Inc | **Direction:** | east |
| **Address:** | 3055 Packard Road | **Elevation:** | 822 feet |
| **Section References:** | Refer to Section 4.3.2 for further information. | **Known/Inferred Groundwater Flow Direction:** | northeast |
| Sakstrups Towing Inc is identified on the state UST database. According to the EDR Report, a 200-gallon used oil UST was removed from the property in 1997. In addition, a "Phantom" non-registered tank was located onsite. Specific details pertaining to this tank were not reported. A confirmed release was reported for the site in June 1998 and was closed in February 1999. | | | |

| Database | | | |
|---|---|---|---|
| **Database(s):** | **UST** | **Distance:** | adjoining |
| **Name:** | Carl Read | **Direction:** | southwest |
| **Address:** | 3050 Platt Road | **Elevation:** | 823 feet |
| **Section References:** | none | **Known/Inferred Groundwater Flow Direction:** | northeast |
| Carl Reed is identified on the state UST database. According to the EDR Report, two 500-gallon USTs (unknown contents) were removed from the property in 1990.<br>In AKT Peerless' opinion, this property does not appear to present an environmental concern to the subject property based on (1) the USTs were removed from the site, (2) a confirmed release was not reported during the UST removal activities, (3) the site is currently developed with a Rite Aid pharmacy, and (4) the site is located beyond the intersection of Packard and Platt Roads. | | | |

## 4.3 ENVIRONMENTAL RECORD SOURCES

### 4.3.1 MDNRE Waste and Hazardous Material Division (WHMD) Records

AKT Peerless contacted the MDNRE WHMD to review available records regarding waste management activities, permits, inspections, violations, and registered USTs associated with the subject property.

The MDNRE WHMD provided AKT Peerless with UST information shown in the following tables:

| Underground Storage Tanks – General Data | | | | | |
|---|---|---|---|---|---|
| **Tank ID** | **Installation Date** | **Tank Contents** | **Tank Capacity** | **Removal Date** | **Tank Status** |
| 1 | 4/25/1971* | gasoline | 6,000 gallons | 12/13/1994 | removed |
| 2 | 4/25/1971* | gasoline | 20,000 gallons (dual compartment) | 12/13/1994 | removed |
| 4 | 4/25/1971* | fuel oil (kerosene) | 1,000 gallons | 12/13/1994 | removed |
| 5 | 12/1/1994 | gasoline | 20,000 gallons (dual compartment) | N/A | reported as currently in use; however not in service |

* Actually installed in 1966.

| Underground Storage Tanks – Description of Performance Standards | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Tank ID** | **Spill and Overfill Prevention** | **Release Detection** | | **Construction** | | **Corrosion Protection** | |
| | | **Tank** | **Piping** | **Tank** | **Piping** | **Tank** | **Piping** |
| 1 | unknown | unknown | unknown | galvanized steel | asphalt coated or bare steel | unknown | unknown |
| 2 | unknown | unknown | unknown | galvanized steel | asphalt coated or bare steel | unknown | unknown |
| 4 | unknown | unknown | unknown | galvanized steel | asphalt coated or bare steel | unknown | unknown |
| 5 | alarm | automatic tank gauging; interstitial monitoring, double walled | automatic line leak detectors; interstitial monitoring, double walled | double wall fiberglass reinforced plastic | double-walled, FRP/pressure | fiberglass reinforced plastic | fiberglass reinforced plastic |

In addition to the registration documentation, Facility Inspection Reports and documentation pertaining to the 1994 confirmed release were included in the file. According to the most recent Report (April 23, 2010), the property owner listed (Packard Mini Mart Inc [previous owner]) was in violation of nonpayment of fee(s) for the onsite UST. AKT Peerless notes that Washtenaw County Treasurer has owned the subject property since April 1, 2010. Updated UST registration information indicating the status and ownership of the onsite UST was reportedly not filed with the WHMD. According to the Washtenaw County Treasurer Department, the onsite UST has not been in service since at least September 2009. A release associated with the current UST system has not been reported.

As further discussed in Section 4.5.5, additional non-registered USTs have been installed at the subject property.

### 4.3.2 MDNRE Remediation and Redevelopment Division (RRD) Records

***Subject Property***

AKT Peerless reviewed the MDNRE RRD's Perfected Lien List to determine if environmental cleanup liens had been filed against the subject property. According to the most recent list that was published on March 30, 2010, the MDNRE does not have record of environmental cleanup liens filed against the subject property.

AKT Peerless contacted the MDNRE RRD Jackson District Office to review available records regarding environmental information or leaking USTs associated with the subject property. AKT Peerless reviewed the following documents at the MDNRE RRD district office pertaining to the 1994 LUST incident (portions of these documents are provided in Appendix E):

- Initial Abatement Report, dated September 24, 1994 by Envirologic Technologies, Inc. (Envirologic)
- Initial Assessment report, dated November 21, 1994 by Envirologic
- Free Product Report, dated November 21, 1994 by Envirologic
- Phase I Hydrogeologic Report, dated February 8, 1995 by Envirologic
- Phase II Hydrogeologic Work Plan, dated April 6, 1995 by Envirologic
- Final Assessment Report, dated August 28, 1997 by Fluor Daniel GTI, Inc.
- Closure Report, dated November 14, 1996 by Fluor Daniel GTI, Inc.
- Audit of Corrective Action, dated January 27, 1998 by Michigan Department of Environmental Quality (MDEQ) (currently the MDNRE)
- Letter in Response to Corrective Action Audit, dated June 29, 1998 by Fluor Daniel GTI, Inc.
- Audit of Corrective Actions, dated July 8, 1998 by MDEQ

Envirologic conducted a subsurface investigation at the subject property in 1994 as part of a UST removal and upgrade project (new USTs, piping, pumps). Three soil borings were advanced near the USTs located onsite at that time (6,000-gallon gasoline UST, 20,000-gallon dual compartmented gasoline UST, and a 1,000-gallon kerosene UST). Based on the field screening and analytical results, a confirmed release was reported on September 15, 1994.

As part of initial assessment activities, nine soil borings (SB-1 through SB-9) and one temporary monitor well were advanced at the subject property. Laboratory analytical results identified concentrations of petroleum contaminants above the former Michigan Environmental Resource Act (MERA) Type B Cleanup Criteria. In addition, free phase kerosene was identified in soil borings SB-6 and SB-7 located near the kerosene UST. Between November 16 and 17, 1994, the gasoline and kerosene UST systems were removed. In addition, a total of 870 cubic yards of soil was excavated and disposed offsite from the two UST excavation areas. Confirmatory soil samples were collected from the two excavations identifying the presence of soil contamination above the MERA Type B Criteria. The current UST (20,000-gallon dual compartment gasoline) was installed at this time just west of the former 20,000-gallon UST excavation. In addition, a free product recovery well (RW-1) was installed in the kerosene excavation prior to backfilling with clean fill. Free product recovery occurred using a bailer. According the Free Product

Recovery Report, one inch of product was observed and approximately 0.125 gallons was recovered.

Envirologic implemented a Phase I Hydrogeological Study on January 9, 1995, which included the advancement of five soil borings (MW-1, MW-2, MW-2D, and SB-10), the installation of groundwater monitoring wells, and soil and groundwater sampling. Soil laboratory analytical results indicated concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX) were detected above MERA Type B Criteria, polynuclear aromatic hydrocarbons (PNAs) and methyl tert-butyl ether (MTBE) were detected below MERA Type B Criteria, and lead was detected below MERA Default Type A Criteria. Groundwater analytical results identified concentrations of BTEX and MTBE above MERA Type A Criteria and PNAs and lead below laboratory method detection limits (MDLs). Envirologic concluded that additional investigations were warranted to define the extent of BTEX and MTBE in groundwater. The MDEQ conducted an audit of the Study on February 15, 1997 and concluded the report to be adequate.

Envirologic submitted a Phase II Hydrogeological Work Plan to the MDEQ on April 7, 1995 proposing the advancement of 11 soil borings and the installation of 8 monitoring wells to further define the extent of impact at the subject property. In addition, according to the document, a total of 5.25 gallons of free product had been recovered as of April 7, 1995. The MDEQ concluded the Work Plan to be acceptable.

Fluor Daniel GTI, Inc. submitted a FAR to the MDEQ on August 28, 1997. According to the FAR, the advancement of 13 additional soil borings, the installation of 13 groundwater monitoring wells, and soil and groundwater sampling had occurred in 1997. According to the FAR, free product was not detected in the monitoring wells and the horizontal and vertical extent of BTEX and MTBE contamination had been defined in groundwater.

Fluor Daniel GTI, Inc. submitted a Tier I Unrestricted Residential Closure Report to the MDEQ on November 14, 1997. No additional investigation activities had occurred as part of the closure activities. According to the Closure Report, the extent of soil and groundwater contamination had been defined to the applicable Tier I Residential Risk Based Screening Levels (RBSLs) which included soil and groundwater Direct Contact Criteria. Volatilization to Indoor Air was not determined to be a relative exposure pathway based on the depth of groundwater (6 to 8 feet bgs).

The MDEQ conducted an Audit of Corrective Actions on January 27, 1998. The MDEQ did not concur with the conclusions of the Closure Report. Specifically, the report did not address offsite migration or restrict the possible usage of impacted groundwater. MW-12 is located along the western property boundary and contained benzene at 1,400 parts per billion (ppb) and other gasoline constituents indicating contamination had migrated offsite. Information on file for the western adjoining gasoline fueling station, beyond Platt Road (2995 Packard Road) indicated contamination had not crossed the roadway. In addition, geology at the subject property consisted of interbedded clay and sand to approximately 18 feet bgs, where the sand layer could be utilized as source of drinking water.

Fluor Daniel GTI, Inc. prepared an amended Tier II Restricted Commercial III Closure Report in response to the MDEQ's audit of corrective actions. As part of the amended document, a Restrictive Covenant was filed for the subject property on March 16, 1998. The Restrictive Covenant indicates the following:

- Land use of the subject property shall be consistent with the Commercial III category;
- Soil shall not be removed from the property unless it is characterized;
- All workers who may come into contact with the groundwater must wear OSHA approved personal protective equipment;
- All concrete floors in the existing buildings located onsite must be adequately maintained to minimize the potential for vapor intrusion into the building from subsurface soils or groundwater;
- Construction of any buildings within the restricted area shall include the installation and maintenance of concrete floors or other barrier to vapor intrusion;
- Groundwater at the property cannot be used for potable or nonpotable purposes; and
- Installation of groundwater wells for any use other than monitoring quality is prohibited.

An audit of Corrective Actions was performed by the MDEQ on July 9, 1998. The MDEQ concurred that the corrective actions had been completed in accordance with Part 213 resulting in a Tier II Commercial III Closure with Institutional Controls.

In addition, the following reports were included in the file (not directly related to the LUST incident) (portions of these documents are provided in Appendix E):

- Phase I ESA, dated January 15, 2004 by PM Environmental, Inc. (PM)
- Phase II ESA, dated April 4, 2004 by PM
- Phase I ESA Update, dated October 18, 2005 by PM
- Category S BEA Baseline Environmental Assessment (BEA), dated May 31, 2006 by PM

PM completed a Phase I ESA of the subject property in January 2004 as part of a real estate transaction. PM identified the following RECs associated with the subject property:

- The possible former use of a heating oil UST associated with the former subject building.
- A possibility that orphan USTs installed prior to 1955 exists. Additionally, records pertaining to the removal of the 550-gallon and 1,000-galon USTs installed in 1966 were not identified.
- The potential for hazardous materials associated with the former automotive service station operations from at least 1967 until 1988 to have been discharged onto the ground or into an onsite septic system via floor drains.
- The unknown integrity of the former hoist system and the potential for underground reservoirs and hydraulic oil to have impacted the subsurface.
- The use of the current UST system and associated pumps islands since 1997 (actually 1994).
- The east and south adjoining properties are currently and/or have historically operated as

dry cleaning facilities.

- The southwest adjoining property is listed as a registered UST site. No records were identified for this property by the MDNRE.
- A closed LUST site (3055 Packard Road) is located approximately 400 feet east of the subject property.

In April 2004, PM conducted an initial Phase II ESA of the subject property to address these RECs. The subsurface investigation consisted of (1) the completion of a geophysical survey around the perimeter of the subject building, (2) the advancement of five soil borings (which were all converted to temporary monitor wells, and (3) the collection of groundwater from six existing groundwater monitoring wells. Results of the Phase II ESA identified concentrations of contaminants similar to those identified in the 1997 Closure Report. The geophysical survey did not identify anomalies indicating the presence of orphaned USTs. However, AKT Peerless notes that the survey was conducted only around the perimeter of the subject building and did not include the remaining portions of the subject property.

PM completed a Phase I ESA Update of the subject property in October 2005 that identified the following RECs:

- Review of previous LUST closure activities indicates previous soil and groundwater samples collected for laboratory analysis were not analyzed for the current required gasoline parameters.
- No verification sampling was conducted in the areas of the former gasoline and kerosene pump islands to the west and south of the subject building.
- Review of analytical results from previous site investigations indicate soil contamination is not delineated to the east and south of PSB-5 and MW-3, and to the west of PSB-3, PSB-5, SB-10, SB-5, and MW-8 to the current Part 213 Tier I Soil Drinking Water RBSLs, which are the current Part 213 LUST closure requirements.
- Review of analytical results from PM's 2004 Phase II ESA indicates soil contaminant concentrations of xylenes were identified at PSB-5 above the current Part 213 Tier I Commercial III Soil Volatilization to Indoor Air Inhalation RBSLs and Soil Direct Contact RBSLs, and above the Part 213 Soil Saturation Concentration (Csat) Screening levels. No free product was observed in the temporary monitor well set at the boring location; however, the possibility exists for free product to exist near the area of PSB-5.
- Review of analytical results from previous site investigations indicates groundwater contamination is not delineated to the east of MW-11, MW-3 and MW-6, to the south of MW-6, MW-14, and MW-13, and to the west of MW-13, MW-2, MW-1, MW-8, MW-12, and TMW-3, to the current Part 213 Tier I Groundwater Drinking Water RBSLs, which are the current Part 213 LUST closure requirements.

PM completed an additional site investigation in May 2006 which included (1) advancing two soil borings, (2) installing one temporary monitor well, and (3) sampling 10 existing groundwater monitoring wells. Results of the investigation identified various concentrations of VOCs in soil and groundwater exceeding the MDNRE Part 213 Tier I Residential and Commercial III Drinking Water Protection, Soil Volatilization to Indoor Air, and Drinking Water

RBSLs. Based on these results, the subject property meets the definition of a facility as defined in Part 201 of Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act (PA) 451, 1994, as amended.

PM completed a Category S (same hazardous substance) BEA for the subject property on May 31, 2006 based on the results of PM's subsurface investigations. Tank tightness testing was conducted on the current UST system (Tank No. 5) on May 26, 2006. Results of the tightness testing indicated that the UST and product lines passed. Therefore, the UST system was used as an engineering control as an alternative approach for the BEA. In addition semi-annual groundwater samples were to be collected from up to six existing groundwater monitoring wells to distinguish existing contamination from a new release (unknown if this sampling was completed). The BEA was disclosed to the MDNRE on June 7, 2006. The MDNRE acknowledged receipt of the BEA on June 13, 2006.

AKT Peerless was not provided with copies of other reports that document previous investigations or assessments of the subject property, nor did AKT Peerless identify the existence of such documents during this assessment.

***2995 Packard Road – Packard Amoco***

AKT Peerless contacted the MDNRE RRD Jackson District Office to review available records regarding environmental information or leaking USTs associated with this western adjoining property, beyond Platt Road. According to records reviewed, a product line leak occurred at the station in 1986 due to a car collision with one of the dispensers. During a routine site assessment, organic vapors were detected in soil borings. A confirmed release was reported for the site on May 11, 1989. Subsequent to the confirmed release, several soil borings were advanced at the property and monitoring wells were installed. In 1990, all USTs onsite were removed (later replaced) along with 1,200 cubic yards of soil and 4,800 gallons of excavation water. The excavation sampling results indicated that the northern former dispenser island was the likely source of impact. Between 1990 and 1996, additional soil borings were advanced/monitor wells installed at the property to define the extent of impact. An additional 54 cubic yards of soil was removed from the site in 1996 as part of closure activities. Based on a review of the analytical data, contamination was primarily located in the central and northern portions of the site. Offsite migration did not occur to the east and towards the subject property. The site achieved an audited Tier 1 Unrestricted Residential Closure on November 21, 1996.

In AKT Peerless' opinion, this western adjoining property does not appear to present an environmental concern to the subject property based on (1) the source of impact (dispenser island) and impacted soil have been removed from the property, (2) offsite migration of contamination had not occurred, specifically to the east and towards the subject property, and (3) the site achieved an audited Tier 1 Unrestricted Residential Closure on November 21, 1996.

***3055 Packard Road - Sakstrups Towing Inc***

AKT Peerless contacted the MDNRE RRD Jackson District Office to review available records regarding environmental information or leaking USTs associated with this eastern nearby property (~200 feet). According to records reviewed, a motor oil UST was removed along the

northern exterior wall of the building in 1997. Confirmatory soil samples were collected from the excavation in 1998 and analyzed for BTEX, PNAs, cadmium, chromium, and lead. Based on the analytical results, a confirmed release was reported. However, the level of impact was limited and the site was granted a Tier 1 Unrestricted Residential Closure. Based on this information and the distance of the site from the subject property, this property does not appear to present an environmental concern to the subject property.

### 4.3.3 MDNRE Air Quality Division (AQD) Records

AKT Peerless contacted the MDNRE AQD Dry Cleaning Division to review available records for the eastern adjoining property at 3031 Packard Road. Records for this adjoining property dated back to 1961 (approximate time of construction). Records consisted of plan reviews, inspections, and miscellaneous correspondence. Records pertaining to the solvent UST installed in 1969 and closed in place were not included in the file. Although records of spills, releases, improper material handling, etc. was not identified, this adjoining property still appears to present a potential environmental concern to the subject property based on (1) the site has operated as a drycleaners since at least 1961, (2) a solvent UST was installed at the property in 1969 and was closed in place (specific detail pertaining to the closure was not obtained), (3) the building is located directly east of the subject property, and (4) soil borings/monitoring wells, with a full VOC scan, have not been conducted along the subject property boundary to address this adjoining operation of potential concern.

## 4.4 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

### 4.4.1 Local Health Department

The Washtenaw County Health Department provided AKT Peerless with a Huron River Pollution Abatement Project that was conducted at the subject property. A survey was conducted at the subject property in 1988 that identified the type, usage, handling procedures, storage, and disposal of hazardous materials. According to the survey, indoor plumbing drains to the sanitary sewer on Platt Road. No evidence of improper hazardous material use or storage was noted. No further documentation was provided to AKT Peerless by the Health Department.

### 4.4.2 Local Fire Department

The Ann Arbor Fire Department provided AKT Peerless with the following documents:

- May 9, 1974 - Permit for a 6,000-gallon UST.
- April 17, 1979 – Commercial Inspection; noted oil as heating source via overhead forced air.
- May 27, 1980 - Permit for a 1,000-gallon UST.
- September 13, 1982 – Commercial Inspection; noted gas as heating source.
- February 10, 1984 – Basic Occupancy Report; noted to have repair personnel remove gasoline spill or close station until violation is corrected. No further information pertaining to this spill was reported.
- October 16, 1990 – Permit for coating UST.
- 1994 Correspondence related to confirmed release; a concrete footing was dug for the

installation of a sign at the corner of Platt and Packard Roads. The worker identified product in the footing excavation. A confirmed release was reported on August 31, 1994

Refer to Appendix F for copies of this documentation.

### 4.4.3 Water & Sewage Utility Provider

The City of Ann Arbor has provided municipal water and sewerage services to the subject property since at least 1957. The City of Ann Arbor Public Works Department's sanitary waste is ultimately received for processing by the City of Ann Arbor Waste Water Treatment Plant.

Information regarding potable water and sewage services was limited for the former commercial structure(s) located on the subject property from at least 1937 until between 1963 and 1966. This gap in historical information is considered *data failure* as provided in Section 8.3.2.3 of the ASTM Standard Practice For ESAs (E 1527). Therefore, a potential exists for an abandoned water well and/or septic system associated with the former structure(s) to be present at the subject property.

### 4.4.4 Natural Gas Provider

Michcon (DTE Energy) has provided natural gas to the subject property since the construction of the current development in 1966/1967. In addition, according to an April 17, 1979 Fire Inspection Report, oil was identified as a heating source via overhead forced air.

Information regarding heating services was not available for the former commercial structure(s) located on the subject property from at least 1937 until between 1963 and 1966. This gap in historical information is considered *data failure* as provided in Section 8.3.2.3 of the ASTM Standard Practice For ESAs (E 1527). Therefore, a potential exists for an abandoned heating oil tank to be present at the subject property.

### 4.4.5 Previous Environmental Reports

Refer to Section 4.3.2 for a summary of previous environmental reports maintained by the MDNRE Jackson District Office.

AKT Peerless was not provided with copies of other reports that document previous investigations or assessments of the subject property, nor did AKT Peerless identify the existence of such documents during this assessment.

## 4.5 HISTORICAL USE INFORMATION

The objective of reviewing historical sources is to: (1) develop a history of previous uses or specific occupancies of the subject property, (2) identify those uses or specific occupancies that are likely to have led to potential environmental concerns at the subject property, and to the extent identifiable, at adjoining properties, and (3) identify obvious uses of the subject property from the present, back to the property's *obvious* first developed use, or back to 1940, whichever is earlier.

**Historical Summary – Subject Property**

Based on a review of available sources, the subject property has been developed as a commercial property since at least 1937. The subject property was developed as a gasoline fueling/service station from at least 1957 (potentially as early as 1937) until between 1963 and 1966, when the building was demolished. A new gasoline fueling/service station was constructed on the northeastern portion of the subject property in 1966/1967. Three service bays were located within the building. Specific details pertaining to the former service garage operations were not identified. In 1988, the subject building was remodeled into a convenience store and vehicle servicing ceased. In addition, gasoline dispenser islands were relocated at this time. Canopies were constructed over the dispenser islands located in the western and southern portions of the property in 1994. The subject property continued use as a convenience store and gasoline fueling station until early 2010, when the property was vacated. The Washtenaw County Treasurer obtained ownership of the property in April 2010. The subject property has remained vacant and unused since. Previous property owners have included H&A Investment Co, Inc., South Street Investments, LLC, and Packard Mini Mart.

**Historical Summary – Adjoining Properties**

*East*
The eastern adjoining property (3031 Packard Road) consisted of unimproved land from at least 1937 until between 1940 and 1949, when an apparent parking area was constructed. In 1960, a commercial building was constructed. This adjoining property has been occupied by a drycleaners (Wash & Dry) since construction.

*South/Southeast*
The southern/southeastern adjoining property, beyond Packard Road (3000-3022 Packard Road), consisted of unimproved land from at least 1937 until between 1940 and 1949, when a multi-tenant commercial building was constructed. Occupants of this property have included Steven's Department Store, Kelsey's Super Market, H&R Block, J&W Painting, Clock Shop, Community Law Office, East Ann Arbor Hardware, Women's Choice Health Clinic, Clippindales, U&I Dry Clean, AA Advice, Ann Arbor City Place, etc. This adjoining property is currently occupied by Little Caesars, Bombay Groceries, Binh's Place, Makkara Sushi, Groom & Go, and K&K Cleaners.

*Southwest*
The southwestern adjoining property, beyond the intersection of Packard and Platt Roads (3050 Platt Road), consisted of unimproved land from at least 1937 until between 1955 and 1963, when a commercial property was constructed. Occupants of this building included Buster's Food M, Mr. Cash, Pronto Communications, and U-Hi Co. Independent. This building was demolished and a new commercial building was constructed in 2008. This adjoining property is currently occupied by Rite Aid Pharmacy.

*West (from north to south)*
This western adjoining property, beyond Platt Road (2976 Cascade Road), consisted of unimproved land from at least 1937 until between 1955 and 1963, when land disturbances (likely associated with the surrounding development activities) were evident. This adjoining property

was developed with the Carleton Court Apartments in the mid to late 1980s.

This adjoining property, beyond Platt Road (2995 Packard Road), consisted of unimproved land from at least 1937 until between 1949 and 1955, when commercial development began. Between 1963 and 1969, a gasoline fueling station was constructed. This adjoining property has continued this use and is currently occupied by BP.

*North (from west to east)*
This adjoining property (2881 Platt Road) consisted of a residential property from at least 1937 until 2003, when a medical/office building was constructed. This adjoining property is currently occupied by Azilia Westfall D.D.S (dental office).

This adjoining property (2898 Elmwood) consisted of unimproved land from at least 1937 until 1987, when a residential dwelling was constructed.

### 4.5.1 Aerial Photographs

AKT Peerless obtained aerial photographs for the subject property from EDR and Washtenaw County. AKT Peerless' observations noted during the review of these photographs are summarized in the following table. Photocopies of select aerial photographs are presented as Appendix E.

| Photo Dates | Observations (Subject Property) | Potential Environmental Concerns |
|---|---|---|
| 1937<br>1940<br>1949<br>1955<br>1963 | The subject property appears to be developed with a commercial property with access drives to Platt and Packard Roads. AKT Peerless notes that the resolution of the aerial photographs is poor and specific site details could not be identified. | potential gasoline fueling station |
| 1969<br>1978<br>1985<br>1993<br>2000<br>2002<br>2005<br>2006 | The subject property appears to have been redeveloped with a gasoline fueling station. The subject building is located on the northeastern portion of the property. Dispenser islands are evident to the west and south of the building. Canopies are evident over the dispenser islands on the 2000 through 2006 aerial photographs. | gasoline fueling station |

AKT Peerless' review of historical aerial photographs of the adjoining properties is summarized in the following table.

| Photo Dates | Potential Environmental Concerns (Adjoining Properties) |
|---|---|
| 1937<br>1940<br>1949<br>1955<br>1963 | No obvious evidence or indications of recognized environmental conditions or other potential environmental concerns were noted with respect to the adjoining properties during AKT Peerless' review of the referenced aerial photographs. |
| 1969<br>1978<br>1985<br>1993<br>2000<br>2002<br>2005<br>2006 | No obvious evidence or indications of recognized environmental conditions or other potential environmental concerns were noted with respect to the adjoining properties during AKT Peerless' review of the referenced aerial photographs, aside from the fact that a western adjoining property appears to be developed with a gasoline fueling station. However, as discussed in Section 4.3.2 this western adjoining fueling station does not appear to present environmental concern to the subject property. |

### 4.5.2 Fire Insurance Maps

AKT Peerless' research did not identify historical fire insurance map coverage of the subject property or adjoining properties. A copy of the "No Coverage" statement provided by EDR is presented in Appendix F.

### 4.5.3 City Directories

City Directories from various years between 1957 and 2010 were reviewed at the Bresser's Cross-Reference Directory archival library. The purpose of this review was to determine the past occupancy of the subject property. Information obtained from the reviewed directories is summarized in the following table:

| Dates | Subject Property Occupants (3005 Packard Road) |
|---|---|
| 1957 | Mitchell's Service and Gasoline Station |
| 1960-1968 | address not listed |
| 1972-1973 | Deasy's Auto Service |
| 1977-1983 | K&N Sunoco |
| 1987-1988 | Pipeline Oil Sales |
| 1992-2004 | Buddy's Mini Mart |
| 2009-2010 | Global Fuel, Inc. / Packard Platt Petro Inc. |

An address that is not listed typically indicates that (1) the property was vacant at that time, (2) a potential building was unoccupied at that time, (3) a previously existing address was different than the current address, (4) the building was not represented in the directory because of a "lag time" between building the structure and compiling the list, or (5) occupant information was not available for inclusion into the directory.

AKT Peerless also reviewed city directories for select adjoining properties to determine their past occupancy. No obvious or potential environmental concerns associated with historical occupants of the adjoining properties were noted, except that the eastern adjoining property (3010 Packard Road) has operated a drycleaners since at least 1967, a southern adjoining property (3018 Packard Road) has operated as drycleaners since the 1990s, and a western adjoining property (2995 Packard Road) has operated as a gasoline fueling station since at least 1967. As discussed in Sections 4.3.2 and 4.3.3 the eastern adjoining drycleaners may present an environmental concern to the subject property; however, the western adjoining fueling station does not appear to present environmental concern to the subject property.

In addition, the southern adjoining drycleaners does not appear to present an environment concern to the subject property based on (1) the site is not identified in the EDR Report as handling, generating, or storing hazardous materials, (2) the site has only operated as a drycleaners since the 1990s, and (3) groundwater samples collected along the southern subject property line during previous subsurface investigations (Section 4.3.2) did not identify the presence of dry cleaning related VOCs.

### 4.5.4 Assessing Department Records

AKT Peerless reviewed tax assessment records on the subject property at the Ann Arbor Assessing Department. The following table summarizes features or items of potential environmental concern, if any, that were noted during the record review.

| Environmental Issue | Comments |
|---|---|
| Storage Tanks | 20,000-gallon compartmental UST and 6,000-gallon unleaded gasoline UST (dates not reported); 1966 permit for 550-gallon and 1,000-gallon UST; 1974 permit for a gasoline UST |
| Asbestos-Containing Materials | none identified |
| PCB Materials | none identified |
| On-site Well/Septic System | none identified |
| Disposal Facilities/Fill Material (e.g., lagoons, pits, landfills, etc.) | none identified |

No additional information that could indicate potential environmental concerns at the subject property was found in the records, except that the subject building was remodeled from a service garage into a convenience store. Copies of information obtained from the Ann Arbor Assessing Department are included in Appendix F.

### 4.5.5 Building Department Records

AKT Peerless reviewed building records for the subject property at the Ann Arbor Building Department. AKT Peerless' review did not identify potential environmental concerns associated with the subject property, except for the following permits:

- July 14, 1959 – Install 4,000-gallon gasoline UST.
- March 29, 1960 – Gasoline fire in station.
- May 20, 1966 – Install 20,000-gallon gasoline UST.
- September 16, 1966 – Build gasoline service station.
- November 11, 1996 – Install 550-gallon and 1,000-gallon USTs.
- June 29, 1987 – Remove old gas dispensers and relocate existing pump islands.
- May 7, 1994 – Install 6,000-gallon gasoline UST.

Copies of information obtained from the Ann Arbor Building Department are included in Appendix F.

## 5.0 INTERVIEWS

AKT Peerless provided questionnaires to the subject property owner and key site manager, and as available, conducted interviews.

### 5.1 INTERVIEW WITH SUBJECT PROPERTY OWNER

AKT Peerless interviewed Mr. Ben Kraft, with the Washtenaw County Treasurer Department, regarding knowledge of the subject property and provided an owner questionnaire. According to Mr. Kraft, the Washtenaw County Treasurer Department obtained the property through foreclosure in April 2010. Prior to obtaining ownership, the property was not in operation. Other than the subject property formerly operating as a gasoline fueling station, Mr. Kraft was not aware of other potential areas of concern.

### 5.2 INTERVIEW WITH KEY SITE MANAGER

See Section 5.1.

### 5.3 INTERVIEW WITH SUBJECT PROPERTY OCCUPANT(S)

The subject property is currently unoccupied.

### 5.4 INTERVIEW(S) WITH OTHERS

Other interviews were not conducted as part of this assessment.

## 6.0 SUBJECT PROPERTY RECONNAISSANCE

### 6.1 METHODOLOGY AND LIMITING CONDITIONS

The subject property reconnaissance consisted of visual and physical observations of the subject property. AKT Peerless visually and/or physically observed the periphery of the subject property. In addition, AKT Peerless observed the subject property from all adjacent public thoroughfares.

Ms. Jessica Cory of AKT Peerless conducted the subject property reconnaissance on June 10, 2010. Ms. Cory was unaccompanied during the reconnaissance. AKT Peerless did not encounter project specific facts or conditions that limited our ability to access the subject property.

## 6.2 GENERAL SUBJECT PROPERTY SETTING AND OPERATIONS

The subject property consists of a vacant gasoline fueling station/convenience store building. The interior of the subject building consists of a general retail sales area, cooler/freezer room, storage room, and restroom. Exterior portions of the subject property contain three out-of-service dispenser islands covered with aluminum canopies, an out-of-service UST, asphalt and concrete-paved driveways and parking areas, concrete walkways and landscaped areas (grass). In general, the subject property slopes gently to the west.

## 6.3 OBSERVATIONS

### 6.3.1 Hazardous Substances and Petroleum Products

AKT Peerless did not observe hazardous substances or petroleum products at the subject property, except for small quantities of general cleaners in the subject building. Environmental concerns associated with these materials were not observed. In addition, as further discussed in Section 6.3.3, an out-of-service 20,000-gallon dual compartmented gasoline UST is located on the west-central portion of the subject property.

### 6.3.2 Hazardous and Non-Hazardous Waste

AKT Peerless did not observe hazardous or non-hazardous waste at the subject property, except for general refuse in the subject building.

### 6.3.3 Storage Tanks

AKT Peerless did not observe evidence of current or former UST systems (e.g., vent pipes, fill ports, dispensing pumps, patched pavement, etc.) at the subject property, except for an out-of-service 20,000-gallon gasoline UST is located on the west-central portion of the subject property. The UST is dual compartmented (12,500-gallons and 7,500-gallons). The UST was installed in 1994. The date the UST was taken out-of-service/emptied is unknown; however, was reportedly conducted in late 2009. Two associated vent pipes are located along the southeastern wall of the subject building. Three out-of-service dispenser islands are located in the western and southern portions of the subject property. Refer to Section 4.3.1 for specific details pertaining to the UST and associated performance standards.

AKT Peerless did not observe evidence of current or former AST systems (e.g., stands, secondary containments, etc.) at the subject property.

### 6.3.4 Unidentified Substances/Containers

AKT Peerless did not observe evidence of unidentified substances or other suspect containers on the subject property.

### 6.3.5 Potential PCB Containing Equipment

AKT Peerless inspected the subject property for the presence of liquid-cooled electrical units such as transformers and large capacitors. Such units are notable since they may be potential sources of PCBs (polychlorinated biphenyls). AKT Peerless did not observe suspect PCB-containing equipment at the subject property, except for the following:

| Source Description | Source Location | Responsibility | Observations |
|---|---|---|---|
| fluorescent light fixtures | subject building interior | subject property owner | no evidence of a release |
| two pole-mounted transformers | near the northern property boundary | MichCon | no evidence of a release |

Fluorescent light ballasts manufactured before 1980 may contain PCBs. These ballasts are considered small capacitors under the Toxic Substances Control Act (TSCA). An inspection of these fluorescent light ballasts for evidence of PCB content was beyond the scope of this assessment. However, no obvious evidence of leaking units was noted. Given the subject building's date of construction (1966/1967), it is AKT Peerless' opinion that these fixtures may contain PCBs. However, it is important to note that the building was fully remodeled in 1988.

AKT Peerless observed two pole-mounted transformers near the northern property boundary. These transformers are the responsibility of MichCon. In the event of a release incident, MichCon will repair the damaged or leaking electrical unit(s), and return the quality of the affected soil and groundwater, if any, to its pre-release condition. AKT Peerless did not observe evidence or indication of oil stains, leaks, or spills near the transformers.

### 6.3.6 Interior Staining / Corrosion

AKT Peerless did not observe evidence of interior staining or corrosion.

### 6.3.7 Drains and Sumps

AKT Peerless did not observe drains or sumps in the subject building, except for the following:

| Description | Location | Observed Environmental Concerns |
|---|---|---|
| floor drain | bathroom | none |

### 6.3.8 Discharge Features

Storm water that falls upon the subject property appears to percolate directly into the ground, runoff into onsite storm water catch basins, or runoff onto adjoining properties.

### 6.3.9 Pits, Ponds, and Lagoons

AKT Peerless did not observe pits, ponds, or lagoons, or evidence thereof, at the subject property.

### 6.3.10 Solid Waste Dumping / Landfills

AKT Peerless did not observe evidence of solid waste dumping or landfills at the subject property.

### 6.3.11 Stained Soil, Stressed Vegetation, Stressed/Stained Pavement

AKT Peerless did not observe any evidence of stained soil, stressed vegetation, stressed pavement, or stained pavement at the subject property, except for the following:

| Description | Location | Size (approx.) | Observations |
|---|---|---|---|
| stressed vegetation/gravel | south of the subject building | 5' x 5' | location of a former 1,000-gallon kerosene UST |
| rust stained pavement | northeastern portion of parking lot | 5' x 5' | likely source: dumpster |

### 6.3.12 Well and Septic Systems

AKT Peerless did not observe physical evidence or indication of wells or septic systems at the subject property, except for the following:

| Description | Location | Observed Environmental Concerns |
|---|---|---|
| 12 groundwater monitoring wells | throughout exterior of subject property | associated with the 1994 LUST incident; Refer to Section 4.3.2 |

### 6.3.13 Other Observations

AKT Peerless did not observe evidence of other potential environmental concerns at the subject property.

## 6.4 NON-ASTM SCOPE CONSIDERATIONS

AKT Peerless did not evaluate any other potential environmental conditions (i.e., further areas of possible business/environmental concern and/or liability) that are outside the scope of ASTM Standard Practice E 1527-05. Examples of such potential environmental conditions that were beyond the scope of this Phase I ESA include cultural and historic resources, ecological resources, endangered species, health and safety, high-voltage power lines, indoor air quality, industrial hygiene, asbestos containing materials, lead-based paints (LBPs), lead in drinking water, moisture intrusion/suspect mold growth, noise pollution, radon, regulatory compliance/non-compliance and/or wetlands.

AKT Peerless advises users of this document who wish to obtain an evaluation of the subject property relative to any of the aforementioned non-ASTM issues to engage the services of a qualified environmental professional.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

### 7.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

We have performed a Phase I ESA of the subject property in conformance with the scope and limitations of ASTM Standard Practice E 1527-05 and AAI 40 CFR Part 312. Any exceptions to, or deletions from, this practice are described in Section 8 and Appendix A of this report. This assessment has revealed no evidence of RECs in connection with the subject property, except for the following:

1. As discussed throughout this report, the subject property operated as an automotive service garage from at least 1957 (potentially as early as the 1930s) until between 1963 and 1966, when the original building was demolished. The current building was constructed in 1966 and continued operation as a service garage until approximately 1988, when the building was remodeled. Three service bays were formerly located in the subject building. This former use entailed the use and storage of petroleum products and hazardous materials/wastes and potentially former hoist systems. Drum imprints were observed to the north and east of the subject building. In addition, specific details pertaining to when municipal sewer service was connected to the subject property (prior to 1966) was not identified. Therefore, the potential for a septic system to have been utilized and/or abandoned at the subject property exists.
2. As discussed throughout this report, the subject property operated as a gasoline fueling station from at least 1957 (potentially as early as the 1930s) until approximately 2009/early 2010. This former operation entailed the use of a 1,000-gallon fuel oil (later converted to kerosene) UST, a 6,000-gallon gasoline UST, and a 20,000-gallon dual compartment gasoline UST. These USTs were removed in 1994. An "out-of-service" (reportedly empty) 20,000-gallon dual compartment gasoline UST and out of service dispenser islands are currently located on the western and southern portions of the subject property. Specific details pertaining to the current compliance status of the out-of-service UST was not identified.
3. As discussed in Sections 4.5.4 and 4.5.5, a 550-gallon "slop oil" UST was installed at the northwest corner of the subject building in 1966. A drain line extended from the UST into the northern portion of the subject building. Soil borings have not been conducted in the area of this UST during previous investigation activities. In addition, a 4,000-gallon gasoline UST was installed at the subject property 1959. Records of removal of these USTs and associated components were not identified. Furthermore, the potential exists for additional abandoned USTs (including a heating oil UST) to be present at the subject property. A geophysical survey was conducted around the perimeter of subject building in 2004 which did not identify the presence of abandoned USTs. However, the geophysical survey was not conducted throughout the entire subject property.
4. As discussed in Sections 4.2.1 and 4.3.2, a confirmed release was reported for the subject property in 1994. Several investigation activities were conducted from 1994 through 1997 to address the confirmed release. The release was granted a Tier II Restricted Use Commercial III Closure in 1998. A Restrictive Covenant was filed for the subject property on March 16, 1998. Subsurface investigations were most recently conducted in 2004 and 2006 as part of a property transaction. Results of the previous subsurface investigation activities identified the

presence of soil and groundwater contamination (gasoline related VOCs and PNAs) at the subject property above the MDNRE Part 213 Tier 1 Residential and Commercial III RBSLs. Based upon the presence of contaminants at concentrations above the applicable Part 213 Tier 1 Residential and Commercial II RBSLs, the subject property meets the definition of a facility. In addition, contamination appears to have migrated offsite to the west and south.

5. As discussed in Sections 4.2.2, 4.3.3. and 4.5, the eastern adjoining property (3031 Packard Road) may present an environmental concern to the subject property based on (1) the site has operated as a drycleaners since at least 1961, (2) a solvent UST was installed at the property in 1969 and was closed in place (specific detail pertaining to the closure was not obtained), (3) the building is located directly east of the subject property, and (4) soil borings/monitoring wells, with a full VOC scan, have not been conducted along the subject property boundary to address this adjoining operation of potential concern.

Because RECs were identified during the performance of the Phase I ESA, further investigation and/or assessment is warranted in order to determine the nature, extent, magnitude, and materiality of the RECs associated with the subject property.

## 7.2 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

AKT Peerless did not identify HRECs in connection with the subject property.

## 7.3 AREAS OF POTENTIAL CONCERN AND SIGNIFICANT DATA GAPS

AKT Peerless did not identify other areas of potential concern in connection with the subject property during the course of this ESA, except for the following:

- As discussed in Section 6.3.5, based on the age of the subject building, fluorescent light ballasts noted during the site inspection may contain PCBs. It is AKT Peerless' opinion these fixtures represent a minimal environmental risk to the subject property. However, upon replacement of the fixtures during future renovations, the ballasts should be evaluated and, if PCB-containing, handled in accordance with applicable regulations.
- Due to data failure, AKT Peerless was unable to obtain specific information about the former commercial building(s) located on the subject property from at least 1937 until between 1963 and 1966 (i.e., construction/demolition dates, specific operations, utilities, etc.).

AKT Peerless did not identify evidence of an adverse environmental effect upon the subject property in connection with the areas of potential concern listed above. Nevertheless, it is AKT Peerless' opinion that a potential exists for an abandoned water well, PCB containing light ballasts, septic system, and/or heating oil container to be present at the subject property.

Consequently, AKT Peerless recommends that such items, if identified or encountered during future development activities, be decommissioned, removed, and/or disposed in accordance with applicable federal, state, and local regulations. Additional action beyond that recommended above may be warranted if evidence of actual or historical heating oil USTs is identified at the subject property in the future.

AKT Peerless did not identify or encounter any instances of significant data gaps during the course of this ESA.

## 8.0 DEVIATIONS

AKT Peerless did not deviate from ASTM Standard Practice E 1527-05 when performing this Phase I ESA (i.e., no components of that practice were deleted, and no additions to it were made).

## 9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our knowledge and professional belief, we meet the definition of environmental professional as defined in ASTM E-1527-05 and §312.10 of 40 CFR 312 or conducted this inquiry under the supervision or responsible charge of, an environmental professional. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in ASTM E-1527-05 and 40 CFR Part 312.

Jessica T. Cory

Jessica T. Cory
Project Manager
**AKT PEERLESS ENVIRONMENTAL & ENERGY SERVICES**
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Sandra Muszynski

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Senior Environmental Consultant
**AKT PEERLESS ENVIRONMENTAL & ENERGY SERVICES**
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AKTPEERLESS
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# QUALIFICATIONS

**AKTPEERLESS**
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*Professional Environmental Services*

***PROFESSIONAL PROFILE***

# JESSICA T. CORY

**Project Manager**
**Environmental Compliance and Assessment Services**

## EDUCATION

**Bachelor of Science: Environmental Studies and Applications, 2003**
Michigan State University, East Lansing, Michigan

## PROFESSIONAL EXPERIENCE

**Project Manager**
AKT Peerless Environmental Services

**Project Scientist**
Innovative Environmental Solutions, Inc.

## AREA OF EXPERTISE

(1) Evaluating the potential environmental risk at commercial, industrial, and residential property

(2) Management of federal environmental grant programs

(3) Conducting Phase I environmental site assessments (ESAs)

(4) Conducting Phase II Subsurface Investigations

(5) Preparing Baseline Environmental Assessments

(6) Field management and activities coordination

(7) Coordinating environmental investigations

## ADDITIONAL EXPERTISE

(1) Conducting field operations such as soil, surface water, and groundwater sampling

(2) Oversight of field operations such as monitoring well installation, contaminant delineation, and soil excavation

(3) Creating maps, diagrams, and drawings

***ADDITIONAL EXPERTISE (continued)***

(4) Assessment of commercial and multi-family residential facilities in support of property condition assessments

(5) Conducting asbestos, lead, and hazardous material inspections

**SUMMARY OF SELECTED PROJECTS**

(1) Acted as project manager and technical advisor for several communities with U.S. EPA Brownfield assessment grants. The primary objective of each Brownfield grant was to perform Brownfield inventories, conduct Phase I and Phase II environmental site assessments (ESAs), baseline environmental site assessments (BEAs) and EPA quality assurance project plans (QAPPS). Responsibilities also included: acting as a liaison between Brownfield communities, U.S. EPA project managers, and stake holders, project budget tracking, and quarterly reporting.

(2) Performed Phase I ESAs (including site reconnaissance, regulatory and historical records investigations, and report completion) for financial institutions, manufacturing facilities, real estate developers, and property managers. Properties included industrial, commercial, and residential sites located in Michigan, Alabama, Georgia, and Ohio.

(3) Performed II subsurface investigations (including soil boring and monitoring well installation, laboratory data interpretation, and report preparation) to:
   (a) Evaluate the potential presence of contaminants
   (b) Evaluate the type of contaminants
   (c) Delineate horizontal and vertical extent

   Additional activities included the preparation of Baseline Environmental Assessments to address identified contamination at facilities for submittal to the Michigan Department of Environmental Quality.

(4) Prepared Property Condition Assessments of commercial and residential apartment properties. Activities included site inspections and report preparation.

(5) Performed asbestos, lead, and hazardous material inspections of various buildings including commercial and manufacturing buildings and residential structures. Activities performed consisted of visual inspections of suspect materials, review of building records, observations of sampling techniques, and review of laboratory results.

**LICENSES**

Michigan Asbestos Inspector, Accreditation Number A34295

Michigan Asbestos Management Planner, Accreditation Number A32400

**SPECIALIZED TRAINING**

OSHA 29 CFR 1910.120 – 40-Hour Hazardous Waste Operations Training

AHERA Asbestos Inspector Course

AHERA Asbestos Management Planner Course

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***PROFESSIONAL PROFILE***

# SANDRA E. MUSZYNSKI, CHMM

**Environmental Site Assessment Review Project Manager**
**Environmental Compliance and Assessment Services**

## EDUCATION

**Master in Science: in Environmental Science, 1990**
University of New Haven, West Haven, Connecticut

**Bachelor of Science: Zoology, 1988**
Michigan State University, East Lansing, Michigan

## PROFESSIONAL EXPERIENCE

**Senior Environmental Consultant & Compliance Specialist**
AKT Peerless Environmental Services

**Environmental Consultant**
Soil and Materials Engineers

**Senior Staff Scientist**
Environmental Science and Engineering

**Compliance Specialist**
Environmental Management Consultants

## AREA OF EXPERTISE

(1) Phase I environmental site assessments (ESAs)

(2) Environmental compliance audits and reviews

(3) Environmental management services such as waste characterization, waste minimization assessments, spill prevention plans, stormwater pollution prevention plans, environmental reporting, and environmental permitting

(4) Project management, oversight, and coordination of Phase I ESAs, Phase II ESAs, and remediation projects

115 West Allegan, Suite 900 • Lansing, MI 48933 • 517.482.9227 • fax 517.482.9229

**SUPPORTING AREAS OF EXPERTISE**

(1) Working knowledge of state and federal environmental regulations applicable to solid, hazardous, and medical waste management, wastewater discharges, toxic release inventory reporting, hazardous chemical inventory reporting, air emissions permitting, underground and aboveground storage tanks, oil pollution control, PCBs, asbestos, and OSHA hazard communication

(2) Asbestos building inspections

(3) Project management and field activities coordination

**SUMMARY OF SELECTED PROJECTS**

(1) Performed Phase I ESAs (including project management, site reconnaissance, regulatory and historical records investigations, and report completion) for financial institutions, manufacturing facilities, real estate developers, property managers, and insurance companies. Properties included industrial, commercial, and residential sites as well as health care facilities.

(2) Conducted environmental compliance audits for:
   - (a) Metal fabricating facilities (including stamping plants and welding operations)
   - (b) Plastics forming facilities
   - (c) Electronic equipment manufacturing facilities
   - (d) Foundries
   - (e) Metal plating operations
   - (f) Hospitals

   Audits focused on determining the facilities' degree of compliance with applicable federal, state and local environmental regulations and recommending actions to achieve compliance.

(3) Provided technical expertise and project management support for Wayne County's USEPA Brownfield Assessment Demonstration Pilot Project. The pilot project was designed to empower communities in the economic redevelopment of Brownfield sites through a $200,000 USEPA grant. Duties include management, oversight and completion of Phase I ESAs; participation in Technical Advisory Committee meetings; budget tracking; and the identification and utilization of available resources from supporting agencies and communities.

(4) Provided technical expertise to the Downriver Area Brownfield Consortium's (DABC) USEPA Brownfield Assessment Demonstration Pilot Project. The pilot project was designed to empower communities in the economic redevelopment of Brownfield sites through a $200,000 USEPA grant. Duties included the management and completion of Phase I ESAs.

***SUMMARY OF SELECTED PROJECTS (continued)***

(5) Prepared Spill Prevention Control and Countermeasure/Pollution Incident Prevention (SPCC/PIP) Plans for (1) bulk fuel storage facilities, (2) asphalt paving facilities (3) pharmaceutical supply companies, and (4) various manufacturing facilities.

(6) Prepared Stormwater Pollution Prevention Plans for foundries and various manufacturing facilities.

(7) Assembled an Environmental, Health, and Safety Policy Handbook for the aviation department of a large manufacturing company.

(8) Prepared an annual Toxic Chemical Release Inventory (TRI/Form R) and Hazardous Chemical Inventory (Tier II) reports for:
- (a) Metal fabricating facilities
- (b) Heat treating facilities
- (c) A pharmaceutical supply company
- (d) Foundries
- (e) Various manufacturing facilities

(9) Completed National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit applications for:
- (a) Manufacturing facilities
- (b) Groundwater remediation systems

(10) Completed Critical Materials and Wastewater Reports for various manufacturing facilities.

(11) Assembled and submitted formal petitions to the MDEQ for the designation of waste foundry sand as "inert for general reuse" and as "low hazard industrial waste," thus avoiding disposal costs. Petitions included information such as waste sand generation schematics, generation rates, raw material data, laboratory analysis data, and statistical analysis.

(12) Conducted asbestos inspections of various buildings including:
- (a) Manufacturing plants
- (b) Commercial buildings
- (c) Hospitals
- (d) Residential structures

(13) Managed Phase II subsurface investigations (including the coordination of soil boring and monitoring well installation, laboratory data interpretation, and report completion) to:
- (a) Evaluate the potential presence of contaminants
- (b) Evaluate the type of contaminants
- (c) Delineate horizontal and vertical extent

## CERTIFICATIONS

Certified Hazardous Materials Manager (CHMM) by the Institute of Certified Hazardous Materials Managers, Michigan

ISO 14001 Environmental Management Systems Lead Auditor Training (RAB Certified Course)

Accredited asbestos inspector by the Michigan Department of Labor and Economic Growth

Certified NIOSH Airborne Asbestos Dust Sampling and Evaluating

Health and Safety Training for Hazardous Waste Sites (OSHA-mandated 40-hour training and additional Site Supervisor Workshop)

## PUBLICATIONS/PRESENTATIONS

Anthony, T.R. and Ashley, S.E., Do Your Clients' USTs Comply With 1998 Regulations? Michigan Lawyers Weekly, Vol. 11, No. 8, December 1996.

Ashley, S.E., Environmental Compliance Audits. Presented to Michigan Asphalt Paving Association. January 1995.

Voydanoff, S.E., New Year's Day, 1990: Out With the Old and Back With the Recycled. Manufacturers' Mart, September 1990.

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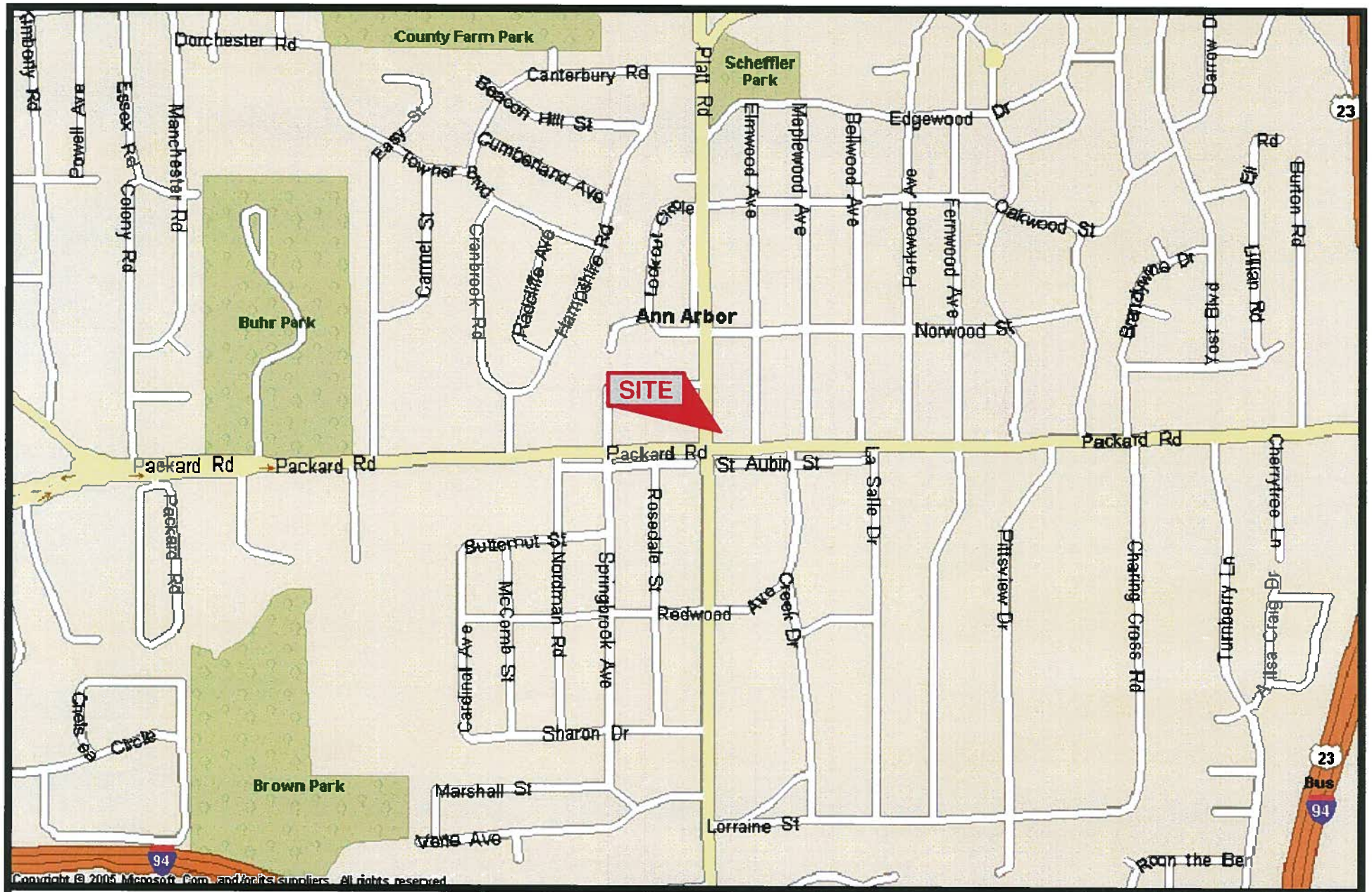
# FIGURES

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*SUBJECT PROPERTY LOCATION MAP*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*
*PROJECT NUMBER : 6588F-1-17*

***LEGEND***

N
W E
S

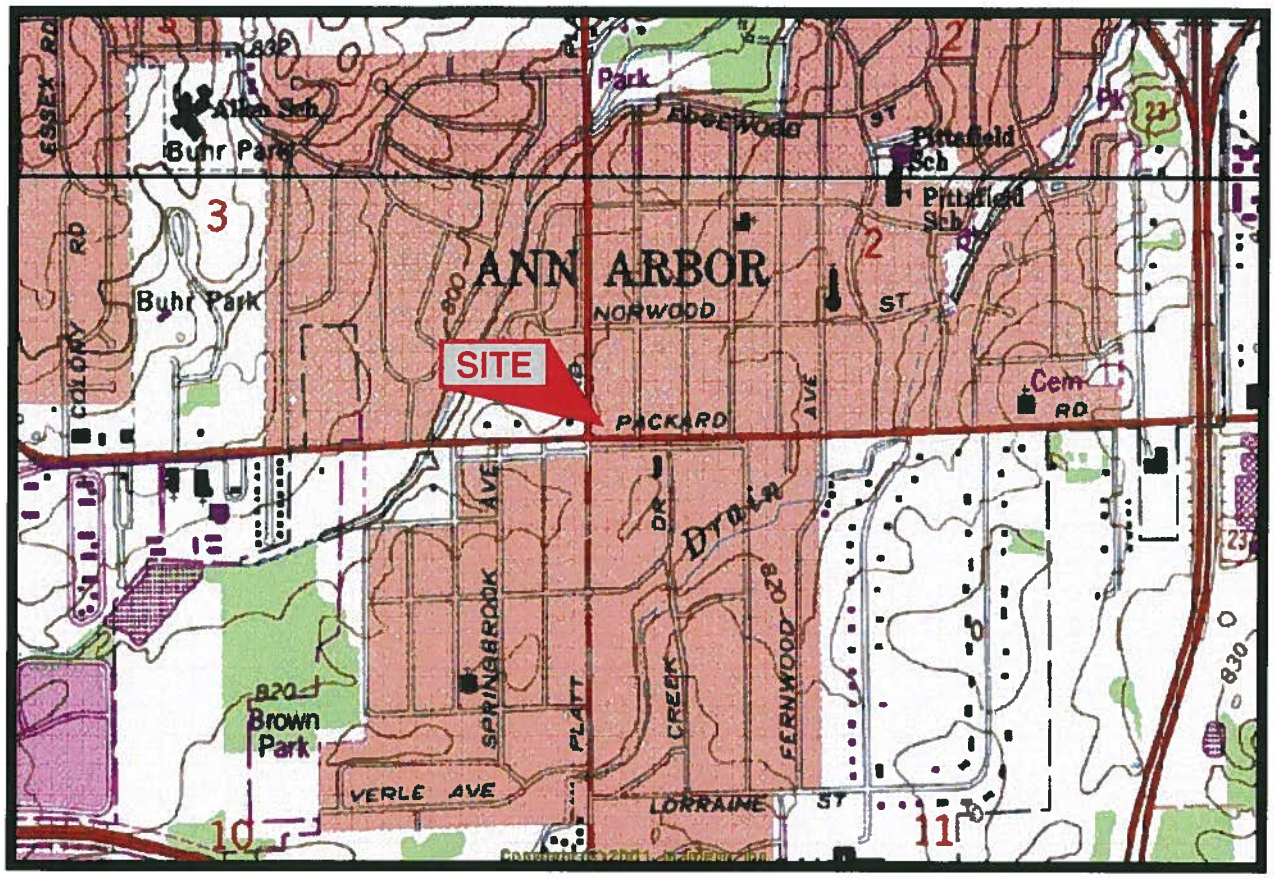
DRAWN BY: K Edmond
DATE: 6/23/2010

*FIGURE 1*

*YPSILANTI WEST QUADRANGLE*

MICHIGAN - WASHTENAW COUNTY

7.5 MINUTE SERIES (TOPOGRAPHIC)




T.3 S. - R.6 W.

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

MICHIGAN
QUADRANGLE LOCATION

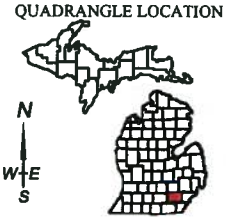



IMAGE TAKEN FROM 1967 U.S.G.S. TOPOGRAPHIC MAP
PHOTOREVISED 1983

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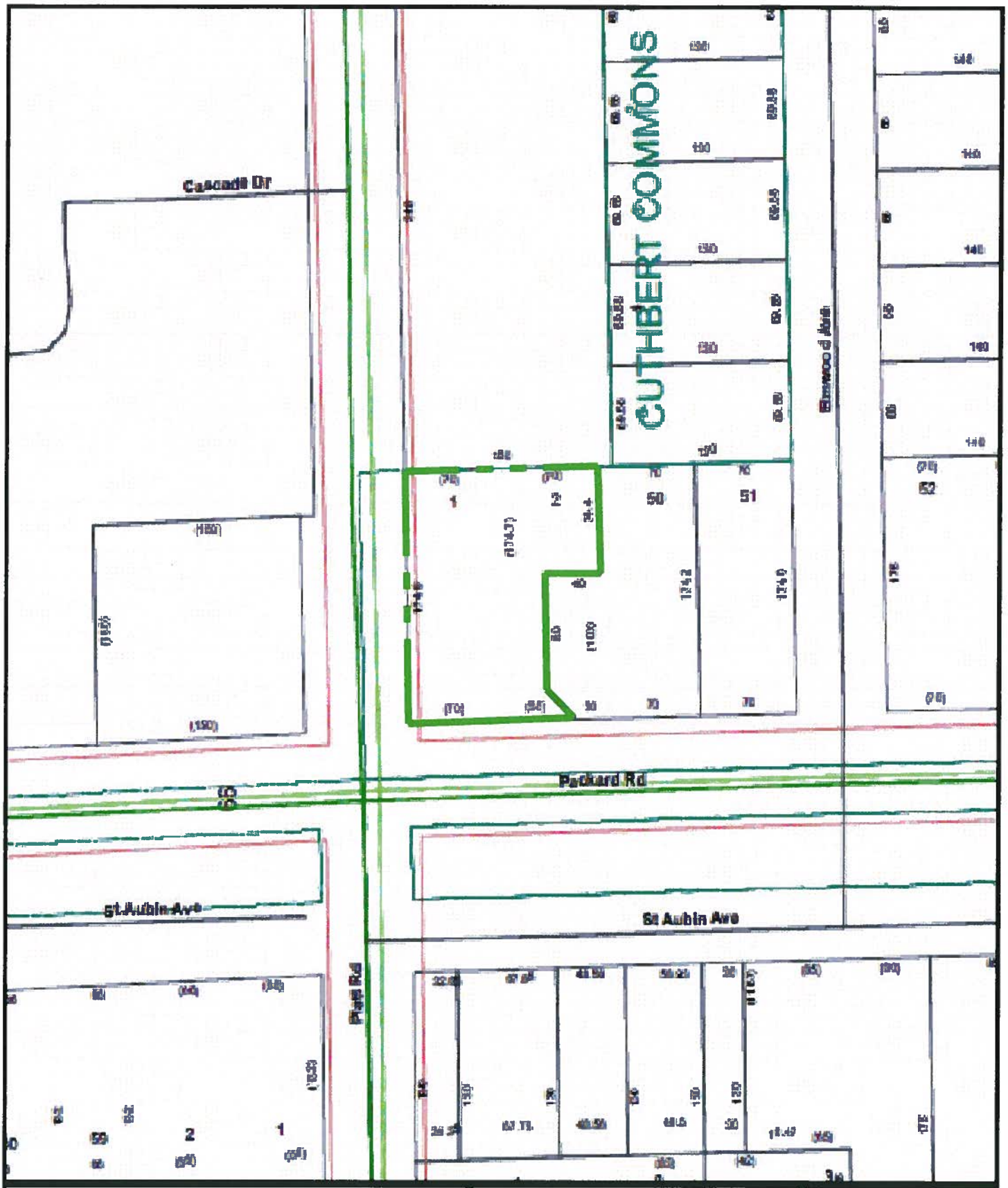
*TOPOGRAPHIC LOCATION MAP*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*
*PROJECT NUMBER : 6588F-1-17*

DRAWN BY: K Edmond
DATE: 6/23/2010

*FIGURE 2*

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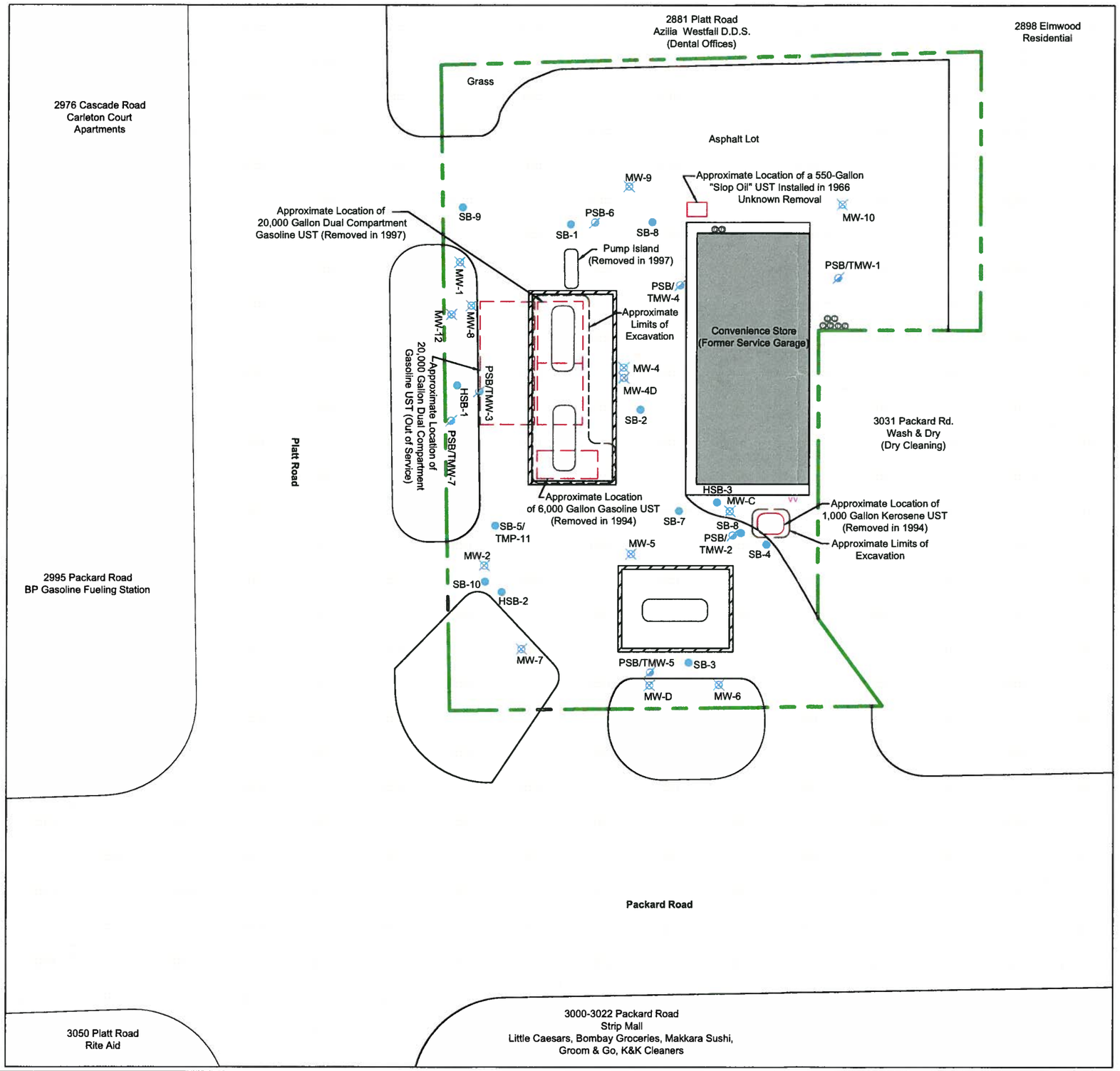
*PARCEL MAP*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*
*PROJECT NUMBER : 6588F-1-17*

DRAWN BY: K Edmond
DATE: 6/23/2010

*FIGURE 3*




DRAWN BY: K Edmond
DATE: 6/23/2010

0 15 30
SCALE: 1" = 30'-0"

FIGURE 4

SUBJECT PROPERTY MAP

3005 PACKARD ROAD
ANN ARBOR, MICHIGAN
PROJECT NUMBER : 6588F-1-17

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# APPENDIX A

# GENERAL LIMITATIONS AND EXCEPTIONS

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## General Limitations and Exceptions

Subject to the proposal, scope-of-services, and the related terms and conditions referenced in Section 1.0 of this Phase I ESA, AKT Peerless accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession, but disclaims any responsibility for consequential damages.

Although AKT Peerless believes that the findings, opinions, and recommendations contained herein are reliable and appropriate, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive, or that the information obtained from any data sources is complete or accurate.

Along with the inherent limitations set forth in various sections of ASTM Standard Practice E 1527-05, the accuracy and completeness of this report may be limited by the following facts or conditions:

- Due to the poor scale of the historical aerial photographs, the presence or absence of small features (e.g., individual drums, fuel dispensers) could not be discerned reliably.
- AKT Peerless made reasonable efforts to determine if USTs or related equipment (collectively referred to as UST systems) are or have been present at the subject property. AKT Peerless defines reasonable efforts as obtaining and evaluating information from visual observations of unobstructed areas and from the secondary sources cited in this report. AKT Peerless recognizes, and suggests users of this assessment acknowledge, that the accuracy of our conclusions relative to the on-site presence or use of UST systems may be directly affected by the presence of physical obstructions at the time of the reconnaissance, or affected by our receipt and evaluation of incorrect information.
- AKT Peerless' evaluation of soil and groundwater features at and near the subject property was based only on published maps and other readily available information. AKT Peerless used this information to assess soil types and groundwater flow directions to determine if conditions at any nearby sites present an environmental threat to the subject property.
- Unless specifically noted otherwise, invasive investigation of any kind has not been performed during this Phase I ESA, nor has observation under floors, above ceilings, behind walls, within the surface and subsurface soil, within groundwater, within confined spaces, roof tops, or inaccessible areas been performed.
- AKT Peerless did not conduct sampling or analysis of air, soil, groundwater, surface water, or building materials as part of this Phase I ESA, unless specifically noted otherwise.
- This Phase I ESA did not include a physical inspection of the adjoining properties, which AKT Peerless observed from the subject property and from readily accessible public rights-of-way.
- AKT Peerless typically does not review historical or environmental information about nearby sites in detail unless known activities or events at a nearby site appear to present an environmental threat to the subject property.
- AKT Peerless' scope of services did not include conducting a review of property title

documentation. AKT Peerless requested property title documentation and environmental cleanup liens from the Client, but was not provided this information, unless specifically noted otherwise. However, as described in this report, AKT Peerless made reasonable attempts to determine if the State Environmental Agency maintains documentation regarding environmental liens recorded against the subject property.

- This assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems, that may be associated with the subject property.
- This Phase I ESA did not include any investigation or evaluation of issues not specifically related to petroleum products or hazardous substances as defined in CERCLA (i.e., other areas of potential business environmental risk such as radon, lead in drinking water, etc.).
- The information and opinions contained in the report are given in light of this assignment. The report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed-upon by the parties and as limited therein.
- Although AKT Peerless believes the results contained in herein are reliable, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive, or that the information provided by the Client, third parties, or the secondary information sources cited in this report is complete or accurate.
- AKT Peerless is not in a position to provide an opinion regarding the Fair Market Value of the subject property. Therefore, a comparison of the purchase price of the subject property to other similar real estate transactions was not conducted during this assessment.
- Nothing in this report constitutes a legal opinion or legal advice. For information regarding individual or organizational liability, AKT Peerless recommends consultation with independent legal counsel.
- AKT Peerless relied upon specific or common knowledge of the Client, or information provided to the Client, to identify environmental liens, institutional controls, activity use limitations, or property valuation issues. As possible within the time frame and cost of this project, AKT Peerless looked for any obvious environmental information regarding these issues made readily available during the course of this ESA.
- The information and opinions presented in this report are for the exclusive use of the Client. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without written consent from the Client, or as required by law or by a Court order.
- Any third parties to whom the right to rely on the contents of this report have been granted by AKT Peerless, which is explicitly required prior to any third-party release, expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and the Client.

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# APPENDIX B

# LEGAL DESCRIPTION

## General Property Information

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

**Parcel:** 09-12-02-325-011 **Data Current As Of:** 0:34 AM 5/26/2010

### Property Address [collapse]

3005 PACKARD RD
Ann Arbor, MI 48108

### Owner Information [collapse]

PACKARD MINI MART BUILDING, LLC
5518 GALLERY PARK
Ann Arbor, MI 48103

**Unit:** 09

### Taxpayer Information [collapse]

SEE OWNER INFORMATION

### General Information for Tax Year 2010 [collapse]

| | | | |
|---|---|---|---|
| **Property Class:** | 201 | **Assessed Value:** | $312,900 |
| **School District:** | 81010 - Ann Arbor | **Taxable Value:** | $312,900 |
| **State Equalized Value:** | $312,900 | **Map #** | N/A |
| **User Number Indx:** | | **Date of Last Name Chg:** | 05/27/2008 |

| | |
|---|---|
| **Date Filed:** | |
| **Principal Residence Exemption (2010 May 1):** | 0.0000 % |
| **Principal Residence Exemption (2010 Final):** | 0.0000 % |
| **Principal Residence Exemption (2011 May 1):** | 0.0000 % |

| Previous Year Info | MBOR Assessed | Final S.E.V. | Final Taxable |
|---|---|---|---|
| 2009 | $318,300 | $318,300 | $318,300 |
| 2008 | $314,200 | $314,200 | $314,200 |

### Land Information [collapse]

| | | | |
|---|---|---|---|
| **Acreage:** | 0.50 | **Frontage:** | 125.00 Ft. |
| **Zoning Code:** | C3 | **Depth:** | 175.00 Ft. |
| **Land Value:** | $316,600 | **Mortgage Code:** | N/A |
| **Land Improvements:** | N/A | **Lot Dimensions/Comments:** | |
| **Renaissance Zone:** | NO | | |
| **ECF Neighborhood Code:** | 0216 | | |

### Legal Information for 09-12-02-325-011 [collapse]

ALL LOT 1 & PRT LOT 2 DESC AS BEG SW COR LOT 2 TH N 174.7 FT TH E 70 FT TH S 74.43 FT TH S 89 DEG 48 MIN 30 SEC W 40 FT TH S 80 FT TH S 45 DEG 05 MIN 45 SEC E 28.24 FT TH S 89 DEG 48 MIN 30 SEC W 50 FT TO POB DARLINGTON SUB

## Sales Information

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# APPENDIX C

# RECONNAISSANCE PHOTOGRAPHS

*PHOTOGRAPH 1: SUBJECT PROPERTY*
*VIEW OF THE NORTHERN AND WESTERN PORTIONS OF THE SUBJECT BUILDING FACING SOUTHEAST*

*PHOTOGRAPH 2: SUBJECT PROPERTY*
*VIEW OF THE EASTERN PORTION OF THE SUBJECT BUILDING FACING SOUTH*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 3: SUBJECT PROPERTY*
*VIEW OF THE SOUTHERN PORTION OF THE SUBJECT BUILDING FACING NORTH*

*PHOTOGRAPH 4: SUBJECT PROPERTY*
*GENERAL INTERIOR VIEW OF THE SUBJECT BUILDING*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 5: SUBJECT PROPERTY*
*VIEW OF THE COOLER/FREEZER AREA*

*PHOTOGRAPH 6: SUBJECT PROPERTY*
*VIEW OF A FLOOR DRAIN IN THE RESTROOM OF THE SUBJECT BUILDING*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 7: SUBJECT PROPERTY*
*VIEW OF TWO VENT PIPES ALONG THE SOUTHEASTERN WALL OF THE SUBJECT BUILDING*

*PHOTOGRAPH 8: SUBJECT PROPERTY*
*VIEW OF A TYPICAL GROUNDWATER MONITORING WELL LOCATED THROUGHOUT THE SUBJECT PROPERTY*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 9: SUBJECT PROPERTY*
*VIEW OF THE OUT-OF-SERVICE 20,000-GALLON GASOLINE UST LOCATED ALONG THE WESTERN PORTION OF THE SUBJECT PROPERTY*

*PHOTOGRAPH 10: SUBJECT PROPERTY*
*VIEW OF OUT-OF-SERVICE DISPENSER ISLANDS LOCATED IN THE WESTERN AND SOUTHERN PORTIONS OF THE SUBJECT PROPERTY*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 11: SUBJECT PROPERTY*
*VIEW OF DRUM IMPRINTS LOCATED TO THE EAST OF THE SUBJECT BUILDING*

*PHOTOGRAPH 12: NORTHERN ADJOINING PROPERTY*
*VIEW OF AZILIA WESTFALL D.D.S (2881 PLATT ROAD)*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

*PHOTOGRAPH 13: EASTERN ADJOINING PROPERTY*
*VIEW OF WASH & DRY (3031 PACKARD ROAD)*

*PHOTOGRAPH 14: WESTERN ADJOINING PROPERTY*
*VIEW OF PLATT ROAD FOLLOWED BY BP (2995 PACKARD ROAD)*

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*RECONNAISSANCE PHOTOGRAPHS*

*3005 PACKARD ROAD*
*ANN ARBOR, MICHIGAN*

TAKEN BY: JTC
DATE: 6/10/10

PROJECT NUMBER: 6588f-1-17

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# APPENDIX D

# STANDARD ENVIRONMENTAL RECORD DATABASE REPORT

**3005 Packard**
3005 Packard
Ann Arbor, MI 48104

Inquiry Number: 2791628.2s
June 11, 2010

# The EDR Radius Map™ Report with GeoCheck®

## Prepared using the EDR FieldCheck® System

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

FORM-BPK-SPM

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## GEOCHECK ADDENDUM

| | |
|---|---|
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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of the environmental records was conducted by Environmental Data Resources, Inc. (EDR). AKT ENVIRONMENTAL CONSULTANTS used the EDR FieldCheck System to review and/or revise the results of this search, based on independent data verification by AKT ENVIRONMENTAL CONSULTANTS. 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

3005 PACKARD
ANN ARBOR, MI 48104

### COORDINATES

| | |
|---|---|
| Latitude (North): | 42.245300 - 42' 14' 43.1" |
| Longitude (West): | 83.699900 - 83' 41' 59.6" |
| Universal Tranverse Mercator: | Zone 17 |
| UTM X (Meters): | 277247.3 |
| UTM Y (Meters): | 4680328.0 |
| Elevation: | 819 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 42083-B6 YPSILANTI WEST, MI |
| Most Recent Revision: | 1983 |
| North Map: | 42083-C6 ANN ARBOR EAST, MI |
| Most Recent Revision: | 1983 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Photo Year: | 2006 |
| Source: | USDA |

### TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7.

| Site | Database(s) | EPA ID |
|---|---|---|
| SUNOCO INC<br>3005 PACKARD ST<br>ANN ARBOR, MI 48108 | RCRA-NonGen<br>FINDS | MID000666479 |
| PACKARD MINI MART INC<br>3005 PACKARD ST<br>ANN ARBOR, MI 48106 | LUST<br>Facility Status: Closed<br>UST | N/A |

# EXECUTIVE SUMMARY

**DATABASES WITH NO MAPPED SITES**

No sites were identified in 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 CERCLIS NFRAP site List***

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

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

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

***Federal RCRA generators list***

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators

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

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

***Federal ERNS list***

ERNS..... Emergency Response Notification System

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

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

# EXECUTIVE SUMMARY

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

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

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

AST..... Aboveground Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land
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
HIST LF..... Inactive Solid Waste Facilities
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

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

US CDL..... Clandestine Drug Labs
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
SPILLS..... Pollution Emergency Alerting System

***Other Ascertainable Records***

DOT OPS..... Incident and Accident Data

# EXECUTIVE SUMMARY

| | |
|---|---|
| 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 |
| DRYCLEANERS | Drycleaning Establishments |
| NPDES | List of Active NPDES Permits |
| AIRS | Permit and Emissions Inventory Data |
| BEA | BASELINE ENVIRONMENTAL ASSESSMENT DATABASE |
| INDIAN RESERV | Indian Reservations |
| SCRD DRYCLEANERS | State Coalition for Remediation of Drycleaners Listing |
| COAL ASH EPA | Coal Combustion Residues Surface Impoundments List |
| PCB TRANSFORMER | PCB Transformer Registration Database |
| COAL ASH | Coal Ash Disposal Sites |
| COAL ASH DOE | Sleam-Electric Plan Operation Data |
| FINANCIAL ASSURANCE | Financial Assurance Information Listing |

**EDR PROPRIETARY RECORDS**

***EDR Proprietary Records***

| | |
|---|---|
| Manufactured Gas Plants | EDR Proprietary Manufactured Gas Plants |

**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 RCRA generators list*

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

An online review and analysis by AKT ENVIRONMENTAL CONSULTANTS of the RCRA-CESQG list, as provided by EDR, and dated 02/17/2010 has revealed that there are 3 RCRA-CESQG sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***WASH AND DRY*** | ***3031 PACKARD ST*** | ***E 0 - 1/8 (0.017 mi.)*** | ***A4*** | ***11*** |
| ***SIR SPEEDY*** | ***3060 PACKARD ST*** | ***ESE 0 - 1/8 (0.052 mi.)*** | ***B8*** | ***19*** |
| ***CLARK RETAIL ENTERPRISES INC*** | ***2955 PACKARD*** | ***W 0 - 1/8 (0.120 mi.)*** | ***C9*** | ***21*** |

### *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.

An online review and analysis by AKT ENVIRONMENTAL CONSULTANTS of the SHWS list, as provided by EDR, and dated 05/03/2010 has revealed that there are 4 SHWS sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***Not reported*** | ***3031 WASHTENAW AVENUE*** | ***N 1/2 - 1 (0.850 mi.)*** | ***13*** | ***31*** |
| Facility Status: See Leaking Underground Storage Tank Site Database | | | | |
| ARBORLAND MALL | 3693 WASHTENAW | NE 1/2 - 1 (0.939 mi.) | 14 | 32 |
| Facility Status: Interim Response in progress | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ANN ARBOR CIVIC THEATER | 2275 PLATT ROAD | N 1/2 - 1 (0.556 mi.) | 11 | 27 |
| Facility Status: Evaluation conducted | | | | |
| ***ARBOR DODGE*** | ***3365 WASHTENAW AVE*** | ***NNE 1/2 - 1 (0.828 mi.)*** | ***12*** | ***27*** |
| Facility Status: Evaluation conducted | | | | |

# EXECUTIVE SUMMARY

### *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.

An online review and analysis by AKT ENVIRONMENTAL CONSULTANTS of the LUST list, as provided by EDR, and dated 05/21/2010 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PACKARD AMOCO***<br>Facility Status: Closed | ***2995 PACKARD ST*** | ***WSW 0 - 1/8 (0.021 mi.)*** | ***A5*** | ***14*** |
| ***SAKSTRUPS TOWING INC***<br>Facility Status: Closed | ***3055 PACKARD ST*** | ***E 0 - 1/8 (0.044 mi.)*** | ***B6*** | ***17*** |
| ***ADVANCED PETRO INC***<br>Facility Status: Open | ***2955 PACKARD ST*** | ***W 1/8 - 1/4 (0.131 mi.)*** | ***C10*** | ***24*** |

### *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.

An online review and analysis by AKT ENVIRONMENTAL CONSULTANTS of the UST list, as provided by EDR, and dated 03/29/2010 has revealed that there are 5 UST sites within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WASH & DRY LAUNDROMAT | 3031 PACKARD ST | E 0 - 1/8 (0.017 mi.) | A3 | 11 |
| ***PACKARD AMOCO*** | ***2995 PACKARD ST*** | ***WSW 0 - 1/8 (0.021 mi.)*** | ***A5*** | ***14*** |
| ***SAKSTRUPS TOWING INC*** | ***3055 PACKARD ST*** | ***E 0 - 1/8 (0.044 mi.)*** | ***B6*** | ***17*** |
| CARL READ | 3050 PLATT RD | SW 0 - 1/8 (0.046 mi.) | 7 | 18 |
| ***ADVANCED PETRO INC*** | ***2955 PACKARD ST*** | ***W 1/8 - 1/4 (0.131 mi.)*** | ***C10*** | ***24*** |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

| Site Name | Database(s) |
|---|---|
| HIDEAWAY LANE | SHWS |
| MICH CON BEAKES ST | SHWS |
| EATON CORPORATION | SHWS |
| PLATT ROAD DUMP | SHWS |
| UM NORTH CAMPUS LANDFILL AREA | SHWS |
| GEORGETOWN CLEANERS | SHWS |
| AVFUEL BULK FACILITY | SHWS |
| UNIVERSITY OF MICH LF NO 1 | SHWS |
| MIT INVESTMENTS | RCRA-NonGen, FINDS, LUST |
| SPEEDWAY SUPERAMERICA LLC | RCRA-NonGen, FINDS |
| CF FLAG | RCRA-CESQG |
| SPEEDWAY SUPERAMERICA LLC | RCRA-CESQG, FINDS |
| 2235 / 2245 S STATE | BEA |
| 212 -216 S STATE ST | BEA |

# OVERVIEW MAP - 2791628.2s

★ 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

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines

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: 3005 Packard<br>ADDRESS: 3005 Packard<br>Ann Arbor MI 48104<br>LAT/LONG: 42.2453 / 83.6999 | CLIENT: AKT Environmental Consultants<br>CONTACT: Jessica Cory<br>INQUIRY #: 2791628.2s<br>DATE: June 11, 2010 3:56 pm |

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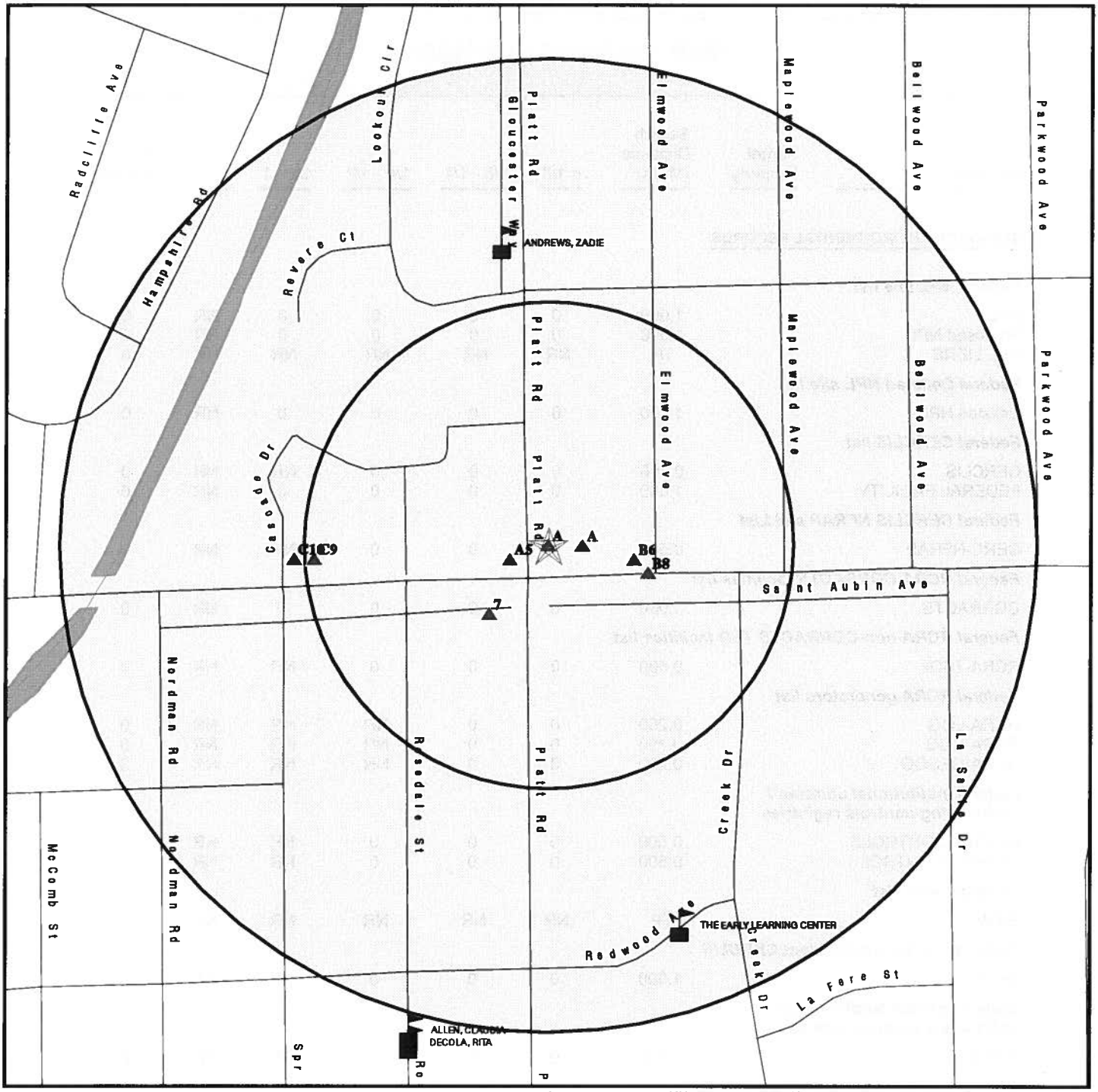
# DETAIL MAP - 2791628.2s




- 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
- 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: 3005 Packard<br>ADDRESS: 3005 Packard<br>Ann Arbor MI 48104<br>LAT/LONG: 42.2453 / 83.6999 | CLIENT: AKT Environmental Consultants<br>CONTACT: Jessica Cory<br>INQUIRY #: 2791628.2s<br>DATE: June 11, 2010 3:56 pm |

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# MAP FINDINGS SUMMARY

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Federal NPL site list*** | | | | | | | | |
| NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Federal Delisted NPL site list*** | | | | | | | | |
| Delisted NPL | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal CERCLIS list*** | | | | | | | | |
| CERCLIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| FEDERAL FACILITY | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal CERCLIS NFRAP site List*** | | | | | | | | |
| CERC-NFRAP | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA CORRACTS facilities list*** | | | | | | | | |
| CORRACTS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ***Federal RCRA non-CORRACTS TSD facilities list*** | | | | | | | | |
| RCRA-TSDF | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal RCRA generators list*** | | | | | | | | |
| RCRA-LQG | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| RCRA-CESQG | | 0.250 | 3 | 0 | NR | NR | NR | 3 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| US ENG CONTROLS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | | TP | NR | NR | NR | NR | NR | 0 |
| ***State- and tribal - equivalent CERCLIS*** | | | | | | | | |
| SHWS | | 1.000 | 0 | 0 | 0 | 4 | NR | 4 |
| ***State and tribal landfill and/or solid waste disposal site lists*** | | | | | | | | |
| SWF/LF | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal leaking storage tank lists*** | | | | | | | | |
| LUST | X | 0.500 | 2 | 1 | 0 | NR | NR | 3 |
| INDIAN LUST | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal registered storage tank lists*** | | | | | | | | |
| UST | X | 0.250 | 4 | 1 | NR | NR | NR | 5 |

# 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 | | 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 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| AUL | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal voluntary cleanup sites*** | | | | | | | | |
| INDIAN VCP | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***State and tribal Brownfields sites*** | | | | | | | | |
| BROWNFIELDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| ODI | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| HIST LF | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US CDL | | TP | NR | NR | NR | NR | NR | 0 |
| DEL SHWS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| CDL | | TP | NR | NR | NR | NR | NR | 0 |
| US HIST CDL | | TP | NR | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS 2 | | TP | NR | NR | NR | NR | NR | 0 |
| LUCIS | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| LIENS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | | TP | NR | NR | NR | NR | NR | 0 |
| SPILLS | | TP | NR | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA-NonGen | X | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| DOT OPS | | TP | NR | NR | NR | NR | NR | 0 |
| DOD | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| FUDS | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| CONSENT | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| ROD | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |

# 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 |
|---|---|---|---|---|---|---|---|---|
| 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 |
| DRYCLEANERS | | 0.250 | 0 | 0 | NR | NR | NR | 0 |
| NPDES | | TP | NR | NR | NR | NR | NR | 0 |
| AIRS | | TP | NR | NR | NR | NR | NR | 0 |
| BEA | | 0.500 | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN RESERV | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | | 0.500 | 0 | 0 | 0 | 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 |
| COAL ASH DOE | | TP | NR | NR | NR | NR | NR | 0 |
| FINANCIAL ASSURANCE | | TP | NR | NR | NR | NR | NR | 0 |
| **EDR PROPRIETARY RECORDS** | | | | | | | | |
| ***EDR Proprietary Records*** | | | | | | | | |
| Manufactured Gas Plants | | 1.000 | 0 | 0 | 0 | 0 | NR | 0 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**A1 Target Property** | **SUNOCO INC**
**3005 PACKARD ST**
**ANN ARBOR, MI 48108** | **RCRA-NonGen FINDS** | **1000330917**
**MID000666479**

**Site 1 of 5 in cluster A**

**Actual: 819 ft.**

RCRA-NonGen:

| | |
|---|---|
| Date form received by agency: | 08/18/1980 |
| Facility name: | SUNOCO INC |
| Facility address: | 3005 PACKARD ST<br>ANN ARBOR, MI 48108 |
| EPA ID: | MID000666479 |
| Contact: | GIL LOVELL |
| Contact address: | 3005 PACKARD ST<br>ANN ARBOR, MI 48108 |
| Contact country: | Not reported |
| Contact telephone: | (313) 358-2540 |
| Contact email: | Not reported |
| EPA Region: | 05 |
| Classification: | Non-Generator |
| Description: | Handler: Non-Generators do not presently generate hazardous waste |

Owner/Operator Summary:

| | |
|---|---|
| Owner/operator name: | SUNOCO SERVICE STATION |
| Owner/operator address: | Not reported<br>Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/01/1970 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | SUNOCO SERVICE STATION |
| Owner/operator address: | Not reported<br>Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | 01/01/1970 |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

| | |
|---|---|
| U.S. importer of hazardous waste: | No |
| 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 |

**SUNOCO INC (Continued)** **1000330917**

Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Violation Status: No violations found

FINDS:

Registry ID: 110003572875

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.

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**A2 Target Property** **PACKARD MINI MART INC** **LUST U000266325**
**3005 PACKARD ST** **UST N/A**
**ANN ARBOR, MI 48106**

**Site 2 of 5 in cluster A**

**Actual: 819 ft.**

LUST:
Facility ID: 00002107
Source: STATE OF MICHIGAN
Owner Name: Packard Mini Mart Inc
Owner Address: 3005 Packard Rd

**PACKARD MINI MART INC (Continued)** **U000266325**

| | |
|---|---|
| Owner City,St,Zip: | Ann Arbor, MI 48106 |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 973-2067 |
| Country: | USA |
| District: | Jackson District Office |
| Site Name: | Buddy's Mini Mart #28 |
| Latitude: | 42.2454840000 |
| Longitude: | -83.6999630000 |
| Date of Collection: | 12-02-2002 |
| Method of Collection: | GPS Code Meas. Standard Positioning Service SA Off |
| Accuracy: | 10 |
| Accuracy Value Unit: | METERS |
| Horizontal Data: | NAD83 |
| Point Line Area: | POINT |
| Desc Category: | Plant Entrance (Freight) |
| | |
| Leak Number: | C-0960-94 |
| Release Date: | Sep 15 1994 |
| Substance Released: | Gasoline,Kerosene |
| Release Status: | Closed |
| Release Closed Date: | Jul 6 1998 |

UST:

| | |
|---|---|
| Facility ID: | 00002107 |
| Facility Type: | ACTIVE |
| Latitude: | 42.2454840000 |
| Longitude: | -83.6999630000 |
| Owner Name: | Packard Mini Mart Inc |
| Owner Address: | 3005 Packard Rd |
| Owner City,St,Zip: | Ann Arbor, MI 48106 |
| Owner Country: | USA |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 973-2067 |
| Contact: | Chehir Ayachi |
| Contact Phone: | (734) 973-2067 |
| Date of Collection: | 12-02-2002 |
| Accuracy: | 10 |
| Accuracy Value Unit: | METERS |
| Horizontal Datum: | NAD83 |
| Source: | STATE OF MICHIGAN |
| Point Line Area: | POINT |
| Desc Category: | Plant Entrance (Freight) |
| Method of Collection: | GPS Code Meas. Standard Positioning Service SA Off |
| | |
| Tank ID: | 1 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 6000 |
| Install Date: | Apr 25 1971 |
| Product: | Gasoline |
| Remove Date: | Nov 20 1994 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Galvanized Steel |
| Piping Type: | Not reported |
| Constr Material: | Asphalt Coated or Bare Steel |
| Impressed Device: | No |

**PACKARD MINI MART INC (Continued)** **U000266325**

| | |
|---|---|
| Tank ID: | 2 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 20000 |
| Install Date: | Apr 25 1971 |
| Product: | Gasoline |
| Remove Date: | Nov 20 1994 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Galvanized Steel |
| Piping Type: | Not reported |
| Constr Material: | Asphalt Coated or Bare Steel |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 4 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 1000 |
| Install Date: | Apr 25 1971 |
| Product: | FUEL OIL |
| Remove Date: | Nov 20 1994 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Galvanized Steel |
| Piping Type: | Not reported |
| Constr Material: | Asphalt Coated or Bare Steel |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 5 |
| **Tank Status:** | **Currently In Use** |
| Capacity: | 20000 |
| Install Date: | Dec 1 1994 |
| Product: | Gasoline |
| Remove Date: | Not reported |
| Tank Release Detection: | Automatic Tank Gauging, Interstitial Monitoring Double Walled Tank |
| Pipe Realease Detection: | Automatic Line Leak Detectors, Interstitial Monitoring Double Walled Piping |
| Piping Material: | Galvanized Steel, Double Walled |
| Piping Type: | Pressure |
| Constr Material: | Composite (Steel with Fiberglass), Double Walled |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | Phantom |
| **Tank Status:** | **Non-Registered Tank** |
| Capacity: | Not reported |
| Install Date: | Not reported |
| Product: | Unknown |
| Remove Date: | Not reported |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Not reported |
| Piping Type: | Not reported |
| Constr Material: | Not reported |
| Impressed Device: | No |

**A3 East < 1/8 0.017 mi. 91 ft.** — **WASH & DRY LAUNDROMAT**, **3031 PACKARD ST**, **ANN ARBOR, MI 48108** — **UST** — **U003866496** / **N/A**

**Site 3 of 5 in cluster A**

**Relative: Higher**

**Actual: 820 ft.**

UST:

| | |
|---|---|
| Facility ID: | 00004201 |
| Facility Type: | CLOSED |
| Latitude: | 42.2451260000 |
| Longitude: | -83.7007700000 |
| Owner Name: | Wash & Dry Laundromat |
| Owner Address: | 3031 Packard St |
| Owner City,St,Zip: | Ann Arbor, MI 48108-1936 |
| Owner Country: | USA |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 971-4220 |
| Contact: | HYONG KIM |
| Contact Phone: | (734) 971-4220 |
| 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:** | **Closed in Ground** |
| Capacity: | Not reported |
| Install Date: | Dec 27 1969 |
| Product: | DRY CLEANING SOLVENT |
| Remove Date: | Nov 27 1990 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Unknown |
| Piping Type: | Not reported |
| Constr Material: | Unknown |
| Impressed Device: | No |

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**A4 East < 1/8 0.017 mi. 91 ft.** — **WASH AND DRY**, **3031 PACKARD ST**, **ANN ARBOR, MI 48108** — **RCRA-CESQG FINDS** — **1000237472** / **MID981777360**

**Site 4 of 5 in cluster A**

**Relative: Higher**

**Actual: 820 ft.**

RCRA-CESQG:

| | |
|---|---|
| Date form received by agency: | 10/03/2002 |
| Facility name: | WASH AND DRY |
| Facility address: | 3031 PACKARD ST<br>ANN ARBOR, MI 48108 |
| EPA ID: | MID981777360 |
| Contact: | YUNG CHOI |
| Contact address: | 3031 PACKARD ST<br>ANN ARBOR, MI 48108 |
| Contact country: | Not reported |
| Contact telephone: | (734) 971-4220 |
| Contact email: | Not reported |
| EPA Region: | 05 |

**WASH AND DRY (Continued)** **1000237472**

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: | YUNG SOO CHOI |
| 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: | 05/09/2002 |
| Owner/Op end date: | Not reported |
| Owner/operator name: | CHUNG SOO OK |
| 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: | 05/09/2002 |
| Owner/Op end date: | Not reported |
| Owner/operator name: | YUNG SOO CHOI |
| 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: | 05/09/2002 |
| 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 |

**WASH AND DRY (Continued)** **1000237472**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 09/26/1986
Facility name: WASH AND DRY
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110003621368

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.

**A5 WSW < 1/8 0.021 mi. 110 ft.** | **PACKARD AMOCO 2995 PACKARD ST ANN ARBOR, MI 48108** | **LUST UST** | **U003425927 N/A**

**Site 5 of 5 in cluster A**

**Relative: Higher**

**Actual: 820 ft.**

LUST:

| | |
|---|---|
| Facility ID: | 00010424 |
| Source: | STATE OF MICHIGAN |
| Owner Name: | Big M Fuel LLC |
| Owner Address: | 2995 Packard St |
| Owner City,St,Zip: | Ann Arbor, MI 48108 |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 975-4878 |
| Country: | USA |
| District: | Jackson District Office |
| Site Name: | Shell - Packard Street |
| Latitude: | 42.2455270000 |
| Longitude: | -83.7004250000 |
| Date of Collection: | 03-03-2006 |
| Method of Collection: | GPS Code Meas. Standard Positioning Service SA Off |
| Accuracy: | 40 |
| Accuracy Value Unit: | FEET |
| Horizontal Data: | NAD83 |
| Point Line Area: | POINT |
| Desc Category: | Plant Entrance (Freight) |
| Leak Number: | C-0141-89 |
| Release Date: | Apr 24 1989 |
| Substance Released: | Not reported |
| Release Status: | Closed |
| Release Closed Date: | Nov 21 1996 |

UST:

| | |
|---|---|
| Facility ID: | 00010424 |
| Facility Type: | ACTIVE |
| Latitude: | 42.2451010000 |
| Longitude: | -83.7017290000 |
| Owner Name: | Big M Fuel LLC |
| Owner Address: | 2995 Packard St |
| Owner City,St,Zip: | Ann Arbor, MI 48108 |
| Owner Country: | USA |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 975-4878 |
| Contact: | Nabil Hassan |
| Contact Phone: | (734) 975-8878 |
| 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: | 8000 |
| Install Date: | Apr 17 1971 |
| Product: | Gasoline |

**PACKARD AMOCO (Continued)** **U003425927**

| | |
|---|---|
| Remove Date: | Jan 22 1990 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Fiberglass reinforced plastic |
| Piping Type: | Not reported |
| Constr Material: | Fiberglass Reinforced plastic |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 2 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 10000 |
| Install Date: | Apr 17 1983 |
| Product: | Gasoline |
| Remove Date: | Jan 22 1990 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Fiberglass reinforced plastic |
| Piping Type: | Not reported |
| Constr Material: | Fiberglass Reinforced plastic |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 3 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 10000 |
| Install Date: | Apr 17 1983 |
| Product: | Gasoline |
| Remove Date: | Jan 22 1990 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Fiberglass reinforced plastic |
| Piping Type: | Not reported |
| Constr Material: | Fiberglass Reinforced plastic |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 4 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 1000 |
| Install Date: | Apr 16 1965 |
| Product: | Used Oil |
| Remove Date: | Jan 22 1990 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Galvanized Steel |
| Piping Type: | Not reported |
| Constr Material: | Asphalt Coated or Bare Steel |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | 5 |
| **Tank Status:** | **Removed from Ground** |
| Capacity: | 45 |
| Install Date: | Apr 17 1983 |
| Product: | HOIST OIL |
| Remove Date: | Jan 1 1989 |

**PACKARD AMOCO (Continued)** **U003425927**

Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: NONE
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 6
**Tank Status: Removed from Ground**
Capacity: 45
Install Date: Apr 17 1983
Product: HOIST OIL
Remove Date: Jan 1 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: NONE
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 7
**Tank Status: Currently In Use**
Capacity: 15000
Install Date: Dec 1 1997
Product: Gasoline
Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging,Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors,Interstitial Monitoring Double Walled Piping
Piping Material: Double Walled,ENVIRON
Piping Type: Pressure
Constr Material: Cathodically Protected Steel
Impressed Device: No

Tank ID: 8
**Tank Status: Currently In Use**
Capacity: 10000
Install Date: Dec 1 1997
Product: Gasoline
Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging,Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors,Interstitial Monitoring Double Walled Piping
Piping Material: Double Walled,ENVIRON
Piping Type: Pressure
Constr Material: Cathodically Protected Steel
Impressed Device: No

Tank ID: 9
**Tank Status: Currently In Use**
Capacity: 10000
Install Date: Dec 1 1997
Product: Gasoline

**PACKARD AMOCO (Continued)** **U003425927**

Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging,Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors,Interstitial Monitoring Double Walled Piping
Piping Material: Double Walled,ENV
Piping Type: Pressure
Constr Material: Cathodically Protected Steel
Impressed Device: No

---

**B6** **SAKSTRUPS TOWING INC** **LUST** **U000715391**
**East** **3055 PACKARD ST** **UST** **N/A**
**< 1/8** **ANN ARBOR, MI 48108**
**0.044 mi.**
**233 ft.** **Site 1 of 2 in cluster B**

**Relative:**
**Higher**

**Actual:**
**822 ft.**

LUST:
Facility ID: 00035772
Source: STATE OF MICHIGAN
Owner Name: Sakstrups Towing Inc
Owner Address: 3055 Packard St
Owner City,St,Zip: Ann Arbor, MI 48108-1936
Owner Contact: Not reported
Owner Phone: (734) 971-1111
Country: USA
District: Jackson District Office
Site Name: Sakstrups Towing Inc
Latitude: 42.2451450000
Longitude: -83.7000230000
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-0444-98
Release Date: Jun 1 1998
Substance Released: Unknown
Release Status: Closed
Release Closed Date: Feb 10 1999

UST:
Facility ID: 00035772
Facility Type: CLOSED
Latitude: 42.2451450000
Longitude: -83.7000230000
Owner Name: Sakstrups Towing Inc
Owner Address: 3055 Packard St
Owner City,St,Zip: Ann Arbor, MI 48108-1936
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (734) 971-1111
Contact: RICHARD SAKSTRUP
Contact Phone: (334) 481-1111
Date of Collection: 01-11-2001
Accuracy: 100
Accuracy Value Unit: FEET

**SAKSTRUPS TOWING INC (Continued)** **U000715391**

| | |
|---|---|
| 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: | 200 |
| Install Date: | Not reported |
| Product: | Used Oil |
| Remove Date: | Jun 1 1997 |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Bare Steel |
| Piping Type: | Gravity Fed? |
| Constr Material: | Unknown |
| Impressed Device: | No |

| | |
|---|---|
| Tank ID: | Phantom |
| **Tank Status:** | **Non-Registered Tank** |
| Capacity: | Not reported |
| Install Date: | Not reported |
| Product: | Unknown |
| Remove Date: | Not reported |
| Tank Release Detection: | Not reported |
| Pipe Realease Detection: | Not reported |
| Piping Material: | Not reported |
| Piping Type: | Not reported |
| Constr Material: | Not reported |
| Impressed Device: | No |

---

**7**
**SW**
**< 1/8**
**0.046 mi.**
**244 ft.**

**CARL READ** **UST** **U000715095**
**3050 PLATT RD** **N/A**
**ANN ARBOR, MI 48108**

**Relative:**
**Higher**

**Actual:**
**821 ft.**

UST:

| | |
|---|---|
| Facility ID: | 00035406 |
| Facility Type: | CLOSED |
| Latitude: | 42.2448730000 |
| Longitude: | -83.7004650000 |
| Owner Name: | Carl Read |
| Owner Address: | 3056 Platt Rd |
| Owner City,St,Zip: | Ann Arbor, MI 48108-1808 |
| Owner Country: | USA |
| Owner Contact: | Not reported |
| Owner Phone: | (734) 971-4038 |
| Contact: | ROBERT O'NEAL YOUNG |
| Contact Phone: | (734) 761-6555 |
| Date of Collection: | 01-11-2001 |
| Accuracy: | 100 |
| Accuracy Value Unit: | FEET |
| Horizontal Datum: | NAD83 |
| Source: | STATE OF MICHIGAN |
| Point Line Area: | POINT |

**CARL READ (Continued)** **U000715095**

Desc Category: Plant Entrance (Freight)
Method of Collection: Address Matching-House Number

Tank ID: 1
**Tank Status: Removed from Ground**
Capacity: 500
Install Date: Jan 1 1930
Product: UNKNOWN
Remove Date: Jul 18 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

Tank ID: 2
**Tank Status: Removed from Ground**
Capacity: 500
Install Date: Jan 1 1930
Product: UNKNOWN
Remove Date: Jul 18 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

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**B8** **SIR SPEEDY** **RCRA-CESQG** **1004722489**
**ESE** **3060 PACKARD ST** **FINDS** **MI0000995191**
**< 1/8** **ANN ARBOR, MI 48108**
**0.052 mi.**
**277 ft.** **Site 2 of 2 in cluster B**

**Relative: Higher**

**Actual: 823 ft.**

RCRA-CESQG:
Date form received by agency: 12/29/1994
Facility name: SIR SPEEDY
Facility address: 3060 PACKARD ST
ANN ARBOR, MI 48108
EPA ID: MI0000995191
Contact: ART ELKIN
Contact address: 3060 PACKARD ST
ANN ARBOR, MI 48108
Contact country: Not reported
Contact telephone: (313) 973-9500
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting

**SIR SPEEDY (Continued)** **1004722489**

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: | ART ELKIN |
| Owner/operator address: | Not reported |
| | Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Operator |
| Owner/Op start date: | 01/01/1970 |
| Owner/Op end date: | Not reported |
| Owner/operator name: | ART ELKIN |
| Owner/operator address: | Not reported |
| | Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/01/1970 |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

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

Universal Waste Summary:

| | |
|---|---|
| Waste type: | Batteries |
| Accumulated waste on-site: | No |
| Generated waste on-site: | No |
| Waste type: | Lamps |
| Accumulated waste on-site: | No |
| Generated waste on-site: | No |
| Waste type: | Pesticides |

**SIR SPEEDY (Continued)** **1004722489**

Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Violation Status: No violations found

FINDS:

Registry ID: 110003570699

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.

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**C9 West < 1/8 0.120 mi. 634 ft.** **CLARK RETAIL ENTERPRISES INC** **RCRA-CESQG** **1000529634**
**2955 PACKARD** **FINDS** **MID985621036**
**ANN ARBOR, MI 48108**

**Site 1 of 2 in cluster C**

**Relative: Equal**

**Actual: 819 ft.**

RCRA-CESQG:
Date form received by agency: 11/08/2001
Facility name: CLARK RETAIL ENTERPRISES INC
Facility address: 2955 PACKARD
ANN ARBOR, MI 48108
EPA ID: MID985621036
Mailing address: 3003 BUTTERFIELD RD
OAK BROOK, IL 60523
Contact: ERIC LARSON
Contact address: 2955 PACKARD
ANN ARBOR, MI 48108
Contact country: Not reported
Contact telephone: (734) 669-6155
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time;

**CLARK RETAIL ENTERPRISES INC (Continued)** **1000529634**

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: | CLARK RETAIL ENTERPRISES 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: | 10/22/2002 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | CLARK RETAIL ENTERPRISES 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: | 10/22/2002 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | CLARK REFINING & MARKETING INC |
| Owner/operator address: | Not reported |
| | Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/02/1997 |
| Owner/Op end date: | Not reported |

| | |
|---|---|
| Owner/operator name: | GALLUP PROPERTIES (PROPERTY OWNER) |
| Owner/operator address: | Not reported |
| | Not reported |
| Owner/operator country: | Not reported |
| Owner/operator telephone: | Not reported |
| Legal status: | Private |
| Owner/Operator Type: | Owner |
| Owner/Op start date: | 01/02/1997 |
| Owner/Op end date: | Not reported |

Handler Activities Summary:

U.S. importer of hazardous waste: No

**CLARK RETAIL ENTERPRISES INC (Continued)** **1000529634**

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

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 08/12/1991
Facility name: CLARK RETAIL ENTERPRISES INC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110003662135

Environmental Interest/Information System

**CLARK RETAIL ENTERPRISES INC (Continued)** **1000529634**

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.

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**C10 West 1/8-1/4 0.131 mi. 689 ft.** **ADVANCED PETRO INC 2955 PACKARD ST ANN ARBOR, MI 48108** **LUST UST** **U002303301 N/A**

**Site 2 of 2 in cluster C**

**Relative: Higher**

**Actual: 820 ft.**

LUST:

| | |
|---|---|
| Facility ID: | 00009884 |
| Source: | STATE OF MICHIGAN |
| Owner Name: | Omar Skaf |
| Owner Address: | c/o Advanced Petro Inc 2955 Packard St |
| Owner City,St,Zip: | Ann Arbor, MI 48108 |
| Owner Contact: | Not reported |
| Owner Phone: | (313) 336-6723 |
| Country: | USA |
| District: | Jackson District Office |
| Site Name: | Advanced Petro Inc |
| Latitude: | 42.2453500000 |
| Longitude: | -83.7023660000 |
| Date of Collection: | 12-02-2002 |
| Method of Collection: | GPS Code Meas. Standard Positioning Service SA Off |
| Accuracy: | 10 |
| Accuracy Value Unit: | METERS |
| Horizontal Data: | NAD83 |
| Point Line Area: | POINT |
| Desc Category: | Plant Entrance (Freight) |
| Leak Number: | C-0165-07 |
| Release Date: | Jun 19 2007 |
| Substance Released: | Gasoline |
| Release Status: | Open |
| Release Closed Date: | Not reported |

UST:

| | |
|---|---|
| Facility ID: | 00009884 |
| Facility Type: | ACTIVE |
| Latitude: | 42.2453500000 |
| Longitude: | -83.7023660000 |
| Owner Name: | Omar Skaf |
| Owner Address: | c/o Advanced Petro Inc 2955 Packard St |
| Owner City,St,Zip: | Ann Arbor, MI 48108 |
| Owner Country: | USA |
| Owner Contact: | Not reported |
| Owner Phone: | (313) 336-6723 |
| Contact: | Victoria Sweet |
| Contact Phone: | (734) 971-7511 |
| Date of Collection: | 12-02-2002 |
| Accuracy: | 10 |
| Accuracy Value Unit: | METERS |
| Horizontal Datum: | NAD83 |

**ADVANCED PETRO INC (Continued)** **U002303301**

Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off

Tank ID: 1
**Tank Status: Removed from Ground**
Capacity: 10000
Install Date: Apr 28 1982
Product: Gasoline
Remove Date: Jun 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
**Tank Status: Removed from Ground**
Capacity: 4000
Install Date: Apr 28 1961
Product: Gasoline
Remove Date: Jun 1 1987
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: 5
**Tank Status: Removed from Ground**
Capacity: 4000
Install Date: Apr 28 1961
Product: Gasoline
Remove Date: Jun 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 7
**Tank Status: Currently In Use**
Capacity: 10000
Install Date: Jun 8 1987
Product: Gasoline
Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging, Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing
Piping Material: Fiberglass reinforced plastic
Piping Type: Pressure

**ADVANCED PETRO INC (Continued)** **U002303301**

Constr Material: Cathodically Protected Steel, STIP3
Impressed Device: No

Tank ID: 2
**Tank Status: Removed from Ground**
Capacity: 4000
Install Date: Apr 28 1961
Product: Gasoline
Remove Date: Jun 1 1987
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: 4000
Install Date: Apr 28 1961
Product: Gasoline
Remove Date: Jun 1 1987
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 6
**Tank Status: Currently In Use**
Capacity: 6000
Install Date: Jun 8 1987
Product: Gasoline
Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging, Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing
Piping Material: Fiberglass reinforced plastic
Piping Type: Pressure
Constr Material: Cathodically Protected Steel, STIP3
Impressed Device: No

Tank ID: 8
**Tank Status: Currently In Use**
Capacity: 8000
Install Date: Jun 8 1987
Product: Gasoline
Remove Date: Not reported
Tank Release Detection: Automatic Tank Gauging, Inventory Control
Pipe Realease Detection: Automatic Line Leak Detectors, Line Tightness Testing
Piping Material: Fiberglass reinforced plastic
Piping Type: Pressure
Constr Material: Cathodically Protected Steel, STIP3

**ADVANCED PETRO INC (Continued)** **U002303301**

Impressed Device: No

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**11 North 1/2-1 0.556 mi. 2934 ft.** **ANN ARBOR CIVIC THEATER** **SHWS** **S110126795** **N/A**
**2275 PLATT ROAD**
**ANN ARBOR, MI 48104**

**Relative: Lower**

**Actual: 804 ft.**

SHWS:
Facility ID: 81000544
**Facility Status: Evaluation conducted**
Source: Not reported
SAM Score: 32
SAM Score Date: 5/25/2005
Township: 03S
Range: 06E
Section: 2
Quarter: Not reported
Quarter/Quarter: Not reported
Pollutants: Not reported

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**12 NNE 1/2-1 0.828 mi. 4370 ft.** **ARBOR DODGE** **RCRA-NonGen** **1000340398**
**3365 WASHTENAW AVE** **FINDS** **MID106752280**
**ANN ARBOR, MI 48104** **SHWS**
**LUST**
**UST**
**BEA**

**Relative: Lower**

**Actual: 797 ft.**

RCRA-NonGen:
Date form received by agency: 11/01/2002
Facility name: ARBOR DODGE
Facility address: 3365 WASHTENAW AVE
ANN ARBOR, MI 48104
EPA ID: MID106752280
Contact: ROBERT PRICE
Contact address: 3365 WASHTENAW AVE
ANN ARBOR, MI 48104
Contact country: Not reported
Contact telephone: (734) 971-5000
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 11/02/2002
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE

**ARBOR DODGE (Continued)** **1000340398**

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: 11/02/2002
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
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

**ARBOR DODGE (Continued)** **1000340398**

Historical Generators:
Date form received by agency: 06/01/1987
Facility name: ARBOR DODGE
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110003610664

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.

SHWS:
Facility ID: 81000553
**Facility Status: Evaluation conducted**
Source: Not reported
SAM Score: 32
SAM Score Date: 5/27/2005
Township: 03S
Range: 06E
Section: 2
Quarter: Not reported
Quarter/Quarter: Not reported
Pollutants: Not reported

LUST:
Facility ID: 00021467
Source: STATE OF MICHIGAN
Owner Name: Chrysler Realty Corp
Owner Address: 1450 W LONG LAKE RD STE 280
Owner City,St,Zip: TROY, MI 48098
Owner Contact: Not reported
Owner Phone: (313) 737-0299
Country: USA
District: Jackson District Office
Site Name: Arbor Dodge
Latitude: 42.2562490000
Longitude: -83.6925720000
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-1184-85
Release Date: May 24 1990

**ARBOR DODGE (Continued)** **1000340398**

Substance Released: Not reported
Release Status: Closed
Release Closed Date: Nov 12 1995

UST:
Facility ID: 00021467
Facility Type: CLOSED
Latitude: 42.2562490000
Longitude: -83.6925720000
Owner Name: Chrysler Realty Corp
Owner Address: 1450 W LONG LAKE RD STE 280
Owner City,St,Zip: TROY, MI 48098
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (313) 737-0299
Contact: FRED NEUMAN
Contact Phone: (313) 737-0299
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: 2000
Install Date: Aug 14 1961
Product: Gasoline
Remove Date: May 15 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
**Tank Status: Removed from Ground**
Capacity: 1000
Install Date: Aug 14 1961
Product: ENGINE OIL
Remove Date: May 15 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 3
**Tank Status: Removed from Ground**
Capacity: 500
Install Date: Aug 14 1961

**ARBOR DODGE (Continued)** **1000340398**

Product: Used Oil,WATER
Remove Date: May 15 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

BEA:
Secondary Address: Not reported
BEA Number: 461
District: Jackson
Date Received: 6/3/2003 12:59:00 AM
Submitter Name: LPN Properties LLC
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: hisket
Division Assigned: Storage Tank Division

Secondary Address: Not reported
BEA Number: 412
District: Jackson
Date Received: 10/7/2002 12:59:00 AM
Submitter Name: Cueter Chrysler Jeep LLC
Petition Determination: Affirmed
Petition Disclosure: 1
Category: Same Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: katkov
Division Assigned: Environmental Response Division

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**13** **SHWS** **S105768036**
**North** **3031 WASHTENAW AVENUE** **BROWNFIELDS** **N/A**
**1/2-1** **ANN ARBOR TOWNSHIP, MI** **BEA**
**0.850 mi.**
**4490 ft.**

**Relative:**
**Higher**

**Actual:**
**823 ft.**

SHWS:
Facility ID: 81000218
**Facility Status: See Leaking Underground Storage Tank Site Database**
Source: Not reported
SAM Score: 41
SAM Score Date: 8/8/2006
Township: 03S
Range: 06E
Section: 2
Quarter: Not reported
Quarter/Quarter: Not reported
Pollutants: Not reported

BROWNFIELD:
Facility ID: 00003042
Region: 1
Status: In Progress

**(Continued)** **S105768036**

Properry Use: Not reported
BEA: A
Ernie Id Number: 81000218
Redevelop Status: Not reported
Before Redevelopment: <a href=images/3042 before 1.jpg target=photoviewer>Photo</a>
After Redevelopment: Not reported

BEA:
Secondary Address: Not reported
BEA Number: 137
District: Jackson
Date Received: 4/30/1998
Submitter Name: Buddy Mini-Marts, Inc.
Petition Determination: No Request
Petition Disclosure: 0
Category: Same Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: temppm
Division Assigned: Storage Tank Division

Secondary Address: Not reported
BEA Number: 133
District: Jackson
Date Received: 4/30/1998
Submitter Name: Pipeline Oil Sales, Inc.
Petition Determination: No Request
Petition Disclosure: 0
Category: Same Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: temppm
Division Assigned: Storage Tank Division

Secondary Address: Not reported
BEA Number: 132
District: Jackson
Date Received: 4/30/1998
Submitter Name: Legacy Investment Company, LLC
Petition Determination: Affirmed
Petition Disclosure: 1
Category: Same Hazardous Substance(s)
Determination 20107A: Pending
Reviewer: temppm
Division Assigned: Storage Tank Division

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**14**
**NE**
**1/2-1**
**0.939 mi.**
**4960 ft.**

**ARBORLAND MALL**
**3693 WASHTENAW**
**ANN ARBOR, MI 48104**

**SHWS** **S105144779**
**N/A**

**Relative:**
**Equal**

**Actual:**
**819 ft.**

SHWS:
Facility ID: 81000492
**Facility Status: Interim Response in progress**
Source: Dry Cleaning Plants
SAM Score: 37
SAM Score Date: 7/2/2004
Township: 3S

**ARBORLAND MALL (Continued)** **S105144779**

Range: 6E
Section: 2
Quarter: NE
Quarter/Quarter: Not reported
Pollutants: PCE; TCE

ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| ANN ARBOR | S110126793 | HIDEAWAY LANE | 2000 / 2018 TRAVER ROAD | 48104 | SHWS |
| ANN ARBOR | S103086285 | MICH CON BEAKES ST | BEAKES / SUMMIT STS | 48104 | SHWS |
| ANN ARBOR | S108632632 | EATON CORPORATION | 315 SOUTH FIRST STREET | 48104 | SHWS |
| ANN ARBOR | S103595083 | PLATT ROAD DUMP | FORMERLY 5375 PLATT ROAD | 48108 | SHWS |
| ANN ARBOR | S103095426 | UM NORTH CAMPUS LANDFILL AREA | HURON PKWY | 48104 | SHWS |
| ANN ARBOR | 1004724204 | SPEEDWAY SUPERAMERICA LLC | 4025 PACKARD | 48104 | RCRA-NonGen, FINDS |
| ANN ARBOR | S108632630 | GEORGETOWN CLEANERS | 2502-2568 PACKARD ROAD | | SHWS |
| ANN ARBOR | S103595047 | AVFUEL BULK FACILITY | STATE / ELLSWORTH RDS. | 48104 | SHWS |
| ANN ARBOR | 1008403289 | CF FLAG | 4714 S STATE RD | 48108 | RCRA-CESQG |
| ANN ARBOR | 1004724331 | SPEEDWAY SUPERAMERICA LLC | 4001 S STATE | 48104 | RCRA-CESQG, FINDS |
| ANN ARBOR | 1000466042 | MIT INVESTMENTS | 3230 S STATE / I-94 | 48108 | RCRA-NonGen, FINDS, LUST |
| ANN ARBOR | S103595057 | UNIVERSITY OF MICH LF NO 1 | WASHINGTON HEIGHTS | 48104 | SHWS |
| ANN ARBOR CITY | S107812200 | | 2235 / 2245 S STATE | 48104 | BEA |
| ANN ARBOR CITY | S106676482 | | 212 -216 S STATE ST | 48104 | BEA |

# 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: 03/31/2010
Date Data Arrived at EDR: 04/02/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 05/07/2010
Next Scheduled EDR Contact: 07/26/2010
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/31/2010
Date Data Arrived at EDR: 04/02/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 05/07/2010
Next Scheduled EDR Contact: 07/26/2010
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/17/2010
Next Scheduled EDR Contact: 08/30/2010
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: 03/31/2010
Date Data Arrived at EDR: 04/02/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 05/07/2010
Next Scheduled EDR Contact: 07/26/2010
Data Release Frequency: Quarterly

***Federal CERCLIS list***

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

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

Date of Government Version: 01/29/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/11/2010
Next Scheduled EDR Contact: 07/12/2010
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of NPL and Base Realighnment & Closure sites found in the CERCLIS database where FERRO is involved in cleanup projects.

Date of Government Version: 06/23/2009
Date Data Arrived at EDR: 01/15/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/30/2010
Next Scheduled EDR Contact: 07/26/2010
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: 06/23/2009
Date Data Arrived at EDR: 09/02/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 19

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 06/11/2010
Next Scheduled EDR Contact: 09/13/2010
Data Release Frequency: Quarterly

***Federal RCRA CORRACTS facilities list***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2010
Date Data Arrived at EDR: 03/31/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/17/2010
Next Scheduled EDR Contact: 08/30/2010
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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/29/2010
Next Scheduled EDR Contact: 07/19/2010
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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/29/2010
Next Scheduled EDR Contact: 07/19/2010
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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/29/2010
Next Scheduled EDR Contact: 07/19/2010
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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/29/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Varies

***Federal Institutional controls / engineering controls registries***

US ENG CONTROLS: Engineering Controls Sites List

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

Date of Government Version: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
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: 12/20/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

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

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/22/2010
Date Made Active in Reports: 02/11/2010
Number of Days to Update: 20

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 04/07/2010
Next Scheduled EDR Contact: 07/19/2010
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: 05/03/2010
Date Data Arrived at EDR: 05/04/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 36

Source: Department of Natural Resources & Environment
Telephone: 517-373-9541
Last EDR Contact: 05/04/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Semi-Annually

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

SWF/LF: Solid Waste Facilities Database

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

Date of Government Version: 04/05/2010
Date Data Arrived at EDR: 05/28/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 12

Source: Department of Natural Resources & Environment
Telephone: 517-335-4035
Last EDR Contact: 04/05/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Semi-Annually

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***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: 05/21/2010
Date Data Arrived at EDR: 05/25/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 15

Source: Department of Natural Resources & Environment
Telephone: 517-373-9837
Last EDR Contact: 05/25/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: Annually

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: 02/01/2010
Date Data Arrived at EDR: 03/03/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Quarterly

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

Date of Government Version: 03/10/2010
Date Data Arrived at EDR: 03/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 27

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/04/2010
Date Data Arrived at EDR: 05/05/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 22

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
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: 05/03/2010
Date Data Arrived at EDR: 05/05/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 22

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 28

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/04/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 02/25/2010
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 46

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Quarterly

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

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

Date of Government Version: 03/29/2010
Date Data Arrived at EDR: 04/01/2010
Date Made Active in Reports: 04/14/2010
Number of Days to Update: 13

Source: Department of Natural Resources & Environment
Telephone: 517-335-4035
Last EDR Contact: 05/25/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: Annually

AST: Aboveground Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 03/12/2010
Date Made Active in Reports: 04/14/2010
Number of Days to Update: 33

Source: Department of Natural Resources & Environment
Telephone: 517-373-8168
Last EDR Contact: 05/24/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: No Update Planned

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: 02/25/2010
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 46

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
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: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/12/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/01/2010
Date Data Arrived at EDR: 03/03/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 40

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Quarterly

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: 03/10/2010
Date Data Arrived at EDR: 03/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 27

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/04/2010
Date Data Arrived at EDR: 05/05/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 22

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/03/2010
Date Data Arrived at EDR: 05/05/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 22

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Semi-Annually

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: 02/11/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
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
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/19/2010
Next Scheduled EDR Contact: 08/02/2010
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: 03/26/2010
Date Data Arrived at EDR: 03/26/2010
Date Made Active in Reports: 04/13/2010
Number of Days to Update: 18

Source: Department of Natural Resources & Environment
Telephone: 517-373-4828
Last EDR Contact: 06/07/2010
Next Scheduled EDR Contact: 09/20/2010
Data Release Frequency: Varies

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

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/05/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

***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: 06/01/2010
Date Data Arrived at EDR: 06/01/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 8

Source: Department of Natural Resources & Environment
Telephone: 517-373-4805
Last EDR Contact: 05/17/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

BROWNFIELDS 2: Brownfields Building and Land Site Locations
A listing of brownfield building and land site locations. The listing is a collaborative effort of Michigan Economic Development Corporation, Michigan Economic Developers Association, Detrot Edison, Detroit Area Commercial Board of Realtors

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

Source: Economic Development Corporation
Telephone: 888-522-0103
Last EDR Contact: 06/07/2010
Next Scheduled EDR Contact: 09/20/2010
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: 03/02/2010
Date Data Arrived at EDR: 03/23/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/23/2010
Next Scheduled EDR Contact: 07/12/2010
Data Release Frequency: Semi-Annually

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

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

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

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 06/07/2010
Next Scheduled EDR Contact: 09/20/2010
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: 06/08/2010
Next Scheduled EDR Contact: 08/23/2010
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***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: 08/19/2009
Date Data Arrived at EDR: 12/29/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 43

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/08/2010
Next Scheduled EDR Contact: 09/20/2010
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: 05/10/2010
Date Data Arrived at EDR: 05/11/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 29

Source: Department of Natural Resources & Environment
Telephone: 517-373-9541
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
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: 04/15/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

***Local Land Records***

LIENS 2: CERCLA Lien Information

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

Date of Government Version: 02/05/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

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

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/24/2010
Next Scheduled EDR Contact: 09/06/2010
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: 03/30/2010
Date Data Arrived at EDR: 04/30/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 40

Source: Department of Natural Resources & Environment
Telephone: 517-373-9837
Last EDR Contact: 04/26/2010
Next Scheduled EDR Contact: 08/09/2010
Data Release Frequency: Varies

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 04/06/2010
Date Data Arrived at EDR: 04/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 50

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/07/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Annually

PEAS: Pollution Emergency Alerting System

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

Date of Government Version: 12/08/2009
Date Data Arrived at EDR: 03/12/2010
Date Made Active in Reports: 03/23/2010
Number of Days to Update: 11

Source: Department of Natural Resources & Environment
Telephone: 517-373-8427
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
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: 02/17/2010
Date Data Arrived at EDR: 02/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/29/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/12/2010
Date Data Arrived at EDR: 02/09/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 62

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/12/2010
Next Scheduled EDR Contact: 08/23/2010
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 04/21/2010
Next Scheduled EDR Contact: 08/02/2010
Data Release Frequency: Semi-Annually

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

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/30/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 62

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/18/2010
Next Scheduled EDR Contact: 06/28/2010
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: 04/11/2010
Date Data Arrived at EDR: 04/19/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 28

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/05/2010
Next Scheduled EDR Contact: 07/19/2010
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: 04/29/2010
Date Data Arrived at EDR: 05/07/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 20

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/07/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Annually

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

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/01/2010
Next Scheduled EDR Contact: 09/13/2010
Data Release Frequency: Varies

MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/12/2010
Date Data Arrived at EDR: 03/10/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 68

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/09/2010
Next Scheduled EDR Contact: 09/20/2010
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: 12/31/2008
Date Data Arrived at EDR: 01/13/2010
Date Made Active in Reports: 02/18/2010
Number of Days to Update: 36

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/04/2010
Next Scheduled EDR Contact: 09/13/2010
Data Release Frequency: Annually

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

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/21/2010
Next Scheduled EDR Contact: 07/12/2010
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: 06/01/2010
Next Scheduled EDR Contact: 09/13/2010
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: 06/01/2010
Next Scheduled EDR Contact: 09/13/2010
Data Release Frequency: Quarterly

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

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

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

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

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

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

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

SSTS: Section 7 Tracking Systems

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

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/06/2010
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 05/03/2010
Next Scheduled EDR Contact: 08/16/2010
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: 04/24/2010
Date Data Arrived at EDR: 04/29/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 03/29/2010
Next Scheduled EDR Contact: 07/12/2010
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: 09/01/2009
Date Data Arrived at EDR: 10/21/2009
Date Made Active in Reports: 12/01/2009
Number of Days to Update: 41

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/22/2010
Next Scheduled EDR Contact: 08/02/2010
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: 03/18/2010
Date Data Arrived at EDR: 04/06/2010
Date Made Active in Reports: 05/27/2010
Number of Days to Update: 51

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

Date of Government Version: 04/13/2010
Date Data Arrived at EDR: 04/14/2010
Date Made Active in Reports: 05/17/2010
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/14/2010
Next Scheduled EDR Contact: 07/26/2010
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: 03/15/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

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

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/25/2010
Date Made Active in Reports: 05/12/2010
Number of Days to Update: 76

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/25/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: Biennially

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: 02/02/2010
Date Data Arrived at EDR: 03/03/2010
Date Made Active in Reports: 03/23/2010
Number of Days to Update: 20

Source: Department of Natural Resources & Environment
Telephone: 517-241-1515
Last EDR Contact: 02/01/2010
Next Scheduled EDR Contact: 05/17/2010
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Establishments
A listing of drycleaning facilities in Michigan.

Date of Government Version: 04/28/2010
Date Data Arrived at EDR: 05/17/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 23

Source: Department of Natural Resources & Environment
Telephone: 517-335-4586
Last EDR Contact: 04/23/2010
Next Scheduled EDR Contact: 08/09/2010
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: 04/13/2010
Date Data Arrived at EDR: 04/14/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 56

Source: Department of Natural Resources & Environment
Telephone: 517-241-1300
Last EDR Contact: 04/14/2010
Next Scheduled EDR Contact: 07/26/2010
Data Release Frequency: Varies

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

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 10/09/2009
Date Made Active in Reports: 11/17/2009
Number of Days to Update: 39

Source: Department of Natural Resources & Environment
Telephone: 517-373-7074
Last EDR Contact: 04/02/2010
Next Scheduled EDR Contact: 07/12/2010
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: 05/27/2010
Date Data Arrived at EDR: 05/28/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 12

Source: Department of Natural Resources & Environment
Telephone: 517-373-9541
Last EDR Contact: 05/24/2010
Next Scheduled EDR Contact: 09/06/2010
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: 04/21/2010
Next Scheduled EDR Contact: 08/02/2010
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: 02/10/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 60

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/10/2010
Next Scheduled EDR Contact: 08/09/2010
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDLAND: Federal and Indian Lands

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

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

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/21/2010
Next Scheduled EDR Contact: 08/02/2010
Data Release Frequency: N/A

FINANCIAL ASSURANCE: Financial Assurance Information Listing

Financial assurance information.

Date of Government Version: 05/04/2010
Date Data Arrived at EDR: 05/06/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 34

Source: Department of Natural Resources & Environment
Telephone: 517-335-6610
Last EDR Contact: 04/12/2010
Next Scheduled EDR Contact: 07/19/2010
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: 04/05/2010
Date Data Arrived at EDR: 05/28/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 12

Source: Department of Natural Resources & Environment
Telephone: 517-335-4034
Last EDR Contact: 04/05/2010
Next Scheduled EDR Contact: 07/19/2010
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 11/09/2009
Date Data Arrived at EDR: 12/18/2009
Date Made Active in Reports: 02/10/2010
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/16/2010
Next Scheduled EDR Contact: 06/28/2010
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

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

Date of Government Version: 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: 05/14/2010
Next Scheduled EDR Contact: 08/16/2010
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
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/21/2010
Next Scheduled EDR Contact: 08/02/2010
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: 04/19/2010
Date Data Arrived at EDR: 04/19/2010
Date Made Active in Reports: 06/09/2010
Number of Days to Update: 51

Source: Department of Natural Resources & Environment
Telephone: 586-753-3754
Last EDR Contact: 04/12/2010
Next Scheduled EDR Contact: 07/26/2010
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.

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: 06/04/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 01/20/2010
Date Made Active in Reports: 02/05/2010
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/23/2010
Next Scheduled EDR Contact: 08/02/2010
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/04/2010
Date Data Arrived at EDR: 02/11/2010
Date Made Active in Reports: 03/17/2010
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/13/2010
Next Scheduled EDR Contact: 08/23/2010
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: 05/24/2010
Next Scheduled EDR Contact: 09/06/2010
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 11/03/2009
Date Data Arrived at EDR: 02/12/2010
Date Made Active in Reports: 02/22/2010
Number of Days to Update: 10

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/01/2010
Next Scheduled EDR Contact: 09/13/2010
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 07/17/2009
Date Made Active in Reports: 08/10/2009
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/22/2010
Next Scheduled EDR Contact: 07/05/2010
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Centers, Group & Family Homes
Source: Bureau of REgulatory Services
Telephone: 517-373-8300

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2009 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®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

3005 PACKARD
3005 PACKARD
ANN ARBOR, MI 48104

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 42.24530 - 42˚ 14' 43.1" |
| Longitude (West): | 83.6999 - 83˚ 41' 59.6" |
| Universal Tranverse Mercator: | Zone 17 |
| UTM X (Meters): | 277247.3 |
| UTM Y (Meters): | 4680328.0 |
| Elevation: | 819 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 42083-B6 YPSILANTI WEST, MI |
| Most Recent Revision: | 1983 |
| | |
| North Map: | 42083-C6 ANN ARBOR EAST, MI |
| Most Recent Revision: | 1983 |

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).

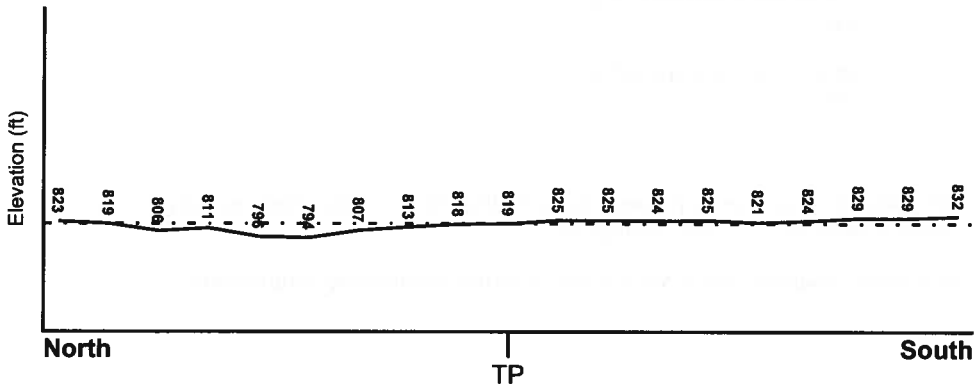
**TOPOGRAPHIC INFORMATION**

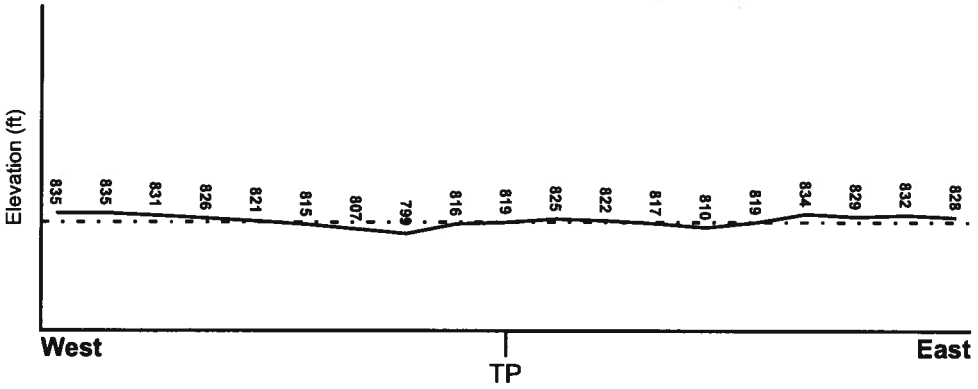
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General NW

**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 819 ft.**

0 1/2 1 Miles

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**

| Target Property County | FEMA Flood Electronic Data |
|---|---|
| WASHTENAW, MI | Not Available |

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| YPSILANTI WEST | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

***Site-Specific Hydrogeological Data*:***

Search Radius: 1.25 miles
Status: Not found

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| 3 | 1/2 - 1 Mile North | SE |
| 5 | 1/2 - 1 Mile NNE | N |

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW VELOCITY INFORMATION**

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

**GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY**

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

| | |
|---|---|
| Era: | Paleozoic |
| System: | Mississippian |
| Series: | Osagean and Kinderhookian Series |
| Code: | M1 *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

**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. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

| | |
|---|---|
| Soil Component Name: | BLOUNT |
| Soil Surface Texture: | loam |
| Hydrologic Group: | Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures. |
| Soil Drainage Class: | Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet. |

Hydric Status: Soil does not meet the requirements for a hydric soil.

| | |
|---|---|
| Corrosion Potential - Uncoated Steel: | HIGH |
| Depth to Bedrock Min: | > 60 inches |
| Depth to Bedrock Max: | > 60 inches |

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | | |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | Permeability Rate (in/hr) | Soil Reaction (pH) |
| 1 | 0 inches | 10 inches | loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 2.00<br>Min: 0.60 | Max: 7.30<br>Min: 5.10 |
| 2 | 10 inches | 25 inches | silty clay loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay. | Max: 0.60<br>Min: 0.06 | Max: 6.50<br>Min: 4.50 |
| 3 | 25 inches | 32 inches | silty clay loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 0.60<br>Min: 0.06 | Max: 7.80<br>Min: 6.10 |
| 4 | 32 inches | 60 inches | silty clay loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 0.60<br>Min: 0.06 | Max: 8.40<br>Min: 7.40 |

**OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: muck
clay

Surficial Soil Types: muck
clay

Shallow Soil Types: silty clay

Deeper Soil Types: clay loam
sand
stratified

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

## FEDERAL USGS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

Note: PWS System location is not always the same as well location.

## STATE DATABASE WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| 1 | MI20317269 | 1/2 - 1 Mile NNW |
| 4 | MI20317308 | 1/2 - 1 Mile South |
| A7 | MI20320195 | 1/2 - 1 Mile West |
| 8 | MI20317267 | 1/2 - 1 Mile NE |
| A9 | MI20317271 | 1/2 - 1 Mile West |
| 10 | MI20317314 | 1/2 - 1 Mile West |
| 11 | MI20323136 | 1/2 - 1 Mile North |

# PHYSICAL SETTING SOURCE MAP - 2791628.2s

0 1/4 1/2 1 Miles

- 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
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

| | |
|---|---|
| SITE NAME: 3005 Packard<br>ADDRESS: 3005 Packard<br>Ann Arbor MI 48104<br>LAT/LONG: 42.2453 / 83.6999 | CLIENT: AKT Environmental Consultants<br>CONTACT: Jessica Cory<br>INQUIRY #: 2791628.2s<br>DATE: June 11, 2010 3:56 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Elevation | | Database | EDR ID Number |
|---|---|---|---|
| **1**<br>**NNW**<br>**1/2 - 1 Mile**<br>**Higher** | | **MI WELLS** | **MI20317269** |

| | | | |
|---|---|---|---|
| Wellid: | 81000006695 | Import id: | 81737603001 |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 3 |
| Owner name: | GREATER MICHIGAN CONTRACTING | | |
| Well addr: | COUNTY FARM PARK | | |
| Well depth: | 148 | | |
| Well type: | Irrigation | | |
| Wssn: | 0 | | |
| Well num: | Not Reported | Driller id: | 26 |
| Const date: | 1981-09-26 00:00:00.000 | Case type: | Unknown |
| Case dia: | 4 | | |
| Case depth: | 114 | | |
| Screen frm: | 144 | | |
| Screen to: | 148 | | |
| Swl: | 73.5 | | |
| Test depth: | 25 | | |
| Test hours: | 4 | | |
| Test rate: | 15 | Test methd: | Unknown |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.2551234476 | | |
| Longitude: | -83.7078944174 | | |
| Methd coll: | Interpolation-Map | | |
| Elevation: | 872 | | |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Not Reported |
| Elev flag: | Not Reported | | |
| Swl flag: | Not Reported | | |
| Elev dem: | 869 | Elev dif: | 3 |
| Elev miv: | 872 | Aq code: | Not Reported |
| Aq flag: | Lithology Problem (Drift under Rock) | Pct aq: | 0 |
| Pct aq d: | 0 | 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: | -9 |
| D r type: | Not Reported | Spc cpcity: | 0 |
| A thicknes: | 13 | A pct aq: | 0 |
| A pct maq: | 100 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 75 | A pct aq2: | 0 |
| A pct maq2: | 23 | A pct pcm2: | 28 |
| A pct cm2: | 49 | A pct na2: | 0 |
| A hit swl: | F | A hit top: | F |
| A hit rock: | F | A sc lith1: | Not Reported |
| A sc lmod1: | Not Reported | A sc lmaq1: | Not Reported |
| A sc lpct1: | 0 | 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: | 70 |
| Pct pcm 1: | 30 | 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: | 0 |
| Pct pcm 3: | 100 | Pct na 3: | 0 |
| Pct aq 4: | 0 | Pct maq 4: | 0 |
| Pct cm 4: | 100 | Pct pcm 4: | 0 |
| Pct na 4: | 0 | Pct aq 5: | 0 |
| Pct maq 5: | 0 | Pct cm 5: | 100 |
| 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: | 75 | | |
| Horiz Conduct: | 1.00312 | | |
| Vert Conduct: | .0002 | | |
| T2: | 75.2337 | | |
| D50plek: | 11.38786 | | |

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**3**
**North**
**1/2 - 1 Mile**
**Lower**

**AQUIFLOW** **63222**

| | |
|---|---|
| Site ID: | 810459 |
| Groundwater Flow: | SE |
| Shallowest Water Table Depth: | Not Reported |
| Deepest Water Table Depth: | Not Reported |
| Average Water Table Depth: | 5 |
| Date: | 08/1995 |

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**4**
**South**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20317308**

| | | | |
|---|---|---|---|
| Wellid: | 81000006734 | Import id: | 81737610001 |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 10 |
| Owner name: | SCHMERBERG, RUDY | | |
| Well addr: | 3802 PLATT RD. | | |
| Well depth: | 36 | | |
| Well type: | Household | | |
| Wssn: | 0 | | |
| Well num: | Not Reported | Driller id: | 388 |
| Const date: | 1975-11-28 00:00:00.000 | Case type: | Unknown |
| Case dia: | 4 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| Case depth: | 32 | | |
| Screen frm: | 32 | | |
| Screen to: | 36 | | |
| Swl: | 14 | | |
| Test depth: | 19 | | |
| Test hours: | 0 | | |
| Test rate: | 25 | Test methd: | Unknown |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.2331868759 | | |
| Longitude: | -83.7003984459 | | |
| Methd coll: | Interpolation-Map | | |
| Elevation: | 845 | | |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Not Reported |
| Elev flag: | Not Reported | | |
| Swl flag: | Not Reported | | |
| Elev dem: | 827 | Elev dif: | 18 |
| Elev miv: | 845 | Aq code: | Drift Well |
| Aq flag: | Not Reported | Pct aq: | 78 |
| Pct aq d: | 78 | Pct aq r: | 0 |
| Pct maq: | 0 | Pct maq d: | 0 |
| Pct maq r: | 0 | Pct cm: | 22 |
| Pct cm d: | 22 | 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: | 22 | A pct aq: | 100 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 22 | 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: | 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: | 40 |
| Pct pcm 1: | 0 | Pct na 1: | 0 |
| Pct aq 2: | 0 | 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 |
| Within sec: | Y | Loc match: | Y |
| Aq code 1: | D | | |
| Hit swl: | T | | |
| Athk2: | 22 | | |
| Horiz Conduct: | 28.40909 | | |
| Vert Conduct: | 26.82927 | | |
| T2: | 625 | | |
| D50plek: | 24.53823 | | |

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**5**
**NNE**
**1/2 - 1 Mile**
**Lower**

**AQUIFLOW** **39419**

| | |
|---|---|
| Site ID: | 810365 |
| Groundwater Flow: | N |
| Shallowest Water Table Depth: | 1.13 |
| Deepest Water Table Depth: | 12.83 |
| Average Water Table Depth: | Not Reported |
| Date: | 09/20/1993 |

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**A7**
**West**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20320195**

| | | | |
|---|---|---|---|
| Wellid: | 81000010089 | Import id: | Not Reported |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 3 |
| Owner name: | Linda Grant | | |
| Well addr: | 2655 Packard Road | | |
| Well depth: | 400 | | |
| Well type: | Household | | |
| Wssn: | 0 | | |
| Well num: | Not Reported | Driller id: | 1607 |
| Const date: | 2000-08-08 00:00:00.000 | Case type: | PVC Plastic |
| Case dia: | 5 | | |
| Case depth: | 234 | | |
| Screen frm: | 0 | | |
| Screen to: | 0 | | |
| Swl: | 35 | | |
| Test depth: | 400 | | |
| Test hours: | 2 | | |
| Test rate: | 7 | Test methd: | Test Pump |
| Grouted: | 1 | Pmp cpcity: | 20 |
| Latitude: | 42.24587728 | | |
| Longitude: | -83.71723009 | | |

# 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: | 836 | Elev dif: | 836 |
| Elev miv: | 836 | Aq code: | Rock Well |
| Aq flag: | Not Reported | Pct aq: | 36 |
| Pct aq d: | 4 | Pct aq r: | 77 |
| Pct maq: | 10 | Pct maq d: | 0 |
| Pct maq r: | 23 | Pct cm: | 54 |
| Pct cm d: | 96 | 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: | 225 |
| D r type: | Not Reported | Spc cpcity: | 0 |
| A thicknes: | 0 | A pct aq: | 0 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 0 | A pct aq2: | 0 |
| A pct maq2: | 0 | A pct pcm2: | 0 |
| A pct cm2: | 0 | A pct na2: | 0 |
| A hit swl: | F | A hit top: | F |
| A hit rock: | F | A sc lith1: | Not Reported |
| A sc lmod1: | Not Reported | A sc lmaq1: | Not Reported |
| A sc lpct1: | 0 | 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: | 0 | Pct maq 2: | 0 |
| Pct cm 2: | 100 | Pct pcm 2: | 0 |
| Pct na 2: | 0 | Pct aq 3: | 50 |
| Pct maq 3: | 0 | Pct cm 3: | 50 |
| Pct pcm 3: | 0 | Pct na 3: | 0 |
| Pct aq 4: | 0 | Pct maq 4: | 0 |
| Pct cm 4: | 100 | Pct pcm 4: | 0 |
| Pct na 4: | 0 | Pct aq 5: | 0 |
| Pct maq 5: | 0 | Pct cm 5: | 100 |
| Pct pcm 5: | 0 | Pct na 5: | 0 |
| Pct aq 6: | 0 | Pct maq 6: | 0 |
| Pct cm 6: | 100 | Pct pcm 6: | 0 |
| Pct na 6: | 0 | Pct aq 7: | 0 |
| Pct maq 7: | 0 | Pct cm 7: | 100 |
| Pct pcm 7: | 0 | Pct na 7: | 0 |
| Pct aq 8: | 0 | Pct maq 8: | 0 |
| Pct cm 8: | 100 | 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: | R | | |
| Hit swl: | F | | |
| Athk2: | 0 | | |
| Horiz Conduct: | 4.87814 | | |
| Vert Conduct: | .00011 | | |
| T2: | 1000.0195 | | |
| D50plek: | 356.68351 | | |

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**8**
**NE**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20317267**

| | | | |
|---|---|---|---|
| Wellid: | 81000006693 | Import id: | 81737602001 |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 2 |
| Owner name: | HI FASHION HOMES INC. | | |
| Well addr: | 3999 WASHTENAW RD | | |
| Well depth: | 130 | | |
| Well type: | Household | | |
| Wssn: | 0 | | |
| Well num: | Not Reported | Driller id: | 248 |
| Const date: | 1967-03-02 00:00:00.000 | Case type: | Unknown |
| Case dia: | 4 | | |
| Case depth: | 130 | | |
| Screen frm: | 122 | | |
| Screen to: | 130 | | |
| Swl: | 40 | | |
| Test depth: | 40 | | |
| Test hours: | 8 | | |
| Test rate: | 12 | Test methd: | Unknown |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.2558106192 | | |
| Longitude: | -83.6885998283 | | |
| Methd coll: | Interpolation-Map | | |
| Elevation: | 825 | | |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Not Reported |
| Elev flag: | Not Reported | | |
| Swl flag: | Not Reported | | |
| Elev dem: | 820 | Elev dif: | 5 |
| Elev miv: | 825 | Aq code: | Drift Well |
| Aq flag: | Not Reported | Pct aq: | 35 |
| Pct aq d: | 35 | Pct aq r: | 0 |
| Pct maq: | 0 | Pct maq d: | 0 |
| Pct maq r: | 0 | Pct cm: | 42 |
| Pct cm d: | 42 | 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: | 0 |
| A thicknes: | 25 | A pct aq: | 100 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 90 | A pct aq2: | 28 |

| | | | |
|---|---|---|---|
| A pct maq2: | 0 | A pct pcm2: | 11 |
| A pct cm2: | 61 | A pct na2: | 0 |
| A hit swl: | F | 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: | 100 |
| Pct maq 1: | 0 | Pct cm 1: | 0 |
| Pct pcm 1: | 0 | 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: | 50 |
| Pct pcm 3: | 50 | Pct na 3: | 0 |
| Pct aq 4: | 0 | Pct maq 4: | 0 |
| Pct cm 4: | 100 | Pct pcm 4: | 0 |
| Pct na 4: | 0 | Pct aq 5: | 0 |
| Pct maq 5: | 0 | Pct cm 5: | 100 |
| Pct pcm 5: | 0 | Pct na 5: | 0 |
| Pct aq 6: | 80 | Pct maq 6: | 0 |
| Pct cm 6: | 20 | 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: | 90 | | |
| Horiz Conduct: | 27.7785 | | |
| Vert Conduct: | .00138 | | |
| T2: | 2500.065 | | |
| D50plek: | 373.25338 | | |

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**A9**
**West**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20317271**

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| Wellid: | 81000006697 | Import id: | 81737603302 |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 3 |
| Owner name: | WALDEN WOODS SUB | | |
| Well addr: | WALDEN WOODS SUB WELL #2 | | |
| Well depth: | 0 | | |
| Well type: | Type I public | | |
| Wssn: | 6840 | | |
| Well num: | WALDEN WOODS SUB WELL #2 | Driller id: | 0 |
| Const date: | Not Reported | Case type: | Unknown |
| Case dia: | 6 | | |
| Case depth: | 0 | | |
| Screen frm: | 0 | | |
| Screen to: | 0 | | |
| Swl: | 999.99 | | |
| Test depth: | 0 | | |
| Test hours: | 0 | | |
| Test rate: | 75 | Test methd: | Unknown |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.246037 | | |
| Longitude: | -83.718556 | | |
| Methd coll: | GPS Code Meas. Std. Positioning Svc. SA Off | | |
| Elevation: | 841 | | |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Well Depth = 0 |
| Elev flag: | Not Reported | | |
| Swl flag: | SWL > Well Depth | | |
| Elev dem: | 840 | Elev dif: | 1 |
| Elev miv: | 841 | Aq code: | Unknown Lithology |
| Aq flag: | Not Reported | Pct aq: | 0 |
| Pct aq d: | 0 | 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: | -3 |
| D r type: | Not Reported | Spc cpcity: | 0 |
| A thicknes: | 0 | A pct aq: | 0 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 0 | A pct aq2: | 0 |
| A pct maq2: | 0 | A pct pcm2: | 0 |
| A pct cm2: | 0 | A pct na2: | 0 |
| A hit swl: | F | A hit top: | F |
| A hit rock: | F | A sc lith1: | Not Reported |
| A sc lmod1: | Not Reported | A sc lmaq1: | Not Reported |
| A sc lpct1: | 0 | 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: | 0 | Pct na 1: | 0 |
| Pct aq 2: | 0 | 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 |
| Within sec: | Y | Loc match: | Y |
| Aq code 1: | Not Reported | | |
| Hit swl: | Not Reported | | |
| Athk2: | 0 | | |
| Horiz Conduct: | 0 | | |
| Vert Conduct: | 0 | | |
| T2: | 0 | | |
| D50plek: | 0 | | |

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**10**
**West**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20317314**

| | | | |
|---|---|---|---|
| Wellid: | 81000006740 | Import id: | 81737610302 |
| County: | Washtenaw | Township: | Pittsfield |
| Town range: | 03S 06E | Section: | 10 |
| Owner name: | WALDEN WOODS SUB | | |
| Well addr: | WALDEN WOODS SUB WELL #1 | | |
| Well depth: | 0 | | |
| Well type: | Type I public | | |
| Wssn: | 6840 | | |
| Well num: | WALDEN WOODS SUB WELL #1 | Driller id: | 0 |
| Const date: | Not Reported | Case type: | Unknown |
| Case dia: | 6 | | |
| Case depth: | 0 | | |
| Screen frm: | 0 | | |
| Screen to: | 0 | | |
| Swl: | 999.99 | | |
| Test depth: | 0 | | |
| Test hours: | 0 | | |
| Test rate: | 40 | Test methd: | Unknown |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.246058 | | |
| Longitude: | -83.718642 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| Methd coll: | GPS Code Meas. Std. Positioning Svc. SA Off | | |
| Elevation: | 841 | | |
| Elev methd: | Topographoc Map Interpolation | Depth flag: | Well Depth = 0 |
| Elev flag: | Not Reported | | |
| Swl flag: | SWL > Well Depth | | |
| Elev dem: | 840 | Elev dif: | 1 |
| Elev miv: | 841 | Aq code: | Unknown Lithology |
| Aq flag: | Not Reported | Pct aq: | 0 |
| Pct aq d: | 0 | 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: | -3 |
| D r type: | Not Reported | Spc cpcity: | 0 |
| A thicknes: | 0 | A pct aq: | 0 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 0 | A pct aq2: | 0 |
| A pct maq2: | 0 | A pct pcm2: | 0 |
| A pct cm2: | 0 | A pct na2: | 0 |
| A hit swl: | F | A hit top: | F |
| A hit rock: | F | A sc lith1: | Not Reported |
| A sc lmod1: | Not Reported | A sc lmaq1: | Not Reported |
| A sc lpct1: | 0 | 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: | 0 | Pct na 1: | 0 |
| Pct aq 2: | 0 | 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 |

| | | | |
|---|---|---|---|
| Within sec: | Y | Loc match: | Y |
| Aq code 1: | Not Reported | | |
| Hit swl: | Not Reported | | |
| Athk2: | 0 | | |
| Horiz Conduct: | 0 | | |
| Vert Conduct: | 0 | | |
| T2: | 0 | | |
| D50plek: | 0 | | |

---

**11**
**North**
**1/2 - 1 Mile**
**Higher**

**MI WELLS** **MI20323136**

| | | | |
|---|---|---|---|
| Wellid: | 81000015315 | Import id: | Not Reported |
| County: | Washtenaw | Township: | Ann Arbor |
| Town range: | 02S 06E | Section: | 35 |
| Owner name: | SEYMOUR LAMPERT | | |
| Well addr: | 3061 WARWICK | | |
| Well depth: | 136 | | |
| Well type: | Household | | |
| Wssn: | 0 | | |
| Well num: | Not Reported | Driller id: | 2014 |
| Const date: | 2004-09-14 00:00:00.000 | Case type: | PVC Plastic |
| Case dia: | 5 | | |
| Case depth: | 126 | | |
| Screen frm: | 126 | | |
| Screen to: | 136 | | |
| Swl: | 47 | | |
| Test depth: | 136 | | |
| Test hours: | 2 | | |
| Test rate: | 25 | Test methd: | Air |
| Grouted: | 1 | Pmp cpcity: | 0 |
| Latitude: | 42.25938318 | | |
| Longitude: | -83.70009341 | | |
| 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: | 823 | Elev dif: | 823 |
| Elev miv: | 823 | Aq code: | Drift Well |
| Aq flag: | Not Reported | Pct aq: | 53 |
| Pct aq d: | 53 | Pct aq r: | 0 |
| Pct maq: | 0 | Pct maq d: | 0 |
| Pct maq r: | 0 | Pct cm: | 47 |
| Pct cm d: | 47 | 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: | 14 | A pct aq: | 100 |
| A pct maq: | 0 | A pct pcm: | 0 |
| A pct cm: | 0 | A pct na: | 0 |
| A thickns2: | 89 | A pct aq2: | 28 |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

| | | | |
|---|---|---|---|
| A pct maq2: | 0 | A pct pcm2: | 0 |
| A pct cm2: | 72 | A pct na2: | 0 |
| A hit swl: | F | 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: | 90 |
| Pct maq 3: | 0 | Pct cm 3: | 10 |
| Pct pcm 3: | 0 | Pct na 3: | 0 |
| Pct aq 4: | 0 | Pct maq 4: | 0 |
| Pct cm 4: | 100 | Pct pcm 4: | 0 |
| Pct na 4: | 0 | Pct aq 5: | 0 |
| Pct maq 5: | 0 | Pct cm 5: | 100 |
| Pct pcm 5: | 0 | Pct na 5: | 0 |
| Pct aq 6: | 12 | Pct maq 6: | 0 |
| Pct cm 6: | 88 | 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: | 89 | | |
| Horiz Conduct: | 14.04502 | | |
| Vert Conduct: | .00014 | | |
| T2: | 1250.0064 | | |
| D50plek: | 191.28809 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: MI Radon

Radon Test Results

| Test Type | Zip | Floor | Stop Date | Can 1 Res pCi/L | Can 1 Error | Can 2 Res pCi/L | Can 2 Error |
|---|---|---|---|---|---|---|---|
| Random | 48104 | | | NR | | | |
| Random | 48104 | | | NR | | | |
| Random | 48104 | 1 | 5/22/87 | 0.7 | 103.1 | % | |
| Random | 48104 | 0 | 12/6/87 | 1.5 | 12.2% | | |
| Random | 48104 | 0 | 5/8/87 | 1.6 | 15.5% | | |
| Random | 48104 | 0 | 4/3/87 | 1.8 | 12.7% | | |
| Random | 48104 | 1 | 1/21/88 | 3.4 | 7.8% | | |
| Random | 48104 | 0 | 12/28/87 | 3.6 | 6.2% | | |
| Random | 48104 | 0 | 12/31/87 | 5.2 | 5.6% | | |
| Random | 48104 | 1 | 12/10/87 | 5.3 | 5.6% | | |
| Random | 48104 | 0 | 11/27/87 | 6.1 | 4.2% | | |
| Random | 48104 | 0 | 11/27/87 | 7.4 | 4.4% | | |
| Random | 48104 | 0 | 1/22/88 | 12.4 | 3.5% | 11. | 7 3.7% |
| Random | 48104 | 0 | 2/8/88 | 12.7 | 3.0% | | |
| Random | 48104 | 0 | 12/26/87 | 27.3 | 2.1% | | |
| Geographic | 48104 | 0 | 3/24/88 | 0.8 | 21.9% | | |

State Database: MI Radon

Radon Test Results

| Zip | Less than sign | Pci/L |
|---|---|---|
| 48104 | | 2.10 |
| 48104 | < | 0.30 |
| 48104 | | 11.60 |
| 48104 | | 3.10 |
| 48104 | | 1.90 |
| 48104 | | 6.00 |
| 48104 | | 22.80 |
| 48104 | | 1.50 |
| 48104 | | 1.40 |
| 48104 | | 1.40 |
| 48104 | | 1.60 |
| 48104 | | 4.40 |
| 48104 | | 4.30 |
| 48104 | | 3.20 |
| 48104 | | 3.00 |
| 48104 | | 5.30 |
| 48104 | | 6.10 |
| 48104 | | 3.50 |
| 48104 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

| | | |
|---|---|---|
| | | 1.10 |
| 48104 | | 1.20 |
| 48104 | | 5.80 |
| 48104 | | 3.60 |
| 48104 | | 4.20 |
| 48104 | | 3.30 |
| 48104 | | 3.60 |
| 48104 | | 1.60 |
| 48104 | | 1.10 |
| 48104 | | 10.40 |
| 48104 | | 9.00 |
| 48104 | | 4.80 |
| 48104 | | 2.80 |
| 48104 | | 2.20 |
| 48104 | | 2.30 |
| 48104 | | 3.10 |
| 48104 | | 1.40 |
| 48104 | | 14.10 |
| 48104 | | 10.50 |
| 48104 | | 2.20 |
| 48104 | | 9.60 |
| 48104 | | 0.80 |
| 48104 | < | 0.30 |
| 48104 | | 6.00 |
| 48104 | | 8.10 |
| 48104 | | 6.60 |
| 48104 | | 3.30 |
| 48104 | | 2.90 |
| 48104 | | 3.60 |
| 48104 | | 3.20 |
| 48104 | | 2.30 |
| 48104 | | 20.70 |
| 48104 | | 18.40 |
| 48104 | | 14.10 |
| 48104 | | 7.50 |
| 48104 | | 7.20 |
| 48104 | | 3.20 |
| 48104 | | 4.20 |
| 48104 | | 9.40 |
| 48104 | | 2.70 |
| 48104 | | 4.60 |
| 48104 | | 6.20 |
| 48104 | | 4.00 |
| 48104 | | 7.00 |
| 48104 | | 8.10 |
| 48104 | | 8.30 |
| 48104 | | 6.70 |
| 48104 | | 4.80 |
| 48104 | | 20.60 |
| 48104 | | 2.80 |
| 48104 | | 12.20 |
| 48104 | | 1.90 |
| 48104 | | 16.90 |
| 48104 | < | 0.30 |
| 48104 | | 2.50 |
| 48104 | | 9.10 |
| 48104 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

| | | |
|---|---|---|
| | | 4.50 |
| 48104 | | 1.40 |
| 48104 | | 10.60 |
| 48104 | | 40.30 |
| 48104 | | 44.90 |
| 48104 | | 4.10 |
| 48104 | | 0.40 |
| 48104 | | 0.50 |
| 48104 | | 0.80 |
| 48104 | | 0.80 |
| 48104 | < | 0.30 |
| 48104 | < | 0.30 |
| 48104 | | 5.70 |
| 48104 | | 4.40 |
| 48104 | < | 0.30 |
| 48104 | | 2.90 |
| 48104 | | 0.60 |
| 48104 | | 5.10 |
| 48104 | | 1.70 |
| 48104 | | 3.00 |
| 48104 | | 4.70 |
| 48104 | | 0.90 |
| 48104 | | 5.60 |
| 48104 | | 2.20 |
| 48104 | | 7.20 |
| 48104 | < | 0.30 |
| 48104 | | 6.50 |
| 48104 | | 12.80 |
| 48104 | < | 0.30 |
| 48104 | | 8.40 |
| 48104 | | 0.80 |
| 48104 | | 1.50 |
| 48104 | | 6.00 |
| 48104 | | 6.40 |
| 48104 | | 5.60 |
| 48104 | | 1.30 |
| 48104 | | 0.70 |
| 48104 | | 3.00 |
| 48104 | | 1.00 |
| 48104 | | 1.40 |
| 48104 | | 4.10 |
| 48104 | | 7.10 |
| 48104 | | 1.10 |
| 48104 | | 5.20 |
| 48104 | | 7.80 |
| 48104 | | 1.20 |
| 48104 | | 7.80 |
| 48104 | | 3.90 |
| 48104 | | 6.10 |
| 48104 | | 4.10 |
| 48104 | | 1.70 |
| 48104 | | 0.70 |
| 48104 | | 1.50 |
| 48104 | | 0.50 |
| 48104 | | 3.20 |
| 48104 | | 1.50 |
| 48104 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

| | |
|---|---|
| | 6.70 |
| 48104 | 8.90 |
| 48104 | 3.70 |
| 48104 | 4.90 |
| 48104 | 1.90 |
| 48104 | 1.40 |
| 48104 | 14.70 |
| 48104 | 4.60 |
| 48104 | 10.10 |
| 48104 | 2.00 |
| 48104 | 2.40 |
| 48104 | 3.60 |
| 48104 | 2.10 |
| 48104 | 5.00 |
| 48104 | 5.50 |
| 48104 | 3.40 |
| 48104 | 0.60 |
| 48104 | 6.20 |
| 48104 | 12.60 |
| 48104 | 5.40 |
| 48104 | 3.50 |
| 48104 | 2.00 |
| 48104 | 16.50 |
| 48104 | 1.50 |
| 48104 | 0.90 |
| 48104 | 2.10 |
| 48104 | 2.50 |
| 48104 | 1.70 |
| 48104 | 0.50 |
| 48104 | 4.50 |
| 48104 | 3.60 |
| 48104 | 1.90 |
| 48104 | 1.40 |
| 48104 | 2.20 |
| 48104 | 3.70 |
| 48104 | 12.60 |
| 48104 | 7.00 |
| 48104 | 2.20 |
| 48104 | 1.30 |
| 48104 | 5.40 |
| 48104 | 3.80 |
| 48104 | 2.80 |
| 48104 | 2.60 |
| 48104 | 2.30 |
| 48104 | 8.40 |
| 48104 | 0.60 |
| 48104 | 6.90 |
| 48104 | 5.80 |
| 48104 | 7.30 |
| 48104 | 6.10 |
| 48104 | 3.20 |
| 48104 | 1.20 |
| 48104 | 1.60 |
| 48104 | 0.80 |
| 48104 | 1.10 |
| 48104 | 7.80 |
| 48104 | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

| | | |
|---|---|---|
| | | 2.80 |
| 48104 | | 4.10 |
| 48104 | | 4.40 |
| 48104 | | 1.90 |
| 48104 | | 10.70 |
| 48104 | | 27.70 |
| 48104 | | 2.70 |
| 48104 | | 1.20 |
| 48104 | | 1.30 |
| 48104 | | 0.90 |
| 48104 | | 31.30 |
| 48104 | | 10.60 |
| 48104 | | 2.00 |
| 48104 | | 4.30 |
| 48104 | | 2.20 |
| 48104 | | 2.00 |
| 48104 | | 5.00 |
| 48104 | | 14.40 |
| 48104 | | 5.90 |
| 48104 | | 5.80 |
| 48104 | | 9.90 |
| 48104 | | 4.80 |
| 48104 | | 4.10 |
| 48104 | | 8.30 |
| 48104 | | 5.80 |
| 48104 | | 12.50 |
| 48104 | | 1.70 |
| 48104 | | 10.80 |
| 48104 | | 9.10 |
| 48104 | | 13.10 |
| 48104 | | 10.90 |
| 48104 | | 5.80 |
| 48104 | | 10.30 |
| 48104 | | 2.10 |
| 48104 | | 2.30 |
| 48104 | | 1.90 |
| 48104 | | 4.50 |
| 48104 | < | 0.30 |
| 48104 | | 6.30 |
| 48104 | | 3.70 |
| 48104 | | 4.70 |
| 48104 | | 0.70 |
| 48104 | | 1.90 |
| 48104 | | 3.30 |
| 48104 | | 11.50 |
| 48104 | | 2.70 |
| 48104 | | 2.90 |
| 48104 | | 5.60 |
| 48104 | | 4.00 |
| 48104 | | 4.30 |
| 48104 | | 1.60 |
| 48104 | < | 0.30 |
| 48104 | | 10.60 |
| 48104 | | 2.50 |
| 48104 | | 2.00 |
| 48104 | < | 0.30 |
| 48104 | | |

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

| | | |
|---|---|---|
| | | 1.80 |
| 48104 | < | 0.30 |
| 48104 | | 6.90 |

Federal EPA Radon Zone for WASHTENAW County: 1

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: 48104

Number of sites tested: 10

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 3.133 pCi/L | 67% | 33% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | 8.500 pCi/L | 30% | 60% | 10% |

# 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 & 2009 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[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation 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: Michigan Department of Natural Resources
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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environmental & energy services

# APPENDIX E

# AERIAL PHOTOGRAPH DOCUMENTATION

**3005 Packard**
3005 Packard
Ann Arbor, MI 48104

Inquiry Number: 2791628.4
June 16, 2010

# The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# 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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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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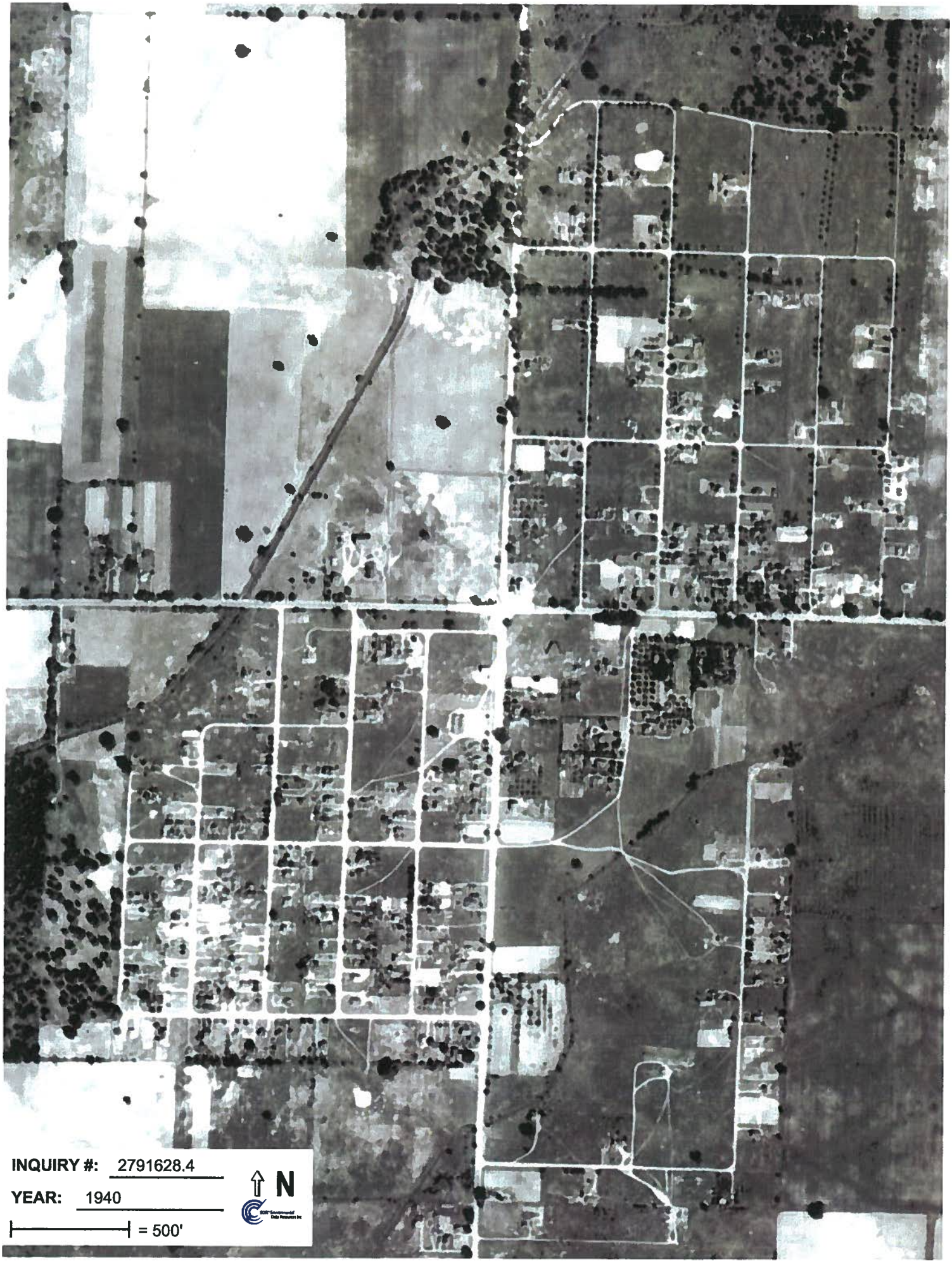
## Date EDR Searched Historical Sources:
Aerial Photography June 16, 2010

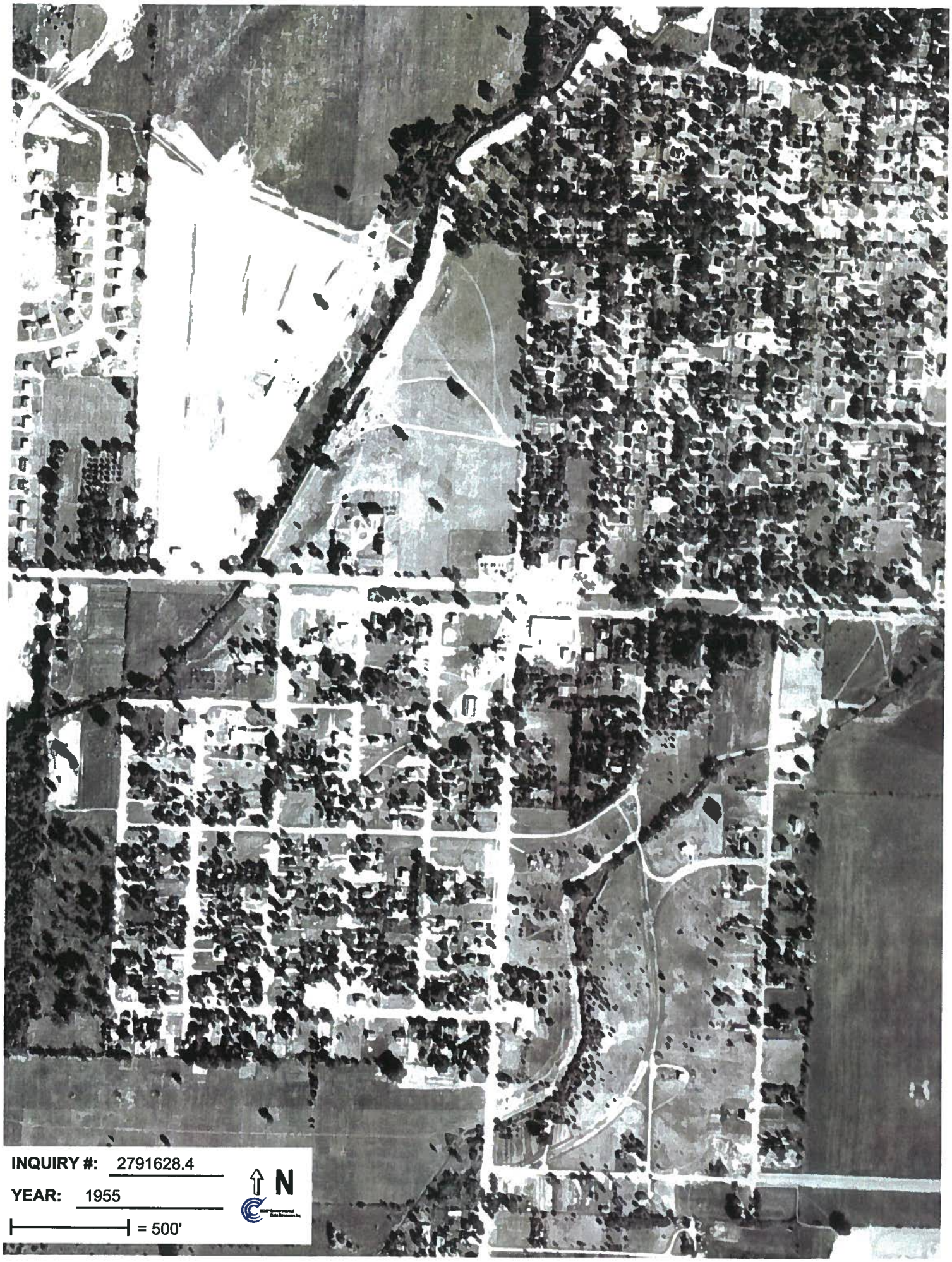
## Target Property:
3005 Packard
Ann Arbor, MI 48104

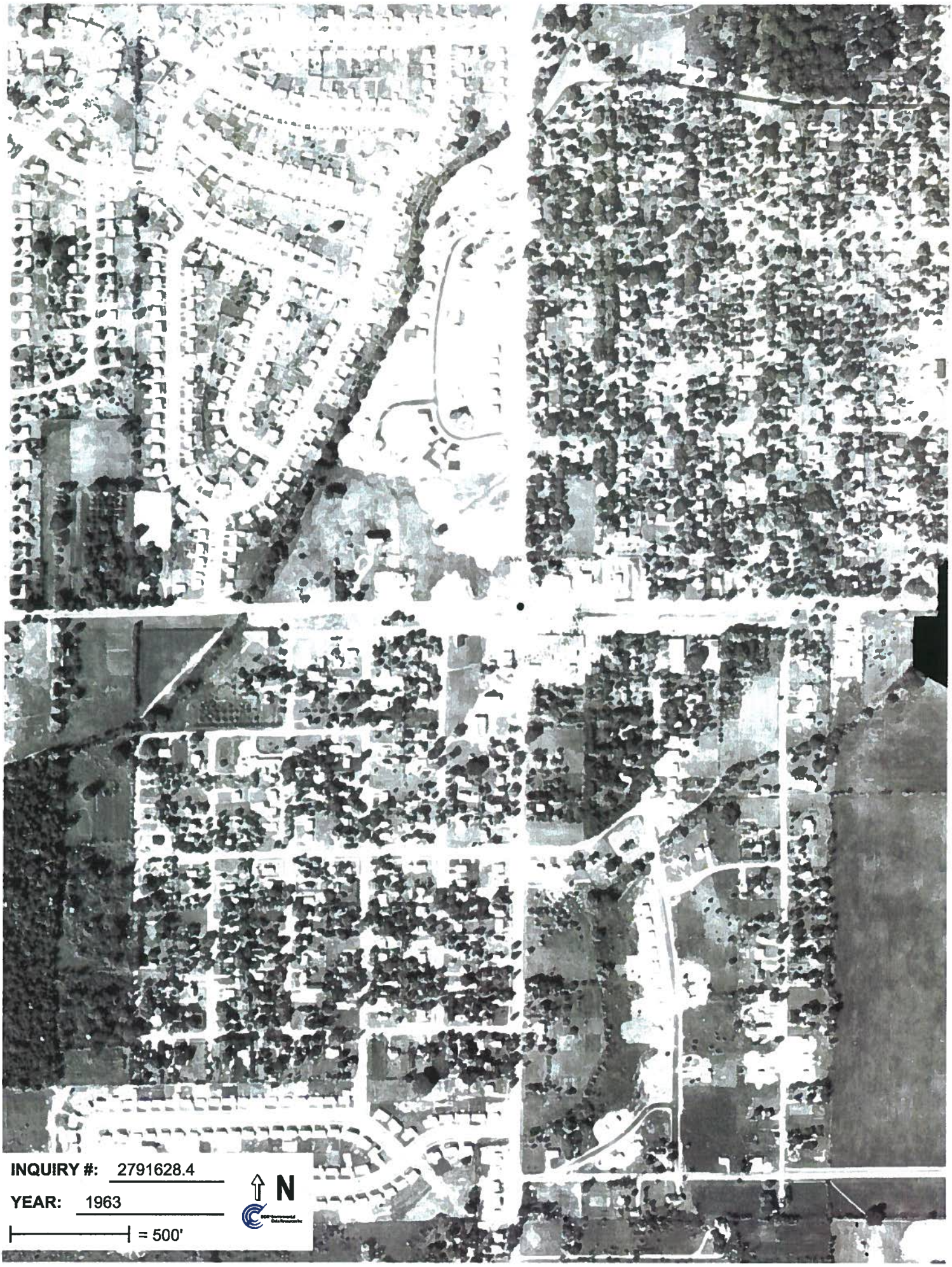
| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 1937 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1937 | AAA |
| 1940 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1940 | AAA |
| 1949 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1949 | Detroit Edison |
| 1955 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1955 | CSS |
| 1963 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1963<br>Best Copy Available from original source | ASCS |
| 1969 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1969 | ASCS |
| 1978 | Aerial Photograph. Scale: 1"=600' | Flight Year: 1978 | ASCS |
| 1985 | Aerial Photograph. Scale: 1"=500' | Flight Year: 1985 | SEMCOG |
| 1993 | Aerial Photograph. Scale: 1"=600' | Flight Year: 1993 | NAPP |
| 2000 | Aerial Photograph. Scale: 1"=500' | Flight Year: 2000 | SEMCOG |
| 2006 | Aerial Photograph. Scale: 1"=604' | Flight Year: 2006 | EDR |

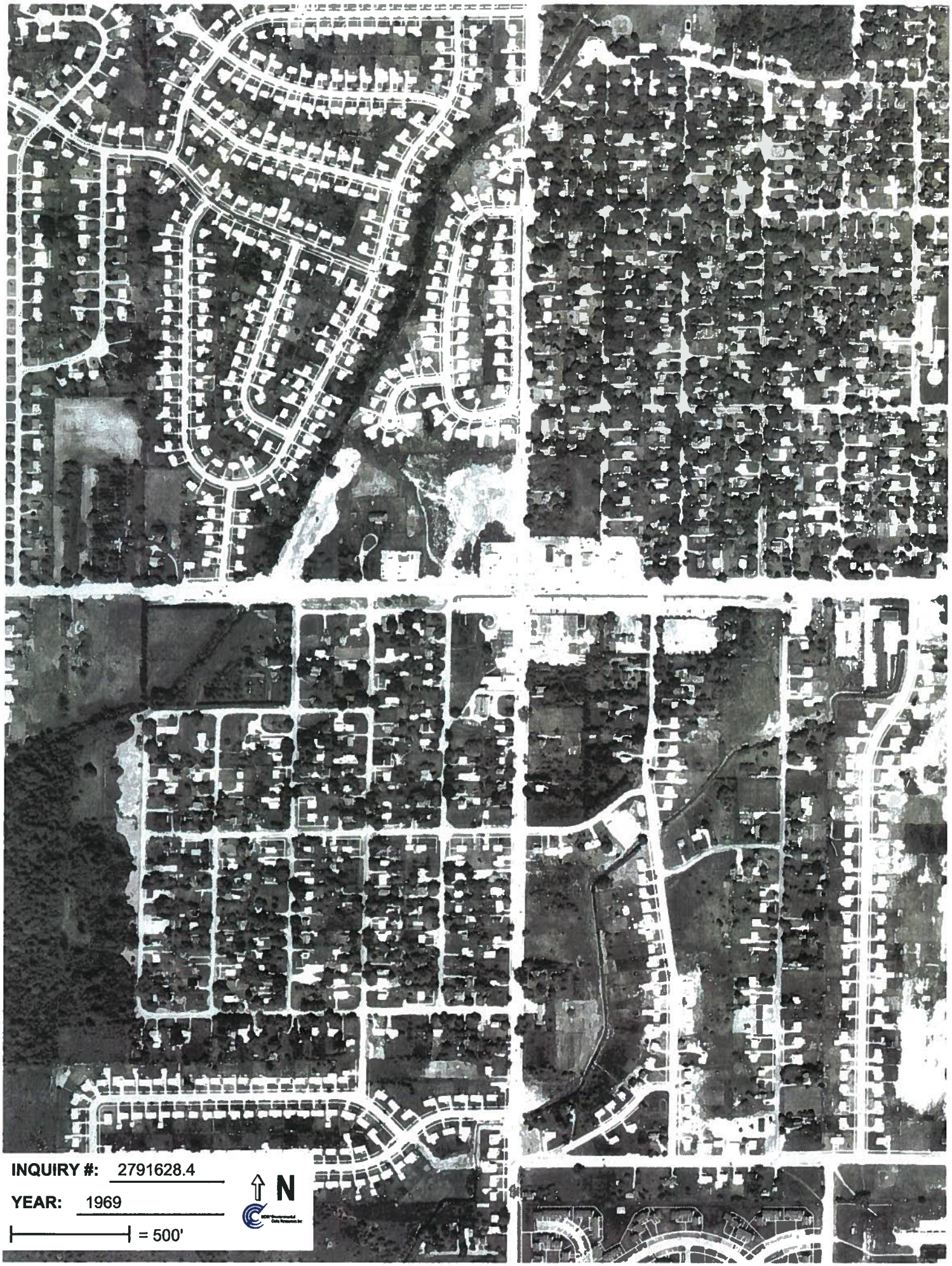
INQUIRY #: 2791628.4
YEAR: 1937
= 500'
N


INQUIRY #: 2791628.4
YEAR: 1940
= 500'
N

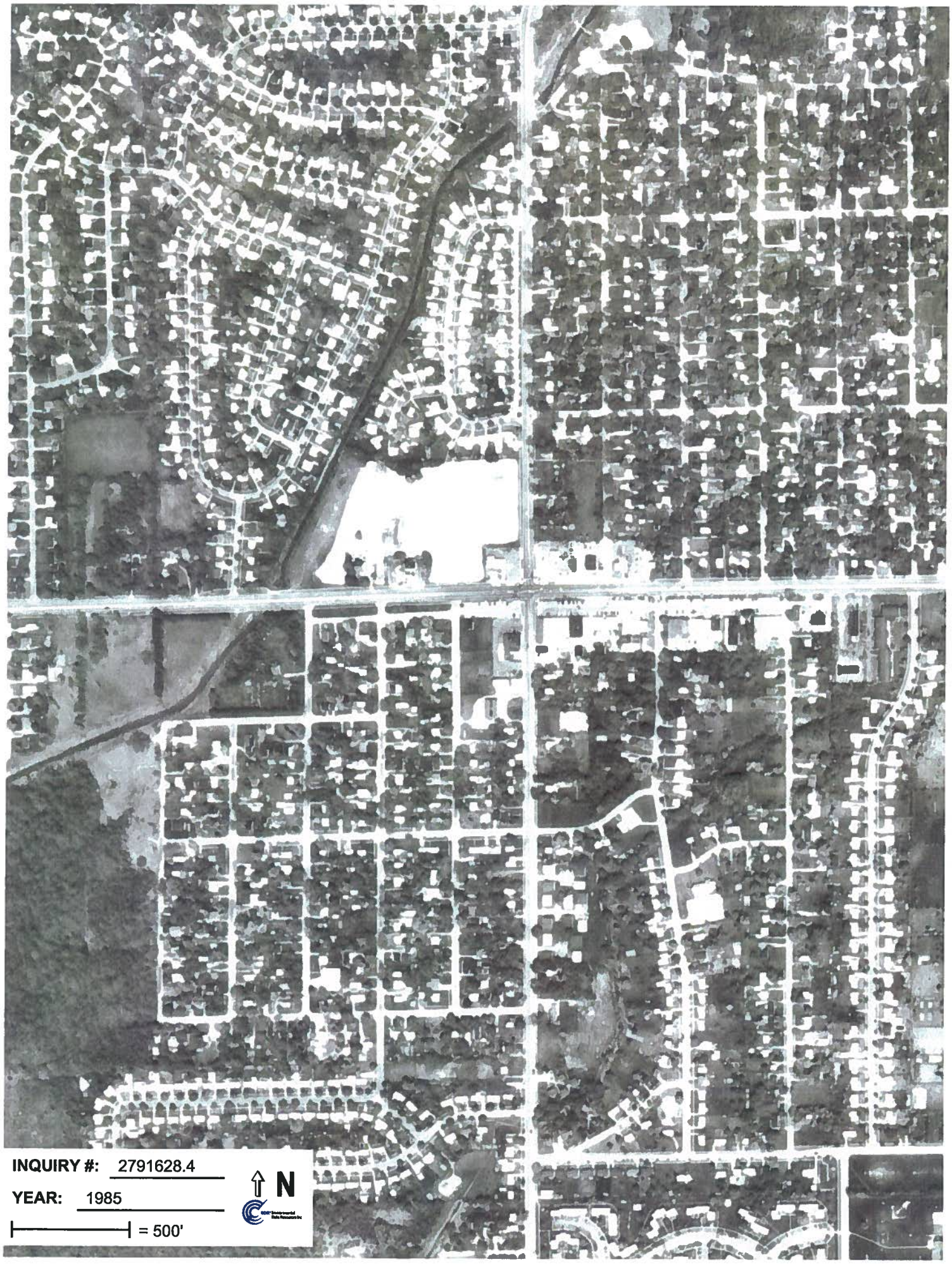
INQUIRY #: 2791628.4
YEAR: 1949
= 500'
N


INQUIRY #: 2791628.4
YEAR: 1955
= 500'
N


INQUIRY #: 2791628.4
YEAR: 1963
= 500'
N


INQUIRY #: 2791628.4
YEAR: 1969
= 500'
N

INQUIRY #: 2791628.4
YEAR: 1978
= 600'
N

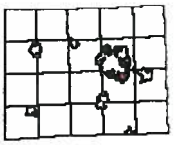

INQUIRY #: 2791628.4
YEAR: 1985
= 500'
N

INQUIRY #: 2791628.4
YEAR: 1993
= 600'
N

INQUIRY #: 2791628.4
YEAR: 2000
= 500'
N

INQUIRY #: 2791628.4
YEAR: 2006
= 604'
N

**Location Map**



N

0 75 150

Feet

1 inch = 91.2 feet

Geographic Information System

The information contained in this cadastral map is used to locate, identify and inventory parcels of land in Washtenaw County for appraisal and taxing purposes only and is not to be construed as a "survey description". The information is provided with the understanding that the conclusions drawn from such information are solely the responsibility of the user. Any assumption of legal status of this data is hereby disclaimed.

NOTE: PARCELS MAY NOT BE TO SCALE

**GIS Map Print**

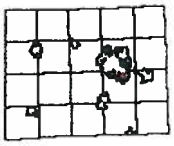
1998

Aerial Date: 4/1998

Date Printed: 06/09/2010

THIS MAP REPRESENTS PARCELS ATTHE TIME OF PRINTING. THE OFFICIAL PARCEL TAX MAPS ARE MAINTAINED SOLELY BY THE WASHTENAW COUNTY EQUALIZATION DEPARTMENT AND CAN BE OBTAINED BY CONTACTING THAT OFFICE AT 734-222-6662.

**Location Map**



N

0 75 150

Feet

1 inch = 91.2 feet

Geographic Information System

The information contained in this cadastral map is used to locate, identify and inventory parcels of land in Washtenaw County for appraisal and taxing purposes only and is not to be construed as a "survey description". The information is provided with the understanding that the conclusions drawn from such information are solely the responsibility of the user. Any assumption of legal status of this data is hereby disclaimed.

NOTE: PARCELS MAY NOT BE TO SCALE

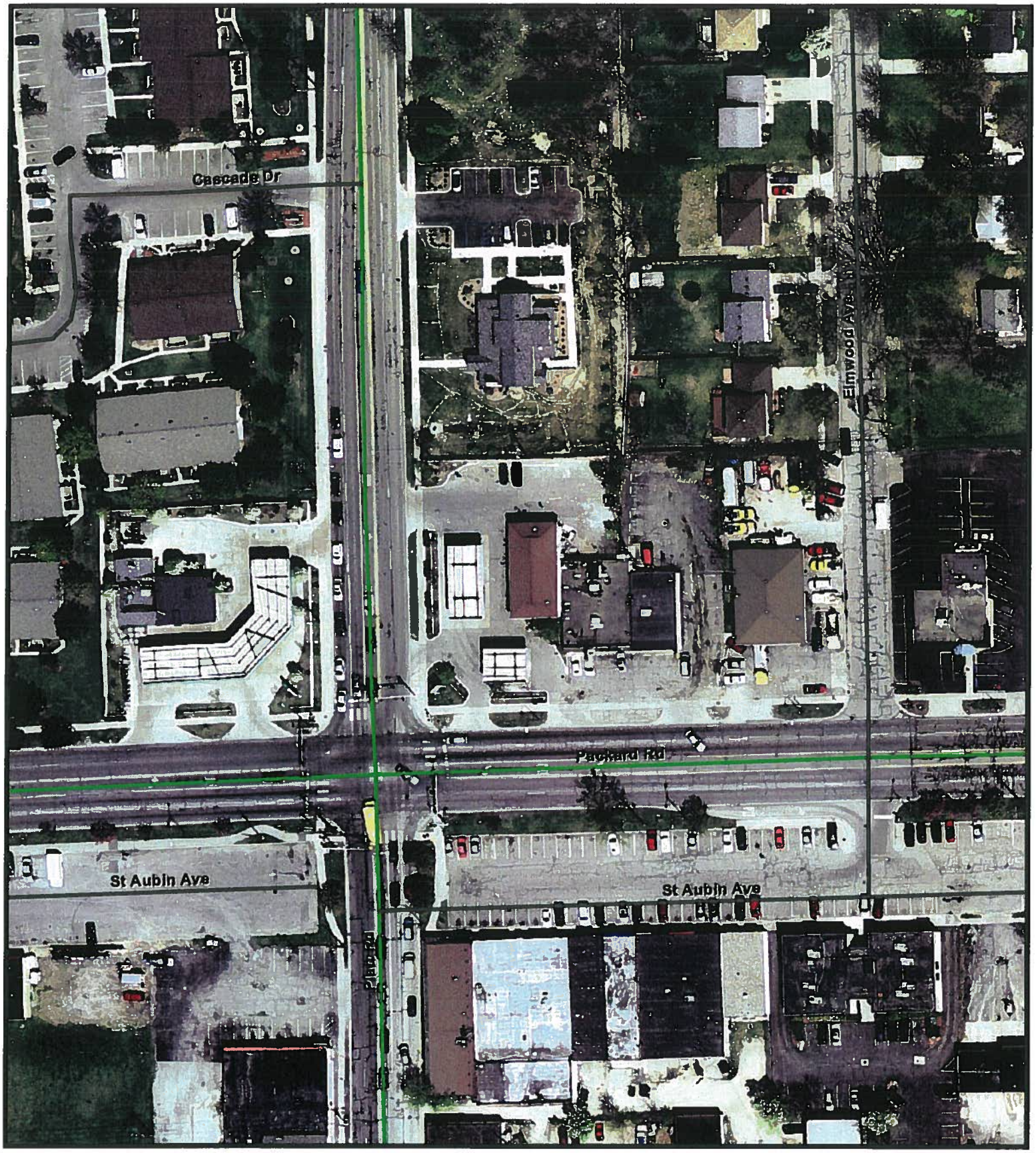
**GIS Map Print**

2002

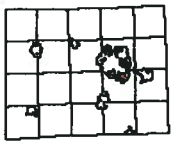
Aerial Date: 4/2002

Date Printed: 06/09/2010

THIS MAP REPRESENTS PARCELS ATTHE TIME OF PRINTING. THE OFFICIAL PARCEL TAX MAPS ARE MAINTAINED SOLELY BY THE WASHTENAW COUNTY EQUALIZATION DEPARTMENT AND CAN BE OBTAINED BY CONTACTING THAT OFFICE AT 734-222-6662.




**Location Map**



N

0 75 150

Feet

1 inch = 91.2 feet

Geographic Information System

The information contained in this cadastral map is used to locate, identify and inventory parcels of land in Washtenaw County for appraisal and taxing purposes only and is not to be construed as a "survey description". The information is provided with the understanding that the conclusions drawn from such information are solely the responsibility of the user. Any assumption of legal status of this data is hereby disclaimed.

NOTE: PARCELS MAY NOT BE TO SCALE

**GIS Map Print**

2005

Date Printed: 06/09/2010

THIS MAP REPRESENTS PARCELS ATTHE TIME OF PRINTING. THE OFFICIAL PARCEL TAX MAPS ARE MAINTAINED SOLELY BY THE WASHTENAW COUNTY EQUALIZATION DEPARTMENT AND CAN BE OBTAINED BY CONTACTING THAT OFFICE AT 734-222-6662.

AKTPEERLESS
environmental & energy services

# APPENDIX F

# HISTORICAL RESEARCH DOCUMENTATION

**AKTPEERLESS**
environmental services

# Client-User Environmental Questionnaire

| | |
|---|---|
| ***Project Name:*** | |
| ***Project Address:*** | 3005 Packard Road |
| ***Project City/State/Zip:*** | Ann Arbor, MI |
| ***AKT Peerless Project No.:*** | 6588F-1-17 |

*This questionnaire must be completed by the client (user), and must be returned to AKT Peerless' on or before the site visit. During the property inspection, the consultant may ask for details associated with selected questions. This questionnaire may be utilized as an exhibit in the final ESA Report.*

***Respondent Name, Title, Date:***
Washtenaw County Treasurer c/o Ben Kraft
5/26/10

UNK = Unknown

| | | YES | NO | UNK |
|---|---|---|---|---|
| 1 | Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? | ☐ | ☒ | ☐ |
| 2 | Are you aware of any Activity and Land Use Limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? | ☐ | ☒ | ☐ |
| 3 | Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? | ☐ | ☒ | ☐ |
| 4 | Does the purchase price being paid for this property reasonably reflect the fair market value of the property? | ☐ | ☐ | ☒ |
| 5 | Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? | ☐ | ☒ | ☐ |
| 5a | Do you know the past uses of the property? | ☒ | ☐ | ☐ |
| 5b | Do you know of specific chemicals that are present or were once were present at the property? | ☒ | ☐ | ☐ |
| 5c | Do you know of spills or other chemical releases that have taken place at the property? | ☐ | ☒ | ☐ |
| 5d | Do you know of any environmental cleanups that have taken place at the property? | ☐ | ☒ | ☐ |
| 6 | As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? | ☒ | ☐ | ☐ |

***Additional Comments from Client-User:***

***Signature:*** Ben K

**AKTPEERLESS**
environmental services

# Key Site Contact - Owner
# Environmental Assessment Questionnaire

| | |
|---|---|
| ***Project Name:*** | |
| ***Project Address:*** | 3005 Packard Road |
| ***Project City/State/Zip:*** | Ann Arbor, MI |
| ***AKT Peerless Project No.:*** | 6588F-1-17 |

*This questionnaire should be completed by the property owner, the owner's designated representative (anyone knowledgeable about the subject property), and presented to AKT Peerless' Environmental Consultant on the day of the site reconnaissance. During the site reconnaissance, the Environmental Consultant may ask for details associated with selected questions. This questionnaire may be utilized as an exhibit in the final Report.*

***Respondent Name, Title, Date:***
Washtenaw County Treasurer c/o Ben Kraft
5/26/10

**UNK** = Unknown **NA** = Not Applicable

| | | YES | NO | UNK | NA |
|---|---|---|---|---|---|
| 1 | Is the Property used for an industrial use? | ☐ | ☒ | ☐ | ☐ |
| 2 | To the best of your knowledge, has the Property been used for an industrial purpose in the past? | ☐ | ☒ | ☐ | ☐ |
| 3 | Is the Property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | ☐ | ☒ | ☐ | ☐ |
| 4 | To the best of your knowledge, has the Project been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | ☒ | ☐ | ☐ | ☐ |
| 5 | Are there currently automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of greater than five gallons in volume or fifty gallons in the aggregate, stored on or used at the Property? | ☐ | ☐ | ☒ | ☐ |
| 6 | To the best of your knowledge, have there been previously automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of greater than five gallons in volume or fifty gallons in the aggregate, stored on or used at the Property? | ☐ | ☐ | ☒ | ☐ |
| 7 | Are there currently any industrial Drums (typically 55 gallon) or sacks of chemicals located on the Property? | ☐ | ☐ | ☒ | ☐ |
| 8 | Has Fill Dirt been brought onto the Property that is of an unknown origin? | ☐ | ☐ | ☒ | ☐ |
| 9 | Are there currently any Pits, Ponds or Lagoons located on the Property in connection with waste treatment or waste disposal? | ☐ | ☐ | ☒ | ☐ |
| 10 | To the best of your knowledge, have there been previously any Pits, Ponds or Lagoons located on the Property in connection with waste treatment or waste disposal? | ☐ | ☐ | ☒ | ☐ |
| 11 | Is there currently, any stained soil on the Property? | ☐ | ☐ | ☒ | ☐ |
| 12 | To the best of your knowledge, has there been previously any stained soil on the Property? | ☐ | ☐ | ☒ | ☐ |
| 13 | Are there currently any registered or unregistered storage tanks (above or underground) located on the Property? | ☐ | ☐ | ☒ | ☐ |
| 14 | To the best of your knowledge, have there been previously any registered or unregistered storage tanks (above or underground) located on the Property? | ☐ | ☐ | ☒ | ☐ |

**UNK** = Unknown **NA** = Not Applicable

| | | YES | NO | UNK | NA |
|---|---|---|---|---|---|
| 15 | To the best of your knowledge, have there been previously any industrial Drums (typically 55 gallon) or sacks of chemicals located on the Property? | ☐ | ☐ | ☒ | ☐ |
| 16 | Has Fill Dirt been brought onto the Property that originated from a contaminated site? | ☐ | ☐ | ☒ | ☐ |
| 17 | Are there currently any flooring, drains, or walls located at the Property that are stained by substances other than water or are emitting foul odors? | ☐ | ☐ | ☒ | ☐ |
| 18 | To the best of your knowledge, have there been previously any flooring, drains, or walls located at the Property that are stained by substances other than water or are emitting foul odors? | ☐ | ☐ | ☒ | ☐ |
| 19 | If the Property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system? | ☐ | ☐ | ☐ | ☒ |
| 20 | If the Property is served by a private well or non-public water system, has the well been designated as contaminated by any government environmental/health agency? | ☐ | ☐ | ☐ | ☒ |
| 21 | Are there any Environmental Liens or governmental notification relating to past or current violations of environmental laws with respect to the Property or any facility located on the Property? | ☐ | ☐ | ☒ | ☐ |
| 22 | Has the owner or occupant of the Property been informed of the past existence of Hazardous Substances or Petroleum Products with respect to the Property or any facility located on the Property? | ☐ | ☒ | ☐ | ☐ |
| 23 | Has the owner or occupant of the Property been informed of the current existence of Hazardous Substances or Petroleum Products with respect to the Property or any facility located on the Property? | ☐ | ☒ | ☐ | ☐ |
| 24 | Has the owner or occupant of the Property been informed of the past existence of environmental violations with respect to the Property or any facility located on the Property? | ☐ | ☒ | ☐ | ☐ |

| | | YES | NO | UNK | NA |
|---|---|---|---|---|---|
| 25 | Are there currently vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground or adjacent to any structure at the Property? | ☐ | ☐ | ☒ | ☐ |
| 26 | To the best of your knowledge, have there been previously any vent pipes, fill pipes or access ways indicating a fill pipe protruding from the ground or adjacent to any structure located on the Property? | ☐ | ☐ | ☒ | ☐ |
| 27 | Have any Hazardous Substances or Petroleum Products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the Property? | ☐ | ☐ | ☒ | ☐ |
| 28 | Is there a transformer, capacitor or any hydraulic equipment for which there are any records indicating the presence of PCBs? | ☐ | ☐ | ☒ | ☐ |
| 29 | Is there now or has there ever been any asbestos-containing materials (ACM), in any application, on the Property? | ☐ | ☐ | ☒ | ☐ |
| 30 | Has there ever been any ACM testing conducted on the Property? | ☐ | ☐ | ☒ | ☐ |
| 31 | Is there now or has there ever been any lead-based paint (LBP) applications on the Property? | ☐ | ☐ | ☒ | ☐ |
| 32 | Has there ever been LBP testing conducted on the Property? | ☐ | ☐ | ☒ | ☐ |
| 33 | Has there been indications of moisture intrusion, mildew-like odors, or visible mold growth on the Property? | ☐ | ☐ | ☒ | ☐ |
| 34 | Is the Property or any portion of the Property located or involved in any environmentally sensitive areas (i.e., wetlands, coastal barrier resource areas, coastal barrier improvement act areas, flood plains, endangered species, etc.)? | ☐ | ☐ | ☒ | ☐ |

**UNK** = Unknown **NA** = Not Applicable

| | | YES | NO | UNK | NA |
|---|---|---|---|---|---|
| 35 | Have there been any Environmental Site Assessments of the Property that indicated the presence of Hazardous Substances or Petroleum Products on, or contamination of, the Property or recommended further assessment of the Property? | ☐ | ☐ | ☒ | ☐ |
| 36 | Are there any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any Hazardous Substance or Petroleum Products involving the Property? | ☐ | ☐ | ☒ | ☐ |
| 37 | To the best of your knowledge, has any Adjoining Properties been used for an industrial use in the past? | ☐ | ☐ | ☒ | ☐ |
| 38 | Is any Adjoining Property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | ☐ | ☐ | ☒ | ☐ |

| | | YES | NO | UNK | NA |
|---|---|---|---|---|---|
| 39 | Does the Property discharge waste water on or adjacent to the Property, other than storm water, into a storm water sewer system? | ☐ | ☐ | ☒ | ☐ |
| 40 | Does the Property discharge waste water on or adjacent to the Property other than storm water, or into a sanitary system? | ☐ | ☐ | ☒ | ☐ |
| 41 | Are any Adjoining Properties used for an industrial use? | ☐ | ☐ | ☒ | ☐ |
| 42 | To the best of your knowledge, has any Adjoining Property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? | ☐ | ☐ | ☒ | ☐ |

***Additional Comments from Key Site Contact:***

***Signature:*** Ben K

Parcel Number: 8109-12-02-325-011 Jurisdiction: City of Ann Arbor County: Washtenaw Printed on 06/10/2010

| Grantor | Grantee | Sale Price | Sale Date | Inst Type | Terms of Sale | Liber &Page | Verified by | Prcnt Trans |
|---|---|---|---|---|---|---|---|---|
| SOUTH STREET INVESTMENTS LL | PACKARD MINI MART BUILDING, | ***,*** | 06/16/2006 | U | Corporation Deed | 4566/84 | | 100.0 |
| H & A INVESTMENT COMPANY IN | SOUTH STREET INVESTMENTS LL | 1 | 11/19/1999 | U | Quit Claim Deed | 3917/599 | | 0.0 |
| H & A INVESTMENT COMPANY | H & A INVESTMENT CO., INC. | 1 | 11/01/1989 | U | Warranty Deed | 2433:0797 | D | 0.0 |
| | | | | | | | | |

**Property Address**
3005 PACKARD RD

**Owner's Name/Address**
PACKARD MINI MART BUILDING, LLC

5518 GALLERY PARK
Ann Arbor MI 48103

**Description**
ALL LOT 1 & PRT LOT 2 DESC AS BEG SW COR LOT 2 TH N 174.7 FT TH E 70 FT TH S 74.43 FT TH S 89 DEG 48 MIN 30 SEC W 40 FT TH S 80 FT TH S 45 DEG 05 MIN 45 SEC E 28.24 FT TH S 89 DEG 48 MIN 30 SEC W 50 FT TO POB DARLINGTON SUB

**Comments/Influences**
2/94 PARTIAL ON CANOPIES ,TANKS ARE COMPLETE. JR

The Equalizer. Copyright (c) 1999 - 2000.

Class: 201 Commercial | Zoning: C3

School: Ann Arbor

P.R.E. 0%

Map #:

2011 Est TCV Tentative

| Building Permit(s) | Date | Number | Status |
|---|---|---|---|
| Permit Prior to Conversion | 11/15/1994 | 46876 | Open |
| Permit Prior to Conversion | 08/12/1994 | 45860 | Open |

X Improved | Vacant

**Public Improvements**

- Dirt Road
- Gravel Road
- Paved Road
- 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

Land Value Estimates for Land Table 0216.216 Packard (Stadium SE) Com

| Description | Frontage | Depth | * Factors * Front | Depth | Rate | %Adj. | Reason | Value |
|---|---|---|---|---|---|---|---|---|
| non-prime frt f | 125.00 | 175.00 | 0.8801 | 1.1514 | 2500 | 100 | | 316,671 |

125 Actual Front Feet, 0.50 Total Acres Total Est. Land Value = 316,671

Land Improvement Cost Estimates

| Description | Rate | CountyMult. | Size | %Good | Cash Value |
|---|---|---|---|---|---|
| D/W/P: Asphalt Paving | 1.61 | 1.40 | 16000 | 67 | 24,163 |

Commercial/Industrial Local Cost Land Improvements

| Description | Rate | CountyMult. | Size | %Good | %Arch.Mult | Cash Value |
|---|---|---|---|---|---|---|
| Light Poles | 1250.00 | 1.00 | 5.0 | 83 | 100 | 5,188 |
| Light | 800.00 | 1.00 | 10.0 | 83 | 100 | 6,640 |

Total Estimated Land Improvements True Cash Value = 35,990

| Year | Land Value | Building Value | Assessed Value | Board of Review | Tribunal/ Other | Taxable Value |
|---|---|---|---|---|---|---|
| 2011 | Tentative | Tentative | Tentative | | | Tentative |
| 2010 | 158,300 | 154,600 | 312,900 | | | 312,900S |
| 2009 | 158,300 | 160,000 | 318,300 | | | 318,300S |
| 2008 | 158,300 | 155,900 | 314,200 | | | 314,200S |

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

Desc. of Bldg/Section:
Calculator Occupancy: Mini-Mart, Convenience Store

Class: C
Floor Area: 1,860
Stories Above Grd: 1
Average Sty Hght : 14
Bsmnt Wall Hght :

Depr. Table : 2%
Effective Age : 31
Physical %Good: 53
Func. %Good : 100
Economic %Good: 100

| | |
|---|---|
| 1967 | Year Built |
| 1995 | Remodeled |
| 14 | Overall Bldg Height |

Comments:

Construction Cost

| | | | | | | |
|---|---|---|---|---|---|---|
| | High | X | Above Ave. | | Ave. | | Low |

** ** Calculator Cost Data ** **
Quality: Good Adj: %+0 $/SqFt:0.00
Heat#1: Package Heating & Cooling 100%
Heat#2: Package Heating & Cooling 0%
Ave. SqFt/Story: 1860
Ave. Perimeter: 184
Has Elevators:

*** Basement Info ***
Area:
Perimeter:
Type: Finished/Office (No Rates)
Heat: No Heating or Cooling

* Mezzanine Info *
Area #1:
Type #1: Office (No Rates)
Area #2:
Type #2: Office (No Rates)

* Sprinkler Info *
Area:
Type: Average

<<<<< Calculator Cost Computations >>>>>
Class: C Quality: Good Percent Adj: +0

Base Rate for Upper Floors = 116.15

(10) Heating system: Package Heating & Cooling Cost/SqFt: 0.00 100%
Adjusted Square Foot Cost for Upper Floors = 116.15

1 Stories Number of Stories Multiplier: 1.000
Average Height per Story: 14 Height per Story Multiplier: 1.040
Ave. Floor Area: 1,860 Perimeter: 184 Perim. Multiplier: 1.175
Refined Square Foot Cost for Upper Floors: 141.94

County Multiplier: 1.40, Final Square Foot Cost for Upper Floors = 198.709

Total Floor Area: 1,860 Base Cost New of Upper Floors = 369,600

Reproduction/Replacement Cost = 369,600
Eff.Age:31 Phy.%Good/Abnr.Phy./Func./Econ./Overall %Good: 53 /100/100/100/53.0
Total Depreciated Cost = 195,888

<<<<< Segregated Cost Computations >>>>>
Costs taken from Segregated Cost Section 3: Stores & Commercials

| Item Desciption | Cost Col. | Rate | # or SqFt | Height Adj. | Storys Adj. | Base Cost |
|---|---|---|---|---|---|---|

(39) Miscellaneous
<<<<< Computations Too Long. Print on separate sheet. >>>>>
ECF (216 Packard (Stadium SE) Com) 1.000 => TCV of Bldg: 1 = 262,415
Replacement Cost/Floor Area= 266.20 Est. TCV/Floor Area= 141.08

(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<br>3-Piece Baths<br>2-Piece Baths<br>Shower Stalls<br>Toilets | | Urinals<br>Wash Bowls<br>Water Heaters<br>Wash Fountains<br>Water Softeners |

(9) Sprinklers:

(10) Heating and Cooling:

| | | | | | | |
|---|---|---|---|---|---|---|
| X | Gas Oil | | Coal Stoker | | Hand Fired Boiler |

(11) Electric and Lighting:

| Outlets: | | Fixtures: | |
|---|---|---|---|
| X | Few<br>Average<br>Many<br>Unfinished<br>Typical | X | Few<br>Average<br>Many<br>Unfinished<br>Typical |
| | Flex Conduit<br>Rigid Conduit<br>Armored Cable<br>Non-Metalic<br>Bus Duct | | Incandescent<br>Fluorescent<br>Mercury<br>Sodium Vapor<br>Transformer |

(13) Roof Structure: Slope=0

(14) Roof Cover:

(39) Miscellaneous:
2160 Steel Frame

(40) Exterior Wall:

| | | | |
|---|---|---|---|
| | Thickness | | Bsmnt Insul. |

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

8729

7/14/59

3005 Packard

O e 4,000 gallon gasoline tank

Owner: Pure Oil Co.

Applicant: Petra Sales

Cost:

OK FINAL 7-16-59 [illegible]

UL.

2 370 3005 ~~3011~~ Packard Rd.

5/20/66

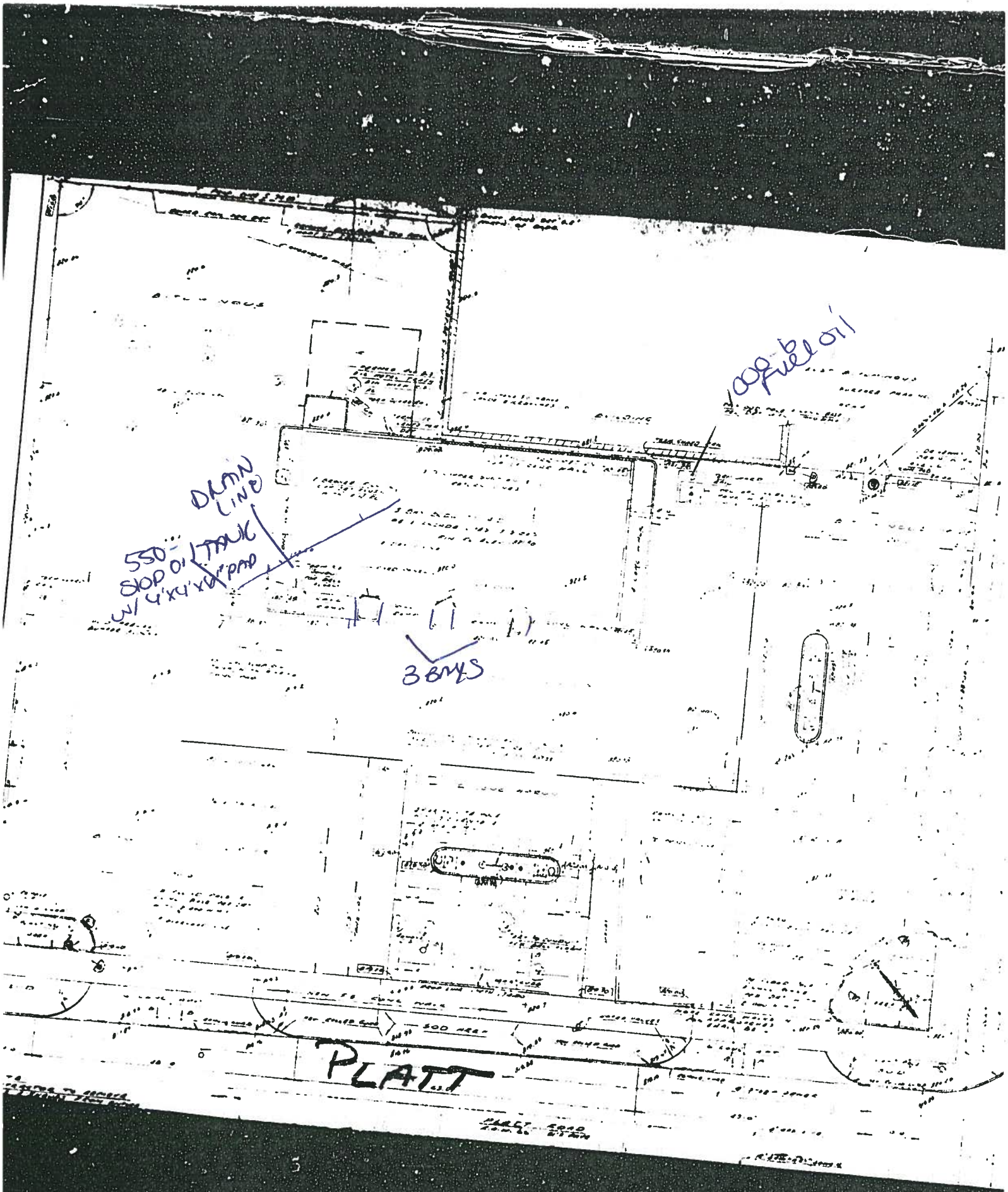
Install 20,000 gallon underground storage tank

Owner: James A. O'Sullivan

Applicant: Sun Oil Co.

Cost: $3,500

Ohio Lawn Completed
11/16/66



1000 Fuel oil
DRAIN LINE
550 - SLOP OIL TANK W/ 4'x4'x4' PAD
3 BAYS
PLATT

23138

3005 Packard Rd.

11/17/66

Install 1-550 gal. & 1-1000 gal tank underground
(F-40518) (F-306068)

Owner: Sun Oil Co.

Applicant: Same

Cost: $500

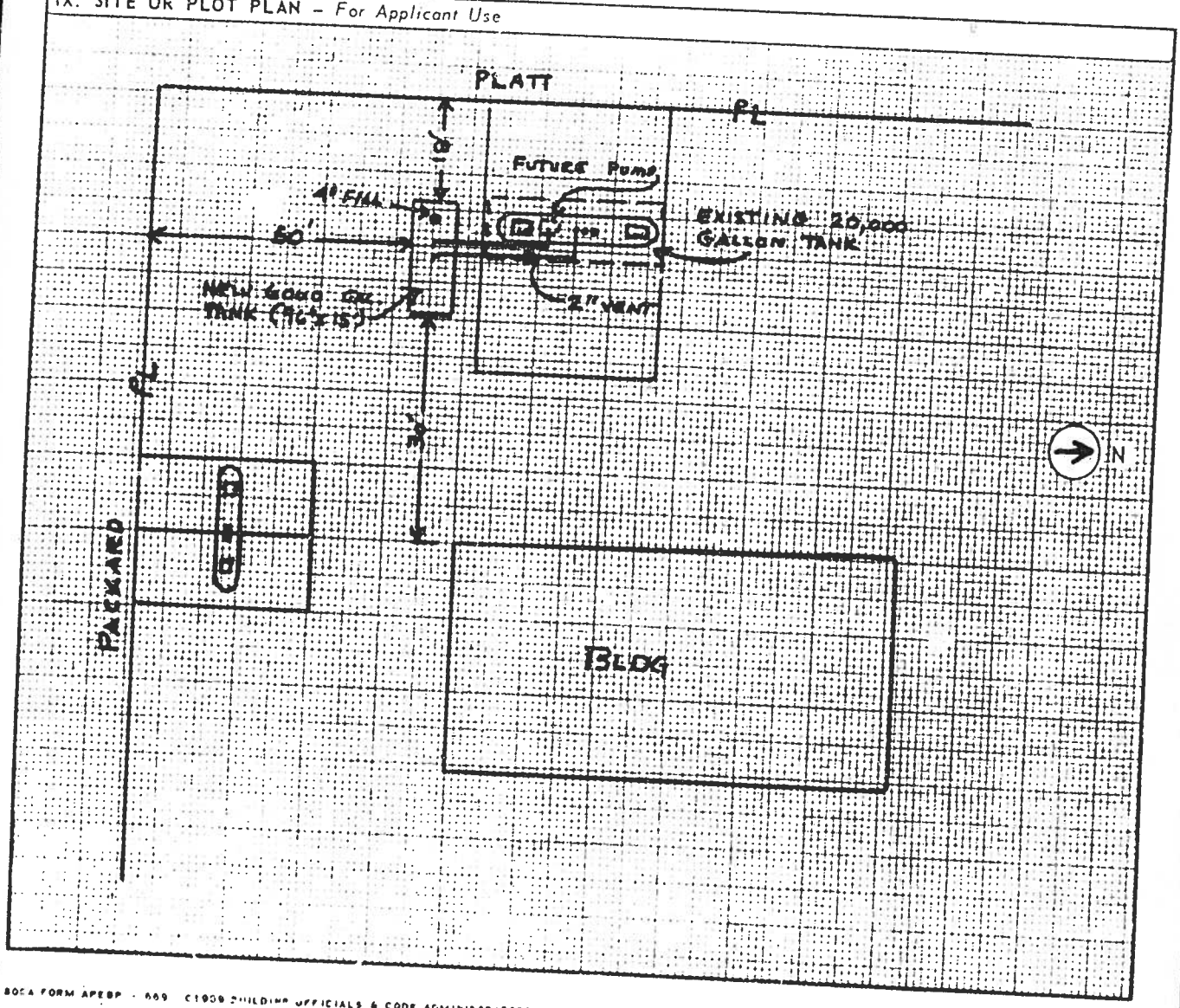
Issued

Sun Oil Co
500 S. Dixi
Detroit

## VIII. ZONING PLAN EXAMINERS NOTES

| | |
|---|---|
| DISTRICT | |
| USE | |
| FRONT YARD | |
| SIDE YARD | SIDE YARD |
| REAR YARD | |
| NOTES | |
| | |
| | |

## IX. SITE OR PLOT PLAN – *For Applicant Use*




BOCA FORM APEBP - 669 ©1969 BUILDING OFFICIALS & CODE ADMINISTRATORS INTERNATIONAL, INC.

RECEIVED
MAY 2 1974
BUILDING & SAFETY ENG.

CITY OF ANN ARBOR, MICHIGAN
BUILDING & SAFETY ENGINEERING DEPT.
100 N. FIFTH AVE. – 761-2400

# APPLICATION FOR PLAN EXAMINATION AND BUILDING PERMIT

**IMPORTANT – Applicant to complete all items in sections: I, II, III, IV, and IX.**

## I. LOCATION OF BUILDING

AT (LOCATION) 3005 (NO.) PACKARD (STREET) ZONING DISTRICT C3

BETWEEN PLATT (CROSS STREET) AND ELMWOOD (CROSS STREET)

SUBDIVISION 12-02-325-11 LOT 1 BLOCK ____ LOT SIZE ____

NO. ____ STREET

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

### A. TYPE OF IMPROVEMENT

1 [ ] New building
2 [ ] Addition (If residential, enter number of new bedroom units added, if any, in Part D, 13)
3 [X] Alteration (Specify above)
4 [ ] Repair, replacement
5 [ ] Wrecking (If multifamily residential, enter number of units in building in Part D, 13)
6 [ ] Moving (relocation)
7 [ ] Foundation only

### B. OWNERSHIP

8 [X] Private (individual, corporation, nonprofit institution, etc.)
9 [ ] Public (Federal, State, or local government)

### D. PROPOSED USE – For "Wrecking" most recent use

**Residential**

12 [ ] One family
13 [ ] Two or more family – Enter number of units → ____
14 [ ] Transient hotel, motel, or dormitory – Enter number of units → ____
15 [ ] Garage
16 [ ] Carport
17 [ ] Other – Specify ____

**Nonresidential**

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

### C. COST

| | (Omit cents) |
|---|---|
| 10. Cost of improvement | $ 3500.00 |
| To be installed but not included in the above cost | |
| a. Electrical | |
| b. Plumbing | |
| c. Heating, air conditioning | |
| d. Other (elevator, etc.) | |
| 11. TOTAL COST OF IMPROVEMENT | $ 3500.00 |

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

INSTALLATION OF 1-6000 GALLON GASOLINE TANK (UNDERGROUND) FOR UNLEADED GASOLINE.

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

### E. PRINCIPAL TYPE OF FRAME

30 [ ] Masonry (wall bearing)
31 [ ] Wood frame
32 [ ] Structural steel
33 [ ] Reinforced concrete
34 [ ] Other – Specify ____

### F. PRINCIPAL TYPE OF HEATING FUEL

35 [ ] Gas
36 [ ] Oil
37 [ ] Electricity
38 [ ] Coal
39 [ ] Other – Specify ____

### G. TYPE OF SEWAGE DISPOSAL

40 [ ] Public or private company
41 [ ] Private (septic tank, etc.)

### H. TYPE OF WATER SUPPLY

42 [ ] Public or private company
43 [ ] Private (well, cistern)

### I. TYPE OF MECHANICAL

Will there be central air conditioning?
44 [ ] Yes 45 [ ] No

Will there be an elevator?
46 [ ] Yes 47 [ ] No

### J. DIMENSIONS

48. Number of stories ____
49. Total square feet of floor area, all floors, based on exterior dimensions ____
50. Total land area, sq. ft. ____

### K. NUMBER OF OFF-STREET PARKING SPACES

51. Enclosed ____
52. Outdoors ____

### L. RESIDENTIAL BUILDINGS ONLY

53. Number of bedrooms ____
54. Number of bathrooms: Full ____ Partial ____

FIELD COPY

CITY OF ANN ARBOR, MICHIGAN
BUILDING & SAFETY ENGINEERING DEPT.
100 N FTH AVE. -- 761-2400

# BUILDING PERMIT

DATE 5-7- 19 74 PERMIT NO 6903

CANT Parks Installation Co. ADDRESS 300 E. Huron, Milford (NO.) (STREET) na (CONTR'S LICE)

T TO Install tanks (TYPE OF IMPROVEMENT) (NO.) STORY coml. (PROPOSED USE) NUMBER OF DWELLING UNITS

LOCATION 3005 Packard (NO.) (STREET) ZONING DISTRICT C3

EEN (CROSS STREET) AND (CROSS STREET)

IS ON 12-02-325-11 LOT 1 BLOCK LOT SIZE

NG IS TO BE FT. WIDE BY FT. LONG BY FT. IN HEIGHT AND SHALL CONFORM IN CONSTRU

E USE GROUP BASEMENT WALLS OR FOUNDATION (TYPE)

IS: ~~XXXX~~ (07) Install underground gasoline tanks

(CUBIC SQUARE FEET) ESTIMATED COST $ 2,500.00 PERMIT FEE $ 22.00

P.R. $ 5.50

Sun Oil Company

S 500 S. Dix, Detroit

H. Rothbart, P.E.
BUILDING DEPT.
BY Asst. City ADmin./dcs

**AKTPEERLESS**
environmental services

# Facsimile

**May 26, 2010**

**Fire Marshal Kathleen Chamberlain**
**Ann Arbor Fire Department**
**Freedom of Information Act Coordinator**
**111 North Fifth Avenue**
**Ann Arbor, MI**
**Phone: 734.994.2772**

**Fax: 734.994.8814**

Dear **Ms. Chamberlain**:

Pursuant to the Freedom of Information Act (FOIA), Act No. 442 of 1976 (MCL 15.231 *et seq.*), I am requesting any file information your department may have regarding underground storage tanks or aboveground storage tanks registered to the following site(s), or other known environmental concerns for the following site(s) or surrounding area.

| Address, City, & County | Occupant(s) |
|---|---|
| 3005 Packard Road, Ann Arbor, Washtenaw County | Packard Mini Mart Inc.<br>Facility ID: 00002107 |

If a file or files for this site are maintained by your department, please notify me so that I may schedule an appointment to review the information.

I have enclosed our standard questionnaire and a site map. Please fill out the form as completely as possible and return it via facsimile.

Thank you for your attention to this matter. If you have any questions about this request, please call me at **248.615.1333**. My fax number is **248.615.1334**.

Sincerely,

**AKT PEERLESS ENVIRONMENTAL SERVICES**

Jessica Cory
AKT Peerless Environmental Consultants
22725 Orchard Lake Road
Farmington, Michigan 48336

coryj@aktpeerless.com

**AKTPEERLESS**
environmental services

# FIRE DEPARTMENT QUESTIONNAIRE

DATE: **May 26, 2010**
CONTACT: **Fire Marshal Kathleen Chamberlain**
NAME: **Ann Arbor Fire Department**
TITLE: **FOIA Response Division**

TARGET PROPERTY: **3005 Packard Road, Ann Arbor, MI**
PROJECT NUMBER:

Please respond to the following list of questions concerning the above referenced target Property.

1. To the best of your knowledge, are you aware of any releases of hazardous substances or petroleum products on or near the Property? If yes, please explain.

   attached to email

2. To the best of your knowledge, are there now or have there ever been any underground storage tanks (USTs) or aboveground storage tanks (ASTs) located on or near the Property? If yes, please explain.

   attached to email

3. To the best of your knowledge, what is the history of use of the Property and adjacent properties?

   This property - service station
   adjacent - residential

4. Has your department responded to any fires or spills at the Property or neighboring properties? If yes, please explain.

   NO

**AKTPEERLESS**
environmental services

5. To the best of your knowledge, has there been any activity or process at the Property or adjacent properties involving the use of hazardous materials? If yes, please explain.
this Property - gasoline + other service station materials
adjacent - no

DATE COMPLETED 5/26/10 COMPLETED BY Amelia S Mohio

FIRE PREVENTION BUREAU
ANN ARBOR FIRE DEPARTMENT
663-4130 663-4139

In accordance with the State of Michigan Flammable Liquids Regulations, and the Flammable Liquids Regulations, City of Ann Arbor, Michigan, inspection has been made of the below listed installation.

Address 3005 PACKARD RD

Type of Installation UNDERGROUND

Contractor PARKS INSTALLATION

Contractor's Address 300 E. HURON ST Phone 684-4825

Tank Construction METAL

Tank Numbers

1. ~~[illegible]~~ Size

2. G660709 Size 6000

3. Size

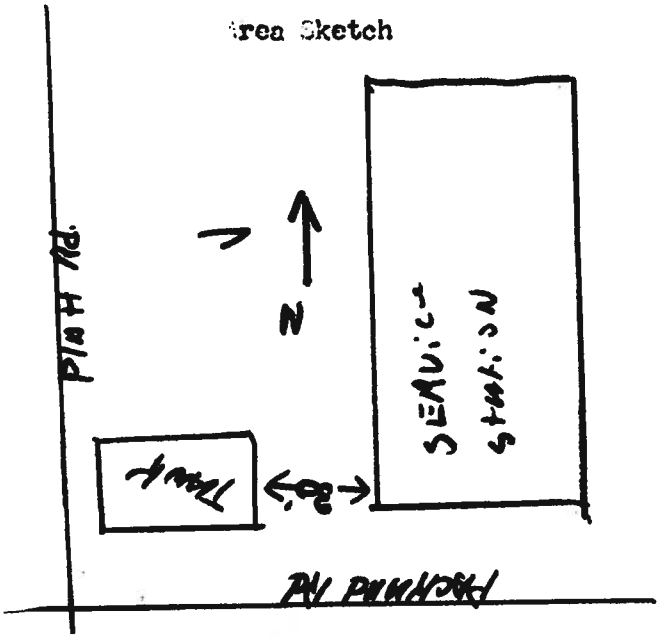
4. Size

Comments or Revisions PERMIT # 6903

✓ Approved
___ Not approved

Date MAY 9, 1974

Area Sketch




W Prater
Inspector

ANN ARBOR FIRE DEPARTMENT
COMMERCIAL INSPECTION

Date 4/17/79
Occupancy 571 B

Location 3005 Packard
Business Owner/Manager KEN SUNOCO SERVICE
Name Nick Scott Phone 231-3578
Address 9555 Crestline Lakeland
Building Owner SUNOCO Phone 358-2540 (Detroit)
Construction Type Cem Block Number Stories 1
Kirk Rowland - 517-536-8006
10655 Cady - Grassland

A. BUILDING

( ) Fire Walls
( ) Fire Doors
( ) Stairway Doors
( ) Elevators
( ) Other - Specify

( ) Openings Protected
( ) Self-Closing
( ) Self-Closing
( ) Pit Clean

B. FIRE PROTECTION

( ) Siamese Connection - ( ) Accessible
( ) Sprinkler System, Partial - ( ) Approved
( ) Sprinkler System, Complete - ( ) Approved
( ) Standpipe System - ( ) Approved
( ) Hose and Cabinets - ( ) Approved
( ) Fire Pump
( ) Control Valves - Accessible/Operable
( ) Alarm System - ( ) Approved
( ) Other Suppression - Systems/Extinguishers

C. ELECTRICAL

( ) Main Service Panel
( ) General Wiring Conditions
( ) Temporary Wiring/Extension Cords
( ) Other Electrical Conditions

Circuit breakers -

Inspector (s) LARSON-Luick

D. MEANS OF EGRESS

( ) Exit Lights - ( ) Approved
( ) Emergency Lights - ( ) Approved
( ) Approved Exit Corridors
( ) Swing of Exit Doors
( ) Door Hardware/Closers
( ) Adequate Number Exits Each Floor
( ) Exit Corridors/Exit Doors Maintained

E. SPECIAL USE/OCCUPANCY - SPECIFY

( ) _____ ( ) Permit?
( ) Other _____

F. HEATING Oil TYPE Overhead forced air

( ) General Conditions _____
( ) Boiler Room Rated _____
( ) Follow-Up Inspection _____

G. GENERAL MAINTENANCE

( ) Storage Areas _____
( ) Hazardous Conditions _____
( ) Other - Specify _____

( ) Re-Inspection Necessary ( ) Violations Corrected
( ) Referral To Other Departments - Specify
( ) _____
( ) Additional Comments/Notes On Back

Cover on grease rag can -

FIRE PREVENTION BUREAU
ANN ARBOR FIRE DEPARTMENT
663-4130 663-4139

Bob Beebe

In accordance with the State of Michigan Flammable Liquids Regulations, and the Flammable Liquids Regulations, City of Ann Arbor, Michigan, inspection has been made of the below listed installation.

Address 3005 PACKARD

Type of Installation UNDERGROUND

Contractor HAWKINS EQUIPMENT

Contractor's Address 747 ORCHARD LAKE PONTIAC Phone 61 74477

Tank Construction STEEL

Permit No. _____

Tank Numbers:

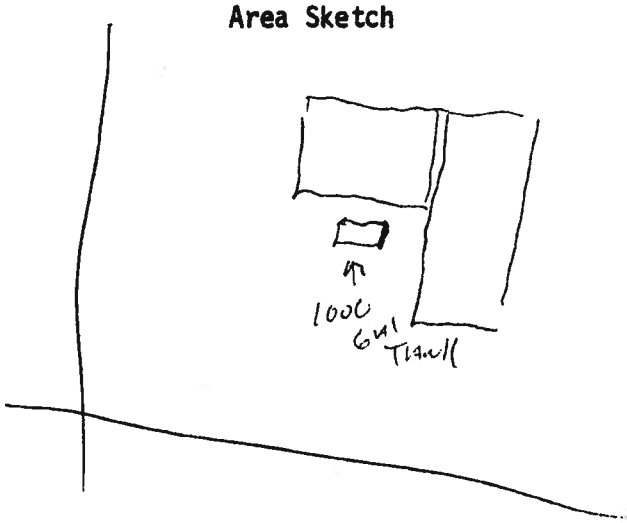
1. H70557 Size 1000 GAL
2. _____ Size _____
3. _____ Size _____
4. _____ Size _____

Comments or Revisions _____

✓ Approved
___ Not Approved

Date: MAY 27, 1980

Area Sketch




W Prater
Fire Inspector

ANN ARBOR FIRE DEPARTMENT
COMMERCIAL INSPECTION

Date 9-13-82

Occupancy

Location 3005 PACKARD - 971 7866
Business Owner/Manager PIPELINE OIL (SUNOCO STATION)
Name CATHY SEWELL Phone 483 4237
Address
Building Owner SAME Phone
Construction Type Number Stories

A. BUILDING

( ) Fire Walls
( ) Fire Doors
( ) Stairway Doors
( ) Elevators
( ) Other - Specify

( ) Openings Protected
( ) Self-Closing
( ) Self-Closing
( ) Pit Clean

B. FIRE PROTECTION

( ) Siamese Connection - ( ) Accessible
( ) Sprinkler System, Partial - ( ) Approved
( ) Sprinkler System, Complete - ( ) Approved
( ) Standpipe System - ( ) Approved
( ) Hose and Cabinets - ( ) Approved
( ) Fire Pump
( ) Control Valves - Accessible/Operable
( ) Alarm System - ( ) Approved
( ) Other Suppression - Systems/Extinguishers

C. ELECTRICAL

( ) Main Service Panel
( ) General Wiring Conditions
( ) Temporary Wiring/Extension Cords
( ) Other Electrical Conditions

Inspector (s) HARRIS

D. MEANS OF EGRESS

( ) Exit Lights - ( ) Approved
( ) Emergency Lights - ( ) Approved
( ) Approved Exit Corridors
( ) Swing of Exit Doors
( ) Door Hardware/Closers
( ) Adequate Number Exits Each Floor
( ) Exit Corridors/Exit Doors Maintained

E. SPECIAL USE/OCCUPANCY - SPECIFY

( ) ( ) Permit?
( ) Other

F. HEATING GAS TYPE

( ) General Conditions
( ) Boiler Room Rated
( ) Follow-Up Inspection

G. GENERAL MAINTENANCE

( ) Storage Areas
( ) Hazardous Conditions
( ) Other - Specify

( ) Re-Inspection Necessary ( ) Violations Corrected
( ) Referral To Other Departments - Specify
( )
( ) Additional Comments/Notes On Back

FIRE EXTINGUISHERS NEEDED
ELECTRICAL COVER PLATE IN ELECTRICAL ROOM
REMOVE HOLD OPEN DEVICES IF SELF SERVE STATUS IS CONTINUED

SPLICED EXTENSION CORD ON ICE MACHINE

**ANN ARBOR FIRE PREVENTION BUREAU**
**CONSTRUCTION INSPECTION NOTICE**

Address 3005 Packard

Business Name Buddy's Mercer Company

THIS FACILITY HAS BEEN INSPECTED BY THE FIRE MARSHAL DIVISION, ANN ARBOR FIRE DEPARTMENT.

Type of Inspection or test Pump Piping - New

| | Approved | Not Approved | Date |
|---|---|---|---|
| Temporary | | | 7/9/87 - 7/15/87 ~~7/23/87 7/29/87~~ |
| Final | | | |

Inspector Hanson

1-33 6/85

---

Address 3005 Packard Capacity

**ANN ARBOR FIRE DEPARTMENT**

**Fire Prevention Code Permit**

Chapter III Title IX Ann Arbor City Code

Date Issued 08/11/92 Expiration Date 08/11/93

Issued To BUDDY'S MINI MART

Use and Activity Mercantile

**Sec. F-103.0** Permits are required for the various uses and activities as provided in this code. Permits shall be at all times kept on the premises designated therein and shall be in all times subject to inspection by the Fire Official. Permits are not transferable and any change in use, operation or tenancy shall require a new permit. The Fire Official may revoke a permit or approval issued under the provisions of this code if upon inspection any violation of the code exists, or if conditions of a permit have been violated, or if there has been any false statement or misrepresentation as to the material facts in the application, data or plans in which the permit opr approval was based.

Issued By: Dennis W. Hasley, Fire Marshal

I-38 Revised 12/88

FIRE PREVENTION BUREAU

# ANN ARBOR FIRE DEPARTMENT

## — PERMIT —

Date Oct 16, 1990

In accordance with fire prevention ordinances and regulations PERMISSION is hereby given

to MERCER Co.

Address Jackson MI

to conduct the business of Coating U.S.T.

at 3005 Packard with the full understanding that said business will be conducted in accordance with all the rules and regulations of the City of Ann Arbor and the State of Michigan.

Permit expires Nov 16 1990

[illegible]

I-16 6/85

F.P.B. 6

Address 3005 Packard Capacity

## ANN ARBOR FIRE DEPARTMENT

### Fire Prevention Code Permit

Chapter III Title IX Ann Arbor City Code

Date Issued 8-6-93 Expiration Date 8-6-94

Issued To Buddy's Mart Corp.

Use and Activity Storage II

**Sec. F-103.0** Permits are required for the various uses and activities as provided in this code. Permits shall be at all times kept on the premises designated therein and shall be in all times subject to inspection by the Fire Official. Permits are not transferable and any change in use, operation or tenancy shall require a new permit. The Fire Official may revoke a permit or approval issued under the provisions of this code if upon inspection any violation of the code exists, or if conditions of a permit have been violated, or if there has been any false statement or misrepresentation as to the material facts in the application, data or plans in which the permit opr approval was based.

Issued By: Dennis W. Hasley, Fire Marshal

I-38 Revised 12/88

---

Address 3005 Packard Capacity

## ANN ARBOR FIRE DEPARTMENT

### Fire Prevention Code Permit

Chapter III Title IX Ann Arbor City Code

Date Issued September 26, 1994 Expiration Date September 26, 1996

Issued To Buddy's Mini Mart

Use and Activity Storage II

**Sec. F-103.0** Permits are required for the various uses and activities as provided in this code. Permits shall be at all times kept on the premises designated therein and shall be in all times subject to inspection by the Fire Official. Permits are not transferable and any change in use, operation or tenancy shall require a new permit. The Fire Official may revoke a permit or approval issued under the provisions of this code if upon inspection any violation of the code exists, or if conditions of a permit have been violated, or if there has been any false statement or misrepresentation as to the material facts in the application, data or plans in which the permit opr approval was based.

Issued By: Scott RAyburn ~~Dennis W. Hasley~~, Fire Marshal

I-38 Revised 12/88

Brad Wilson

# Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0049
APPROVAL EXPIRES 6-30-88

**FOR TANKS IN MI**

**RETURN COMPLETED FORM TO**
Ground Water Quality Division
Department of Natural Resources
Box 30157
Lansing, MI 48909

**STATE USE ONLY**
I.D. Number
Date Received

## GENERAL INFORMATION

**Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.**

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

**Who Must Notify?** Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—
(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and
(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

**What Tanks Are Included?** Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

**What Tanks Are Excluded?** Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:
1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;
4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

**What Substances Are Covered?** The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

**Where To Notify?** Completed notification forms should be sent to the address given at the top of this page.

**When To Notify?** 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

**Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.**

## INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. **This form must by completed for each location containing underground storage tanks.** If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached ☐

## I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity): Jim AHEARN
Street Address: 744 E South Street
County: JACKSON
City: JACKSON State: MI. ZIP Code: 49203
Area Code: 517 Phone Number: 782-9171 313-994-6243

Type of Owner (Mark all that apply ☒)
☒ Current ☐ State or Local Gov't ☒ Private or Corporate
☐ Former ☐ Federal Gov't (GSA facility I.D. no. _____) ☐ Ownership uncertain

## II. LOCATION OF TANK(S)

(If same as Section 1, mark box here ☐)
Facility Name or Company Site Identifier, as applicable: Buddy's Min. Mart
Street Address or State Road, as applicable: 3005 Packard
County: WASHTENAW
City (nearest): Ann Arbor State: MI. ZIP Code: 48104

Indicate number of tanks at this location: 3

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

## III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐) Job Title Area Code Phone Number

## IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

## V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

| Name and official title of owner or owner's authorized representative | Signature | Date Signed |
|---|---|---|
| | | |

CONTINUE ON REVERSE SIDE

Owner Name (from Section I) _____ Location (from Section II) _____ Page No. ____ of ____ Pages

## VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS *(Complete for each tank at this location.)*

| Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...) | Tank No. | Tank No. | Tank No. | Tank No. | Tank No. |
|---|---|---|---|---|---|
| **1. Status of Tank** *(Mark all that apply ☒)* | | | | | |
| Currently in Use | ☒ | ☐ | ☐ | ☐ | ☐ |
| Temporarily Out of Use | ☐ | ☐ | ☐ | ☐ | ☐ |
| Permanently Out of Use | ☐ | ☐ | ☐ | ☐ | ☐ |
| Brought Into Use after 5/8/86 | ☐ | ☐ | ☐ | ☐ | ☐ |
| **2. Estimated Age (Years)** | | | | | |
| **3. Estimated Total Capacity (Gallons)** | | | | | |
| **4. Material of Construction** *(Mark one ☒)* | | | | | |
| Steel | ☒ | ☐ | ☐ | ☐ | ☐ |
| Concrete | ☐ | ☐ | ☐ | ☐ | ☐ |
| Fiberglass Reinforced Plastic | ☐ | ☐ | ☐ | ☐ | ☐ |
| Unknown | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other, Please Specify | _____ | _____ | _____ | _____ | _____ |
| **5. Internal Protection** *(Mark all that apply ☒)* | | | | | |
| Cathodic Protection | ☐ | ☐ | ☐ | ☐ | ☐ |
| Interior Lining (e.g., epoxy resins) | ☐ | ☐ | ☐ | ☐ | ☐ |
| None | ☐ | ☐ | ☐ | ☐ | ☐ |
| Unknown | ☒ | ☐ | ☐ | ☐ | ☐ |
| Other, Please Specify | _____ | _____ | _____ | _____ | _____ |
| **6. External Protection** *(Mark all that apply ☒)* | | | | | |
| Cathodic Protection | ☒ | ☐ | ☐ | ☐ | ☐ |
| Painted (e.g., asphaltic) | ☐ | ☐ | ☐ | ☐ | ☐ |
| Fiberglass Reinforced Plastic Coated | ☐ | ☐ | ☐ | ☐ | ☐ |
| None | ☐ | ☐ | ☐ | ☐ | ☐ |
| Unknown | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other, Please Specify | _____ | _____ | _____ | _____ | _____ |
| **7. Piping** *(Mark all that apply ☒)* | | | | | |
| Bare Steel | ☐ | ☐ | ☐ | ☐ | ☐ |
| Galvanized Steel | ☒ | ☐ | ☐ | ☐ | ☐ |
| Fiberglass Reinforced Plastic | ☐ | ☐ | ☐ | ☐ | ☐ |
| Cathodically Protected | ☒ | ☐ | ☐ | ☐ | ☐ |
| Unknown | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other, Please Specify | _____ | _____ | _____ | _____ | _____ |
| **8. Substance Currently or Last Stored in Greatest Quantity by Volume** *(Mark all that apply ☒)* | | | | | |
| **a. Empty** | ☐ | ☐ | ☐ | ☐ | ☐ |
| **b. Petroleum** | | | | | |
| Diesel | ☐ | ☐ | ☐ | ☐ | ☐ |
| Kerosene | ☐ | ☐ | ☐ | ☐ | ☐ |
| Gasoline (including alcohol blends) | ☒ | ☐ | ☐ | ☐ | ☐ |
| Used Oil | ☐ | ☐ | ☐ | ☐ | ☐ |
| Other, Please Specify | _____ | _____ | _____ | _____ | _____ |
| **c. Hazardous Substance** | ☐ | ☐ | ☐ | ☐ | ☐ |
| Please Indicate Name of Principal CERCLA Substance | _____ | _____ | _____ | _____ | _____ |
| OR Chemical Abstract Service (CAS) No. | _____ | _____ | _____ | _____ | _____ |
| Mark box ☒ if tank stores a mixture of substances | ☐ | ☐ | ☐ | ☐ | ☐ |
| **d. Unknown** | ☐ | ☐ | ☐ | ☐ | ☐ |
| **9. Additional Information (for tanks permanently taken out of service)** | | | | | |
| a. Estimated date last used (mo/yr) | / | / | / | / | / |
| b. Estimated quantity of substance remaining (gal.) | _____ | _____ | _____ | _____ | _____ |
| c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete) | ☐ | ☐ | ☐ | ☐ | ☐ |



☆ U.S. Government Printing Office: 1986—496-735

ANN ARBOR FIRE DEPARTMENT
111 N. Fifth Avenue 994-2774

BOCA FIRE PREVENTION CODE
BASIC OCCUPANCY REPORT

ADDRESS 3005 Packard
Date: 2-16-84 Time: 7:30 AM
Property Name: Sunoco
Emergency Contacts
Tenant Name:
Responsible Party:
Auto Sprinkler: Standpipe & Hose Cabinets: Fire Pump:
Location Of Fire Department Connection:
Fire Alarm: Automatic Manual Alarm Co.
Location Of Annunciator Panel:
Fixed Property Use: Type Of Bldg. Const:
Number Of Stories Occupied By Tenant: Total Floor Area Of Tenant Space:

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| EXITWAYS | | ELECTRICAL | | SPRINK & STANDPIPE | | SPRINK CONTROL | |
| Proper Number | | CONTROL PANEL | | RISERS & VALVES | | Open | |
| Obstructed | | Access | | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | | DRAINS | | F.D. CONNECTION | |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | | Unused Opening | | SPARE HEADS | | Cap & Plugs | |
| Proper Number | | OUTLETS | | Available | | Threads | |
| Width | | Proper Location | | Wrench | | | |
| Arrangement | | Proper Number | | FIRE PUMP | | COMPRESSED GAS | |
| Door Swing | | Covers | | Enclosed in Room | | Chained | |
| Hold Open Device | | EXTENSION CORDS | | Condition | | Storage | |
| Locks | | Condition | | SPRINK PROTECTION | | Other | |
| Panic Hardware | | Use | | HOSE STATIONS | | FLAMMABLE LIQUID | |
| AISLES | | EMERG. LIGHTS | | OTHER | | Storage | |
| Proper Width | | Adequate | | | | Dispensing | |
| Arrangement | | BATTERY UNITS | | FIRE ALARM SYSTEM | | Sources Of Ignition | |
| INTERIOR | | Tested | | CONTROL PANEL | | No Smoking Signs | |
| Condition | | EXIT LIGHTS | | Accessible | | Class B Extin. | |
| | | Working | | Identified | | OTHER | |
| FIRE WALLS | | Properly Located | | PULL STATIONS | | | |
| Condition | | EXPLOSION PROOF | | Accessible | | PORT FIRE EXTING. | |
| Fire Doors | | Condition | | Working | | Condition | |
| Operation | | Seal Offs | | DETECTORS | | Location | |
| Hold Open Device | | ELEVATOR SHAFTS | | Location | | Type | |
| STORAGE | | Emergency Bell | | Working | | Access | |
| Condition | | Stop | | OTHER | | Other | |
| Height | | Access | | | | GAS METER | |
| Housekeeping | | Emergency Key | | SUPERVISION | | Condition | |
| No Smoking Signs | | Equipment Room | | Sprinkler System | | Protection | |
| CEILING | | OTHER | | Fire Alarm System | | ADDRESS | |
| Condition | | | | Sprinkler Valve | | Adequate | |

PERSON INTERVIEWED: Cathy Sewell
Remarks Or Instructions For Elimination Of Fire Hazards:
HAVE REPAIR PERSONNEL IN ROUTE TO REMOVE GASOLINE SPILL BY 10:00 AM OR CLOSE STATION UNTIL VIOLATION IS CORRECTED

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within _____ days.
A re-inspection will be made.

APPROVAL DATE, PERMIT ISSUED:

Symbols: O-Violation +-No Violation /-Does Not Pertain

INSPECTOR: [illegible]

I-7 2/14/83

**ANN ARBOR FIRE DEPARTMENT**
111 N. Fifth Avenue 994-2774

**BOCA FIRE PREVENTION CODE**
**BASIC OCCUPANCY REPORT**

ADDRESS [illegible]
Date: [illegible] Time: _____
Property Name: [illegible]
Emergency Contacts _____
Tenant Name: [illegible]
Responsible Party: [illegible]
Auto Sprinkler: N/A L.A. _____ Standpipe & Hose Cabinets: _____ Fire Pump: _____
Location Of Fire Department Connection: _____
Fire Alarm: N/A Automatic _____ Manual _____ Alarm Co. _____
Location Of Annunciator Panel: N/A
Fixed Property Use: [illegible] Type Of Bldg. Const: _____
Number Of Stories Occupied By Tenant: _____ Total Floor Area Of Tenant Space: _____

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| EXITWAYS | X | ELECTRICAL | X | SPRINK & STANDPIPE | / | SPRINK CONTROL | / |
| Proper Number | | CONTROL PANEL | X | RISERS & VALVES | / | Open | |
| Obstructed | | Access | | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | X | DRAINS | / | F.D. CONNECTION | |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | / | Unused Opening | | SPARE HEADS | / | Cap & Plugs | |
| Proper Number | | OUTLETS | X | Available | | Threads | |
| Width | | Proper Location | | Wrench | | | |
| Arrangement | | Proper Number | | FIRE PUMP | | COMPRESSED GAS | X |
| Door Swing | | Covers | | Enclosed in Room | | Chained | X |
| Hold Open Device | | EXTENSION CORDS | / | Condition | | Storage | |
| Locks | | Condition | | SPRINKLER COVERAGE | / | Other | |
| Panic Hardware | | Use | | HOSE STATIONS | / | FLAMMABLE LIQUID | X |
| AISLES | X | ~~EMERG. LIGHTS~~ | ~~X~~ | OTHER | | Storage | X |
| Proper Width | | Adequate | | | | Dispensing | X |
| Arrangement | | BATTERY UNITS | / | FIRE ALARM SYSTEM | / | Sources Of Ignition | X |
| INTERIOR | X | Tested | | CONTROL PANEL | / | No Smoking Signs | X |
| Condition | | EXIT LIGHTS | X | Accessible | | Class B Extin. | X |
| | | Working | | Identified | | OTHER | |
| FIRE WALLS | / | Properly Located | | PULL STATIONS | / | | |
| Condition | | EXPLOSION PROOF | / | Accessible | | PORT FIRE EXTING. | X |
| Fire Doors | | Condition | | Working | | Condition | X |
| Operation | | Seal Offs | | DETECTORS | / | Location | X |
| Hold Open Device | | ELEVATOR SHAFTS | / | Location | | Type | X |
| STORAGE | X | Emergency Key! | | Working | | Access | X |
| Condition | | Stop | | OTHER | | Other | |
| Height | | Equipment Room | | | | GAS METER | |
| Housekeeping | | HOOD & DUCT SUPP. | / | SUPERVISION | / | Condition | X |
| No Smoking Signs | | Condition | | Sprinkler System | | Protection | |
| CEILING | X | Serviced | | Fire Alarm System | | ADDRESS | X |
| Condition | | Coverage | | Sprinkler Valve | | Adequate | X |

PERSON INTERVIEWED: [illegible]
Remarks Or Instructions For Elimination Of Fire Hazards: [illegible]

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within 10 days.
A re-inspection will be made.

APPROVAL DATE, PERMIT ISSUED: _____

Symbols: 0-Violation +-No Violation /-Does Not Pertain

INSPECTOR: [illegible]

FIRE DEPARTMENT
Avenue 994-2772

**COMPANY FIRE SAFETY INSPECTION FORM**

SYMBOLS: 0 - Violation
+ - No Violation
N/A - Not Applicable

3005 PACKARD RD

Date: 5-18-89 Time: 9:40

Property Name: BUDDYS MINI-MART

Emergency Contacts BRAD WILSON 517 456-7741
800-512-0812

Tenant Name:

Responsible Party: MARK FOXWORTHY - PIPE LINE OIL CO.

Auto Sprinkler: — L.A. — Standpipe & Hose Cabinets: — Fire Pump: —

Location Of Fire Department Connection: NONE

Fire Alarm: — Automatic — Manual — Alarm Co. —

Location Of Annunciator Panel: NONE

Fixed Property Use: M Type Of Bldg. Const: MASONRY

Number Of Stories Occupied By Tenant: 1 Total Floor Area Of Tenant Space:

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| EXITWAYS | | ELECTRICAL | 0 | SPRINK & STANDPIPE | / | SPRINK CONTROL | / |
| Proper Number | | CONTROL PANEL | | RISERS & VALVES | / | Open | |
| Obstructed | | Access | | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | | DRAINS | / | F.D. CONNECTION | / |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | / | Unused Opening | | SPARE HEADS | / | Cap & Plugs | |
| Proper Number | / | OUTLETS | 0 | Available | | Threads | |
| Width | / | Proper Location | | Wrench | | | |
| Arrangement | / | Proper Number | | FIRE PUMP | / | COMPRESSED GAS | |
| Door Swing | / | Covers | 0 | Enclosed in Room | | Chained | 0 |
| Hold Open Device | / | EXTENSION CORDS | | Condition | | Storage | |
| Locks | / | Condition | | SPRINKLER COVERAGE | / | Other | |
| Panic Hardware | / | Use | 0 | HOSE STATIONS | | FLAMMABLE LIQUID | |
| AISLES | | EMERG. LIGHTS | | OTHER | | Storage | |
| Proper Width | | Adequate | | | | Dispensing HOLD OPEN | 0 |
| Arrangement | | BATTERY UNITS | | FIRE ALARM SYSTEM | / | Sources Of Ignition | |
| INTERIOR | | Tested | | CONTROL PANEL | / | No Smoking Signs | 0 |
| Condition | | EXIT LIGHTS | | Accessible | / | Class B Extin. | |
| | | Working | | Identified | | OTHER | |
| FIRE WALLS | + | Properly Located | — | PULL STATIONS | / | | |
| Condition | | EXPLOSION PROOF | | Accessible | | PORT FIRE EXTING. | + |
| Fire Doors | | Condition | | Working | | Condition | |
| Operation | | Seal Offs | | DETECTORS | / | Location | |
| Hold Open Device | | ELEVATOR SHAFTS | | Location | | Type | |
| STORAGE | | Emergency Key! | | Working | | Access | |
| Condition | | Stop | | OTHER | | Other | |
| Height | 0 | Equipment Room | | | | GAS METER | + |
| Housekeeping | | HOOD & DUCT SUPP. | / | SUPERVISION | / | Condition | |
| No Smoking Signs | | Condition | / | Sprinkler System | | Protection | |
| CEILING | | Serviced | / | Fire Alarm System | | ADDRESS | + |
| Condition | | Coverage | / | Sprinkler Valve | | Adequate | + |

PERSON INTERVIEWED: MARK FOXWORTHY

Remarks Or Instructions For Elimination Of Fire Hazards: NO SMOKING SIGNS ON GAS PUMPS AND SHUT MOTOR OFF.

AIR COMPRESSOR STAPLED TO TIGHT

KEEP 2 FT FROM CEILING

KEEP STORAGE 3 FT FROM ALL APPLIANCES HOT WATER, COOLER CLIMA.

OUTLET COVERS NEEDED IN STORAGE AREA + BEHIND CORN SERVALOT + PUNCH MACH.

KEEP ALL STORAGE 3 FT FROM ALL ELECTRICAL PANALS + DOORS CLOSED

REMOVE X CORD IN WALL + AD OUTLET

X CORD IN FLOOR HOLE NEAR CASH REGISTOR.

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within 15 days.
A re-inspection will be made.

I-7 Revised 4/19/89

COMPANY OFFICER: [signature] STA #4 994-1606

ANN ARBOR FIRE DEPARTMENT
111 N. Fifth Avenue 994-2774

BOCA FIRE PREVENTION CODE
BASIC OCCUPANCY REPORT

ADDRESS 3005 Packard
Date: 6/16/92 Time: 300 pm
Property Name: [illegible]
Emergency Contacts [illegible]
Tenant Name: [illegible]
Responsible Party: [illegible]
Auto Sprinkler: ___ L.A. ___ Standpipe & Hose Cabinets: ___ Fire Pump: ___
Location Of Fire Department Connection: None
Fire Alarm: ___ Automatic ___ Manual ___ Alarm Co. None
Location Of Annunciator Panel: None
Fixed Property Use: Gas Station & Convenience Type Of Bldg. Const: C-A
Number Of Stories Occupied By Tenant: 1 Total Floor Area Of Tenant Space: 1 [illegible]

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| EXITWAYS | + | ELECTRICAL | OK | SPRINK & STANDPIPE | | SPRINK CONTROL | |
| Proper Number | | CONTROL PANEL | | RISERS & VALVES | | Open | |
| Obstructed | | Access | OK | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | + | DRAINS | | F.D. CONNECTION | / |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | / | Unused Opening | | SPARE HEADS | | Cap & Plugs | |
| Proper Number | | OUTLETS | + | Available | | Threads | |
| Width | | Proper Location | | Wrench | | | |
| Arrangement | | Proper Number | | FIRE PUMP | | COMPRESSED GAS | OK |
| Door Swing | | Covers | | Enclosed in Room | | Chained | |
| Hold Open Device | | EXTENSION CORDS | + | Condition | | Storage | |
| Locks | | Condition | | SPRINKLER COVERAGE | | Other | |
| Panic Hardware | | Use | | HOSE STATIONS | | FLAMMABLE LIQUID | OK |
| AISLES | + | EMERG. LIGHTS | / | OTHER | | Storage | |
| Proper Width | | Adequate | | | | Dispensing | |
| Arrangement | | BATTERY UNITS | | FIRE ALARM SYSTEM | | Sources Of Ignition leaks | OK |
| INTERIOR | OK | Tested | | CONTROL PANEL | | No Smoking Signs | |
| Condition | | EXIT LIGHTS | OK | Accessible | | Class B Extin. | |
| | | Working | | Identified | | OTHER | |
| FIRE WALLS | | Properly Located | | PULL STATIONS | | | |
| Condition | | EXPLOSION PROOF | / | Accessible | | PORT FIRE EXTING. | + |
| Fire Doors | | Condition | | Working | | Condition | |
| Operation | | Seal Offs | | DETECTORS | | Location | |
| Hold Open Device | | ELEVATOR SHAFTS | / | Location | | Type | |
| STORAGE | OK | Emergency Key | | Working | | Access | |
| Condition | | Stop | | OTHER | | Other | |
| Height | | Equipment Room | | | | GAS METER | + |
| Housekeeping | | HOOD & DUCT SUPP. | / | SUPERVISION | | Condition | |
| No Smoking Signs | | Condition | | Sprinkler System | | Protection | |
| CEILING | | Serviced | | Fire Alarm System | | ADDRESS | + |
| Condition | | Coverage | | Sprinkler Valve | | Adequate | |

PERSON INTERVIEWED: Rick Tolins
Remarks Or Instructions For Elimination Of Fire Hazards: [illegible] OK [illegible] 7/15/92

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within 21 days.
A re-inspection will be made.

APPROVAL DATE, PERMIT ISSUED: ___

Symbols: O-Violation +-No Violation /-Does Not Pertain

INSPECTOR: [illegible]

I-7 Revised 1/13/84

ANN ARBOR FIRE DEPARTMENT
111 N. Fifth Avenue 994-2774

BOCA FIRE PREVENTION CODE
BASIC OCCUPANCY REPORT

48108

ADDRESS [illegible] Packard
Date: [illegible] Time: [illegible]
Property Name: [illegible]
Emergency Contacts [illegible]
Tenant Name: [illegible]
Responsible Party: [illegible]
Auto Sprinkler: ___ L.A. ___ Standpipe & Hose Cabinets: ___ Fire Pump: ___
Location Of Fire Department Connection: ___
Fire Alarm: ___ Automatic ___ Manual ___ Alarm Co. [illegible]
Location Of Annunciator Panel: [illegible]
Fixed Property Use: [illegible]
Type Of Bldg. Const: [illegible]
Number Of Stories Occupied By Tenant: ___
Total Floor Area Of Tenant Space: [illegible]

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| EXITWAYS | | ELECTRICAL | | SPRINK & STANDPIPE | | SPRINK CONTROL | |
| Proper Number | | CONTROL PANEL | | RISERS & VALVES | | Open | |
| Obstructed | | Access | | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | | DRAINS | | F.D. CONNECTION | |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | | Unused Opening | | SPARE HEADS | | Cap & Plugs | |
| Proper Number | | OUTLETS | | Available | | Threads | |
| Width | | Proper Location | | Wrench | | | |
| Arrangement | | Proper Number | | FIRE PUMP | | COMPRESSED GAS | |
| Door Swing | | Covers | | Enclosed in Room | | Chained | |
| Hold Open Device | | EXTENSION CORDS | O | Condition | | Storage | |
| Locks | | Condition | | SPRINKLER COVERAGE | | Other | |
| Panic Hardware | | Use | | HOSE STATIONS | | FLAMMABLE LIQUID | |
| AISLES | | EMERG. LIGHTS | O | OTHER | | Storage | OK |
| Proper Width | | Adequate | | | | Dispensing | |
| Arrangement | | BATTERY UNITS | | FIRE ALARM SYSTEM | | Sources Of Ignition | |
| INTERIOR | | Tested | | CONTROL PANEL | | No Smoking Signs | |
| Condition | | EXIT LIGHTS | O | Accessible | | Class B Extin. | |
| | | Working | | Identified | | OTHER | |
| FIRE WALLS | | Properly Located | | PULL STATIONS | | | |
| Condition | | EXPLOSION PROOF | | Accessible | | PORT FIRE EXTING. | |
| Fire Doors | | Condition | | Working | | Condition | |
| Operation | | Seal Offs | | DETECTORS | | Location | |
| Hold Open Device | | ELEVATOR SHAFTS | | Location | | Type | |
| STORAGE | | Emergency Key | | Working | | Access | |
| Condition | | Stop | | OTHER | | Other | |
| Height | | Equipment Room | | | | GAS METER | |
| Housekeeping | | HOOD & DUCT SUPP. | | SUPERVISION | | Condition | |
| No Smoking Signs | | Condition | | Sprinkler System | | Protection | |
| CEILING | | Serviced | | Fire Alarm System | | ADDRESS | |
| Condition | | Coverage | | Sprinkler Valve | | Adequate | |

PERSON INTERVIEWED: ___
Remarks Or Instructions For Elimination Of Fire Hazards: ___

OK 8/3/93

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within _____ days.
A re-inspection will be made.

APPROVAL DATE, PERMIT ISSUED: ___

Symbols: O-Violation +-No Violation /-Does Not Pertain

INSPECTOR: ___

I-7 Revised 1/13/84

# CITY OF ANN ARBOR, MICHIGAN

111 N. Fifth Avenue, Ann Arbor, Michigan 48104
Phone (313) 994-2772

Ann Arbor Fire Department


February 18, 1993

Cathy O'Neal
Buddy's Mini Mart
3005 Packard
Ann Arbor, MI 48104

Dear Ms. O'Neal,

At previous inspections, there was some confusion as to when gasoline dispensers or islands would be closed. The following is a list of items that would need immediate attention when inspected.

1. All dispensers must have break-away units on the hose to the nozzles and at the base of the dispensers.

2. All leaks must be corrected immediately.

3. All pumps must be protected at least 12" in all directions or equivalent.

4. All nozzles must meet the code listed in NFPA 30. (O.P.W. 11B is an example).

5. Emergency shut-off must be operational.

Other items being checked, but would not mean immediate shut down, would be:

1. Instructions on self-serve islands must be posted.

2. "No Smoking" signs must be posted.

3. New state rules dictate a 4A 20BC classification portable fire extinguisher be on site and available.

Any other code violations will be discussed at the time of the inspection.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely,

Robert Crout
Fire Inspector

RC:cav
R.012

100% recycled paper

Ann Arbor Fire Department
111N. Fifth Avenue 994-4976

# Boca Fire Prevention Code
# Basic Occupancy Report

**Symbols:**
0 = Violation
+ = No Violation
/ = Does Not Pertain

Address 3005 Packard
Telephone 517 784-6576 Date 7/12/94
Property Name Buddy's Mini Mart
Emergency Contacts Jason Murton
Tenant Name [illegible]
Responsible Party Jason Murton
Auto Sprinkler: ____ L.A. ____ Standpipe & Hose Cabinets: ____ Fire Pump: ____
Location of Fire Department Connection: ____
Fire Alarm: Automatic ____ Manual ____ Alarm Co.: ____
Location of Annunciator Panel: ____ Telephone: ____
Fixed Property Use: Storage II Type of Bldg. Const: Ord. Capacity: ____
Number Of Stories Occupied By Tenant: 1 Total Floor Area Of Tenant Space: ____

| | Violation | | Violation | | Violation | | Violation |
|---|---|---|---|---|---|---|---|
| **EXITWAYS** | + | **ELECTRICAL** | + | **SPRINK & STANDPIPE** | | **SPRINK CONTROL** | / |
| Proper Number | | CONTROL PANEL | | RISERS & VALVES | | Open | |
| Obstructed | | Access | | Condition | | Accessible | |
| Arrangement | | Properly Marked | | Accessible | | Condition | |
| Door Swing | | CIRCUITS | | DRAINS | | F.D. CONNECTION | |
| Locks | | Proper Sizes | | Marked | | Accessible | |
| Panic Hardware | | Identified | | Accessible | | Swivels Working | |
| STAIRWAYS | / | Unused Opening | | SPARE HEADS | | Cap & Plugs | |
| Proper Number | | OUTLETS | + | Available | | Threads | |
| Width | | Proper Location | | Wrench | | | |
| Arrangement | | Proper Number | | FIRE PUMP | | **COMPRESSED GAS** | 0 |
| Door Swing | | Covers | | Enclosed in Room | | Chained | |
| Hold Open Device | | EXTENSION CORDS | | Condition | | Storage | |
| Locks | | Condition | | Date Tested | | Other | |
| Panic Hardware | | Use | | SPRINKLER COVERAGE | | **FLAMMABLE LIQUID** | 0 |
| **AISLES** | + | EXPLOSION PROOF | | HOSE STATIONS | | Storage | |
| Proper Width | | Condition | | | | Dispensing | |
| Arrangement | | Seal Offs | | **FIRE ALARM SYSTEM** | | Sources Of Ignition | |
| **INTERIOR** | + | **EMERG. LIGHTS** | / | CONTROL PANEL | | No Smoking Signs | |
| Condition | | Adequate | | Accessible | | Class B Extin. | |
| | | BATTERY UNITS | | Identified | | Emergency Shut Off | |
| **FIRE WALLS** | + | Tested | | PULL STATIONS | | Nozzle | 0 |
| Condition | | **EXIT LIGHTS** | + | Accessible | | **PORT FIRE EXTING.** | + |
| Fire Doors | | Working | | Working | | Condition | |
| Operation | | Properly Located | | DETECTORS | | Location | |
| Hold Open Device | | **ELEVATOR SHAFTS** | / | Location | | Type | |
| **STORAGE** | + | Emergency Key | | Working | | Access | |
| Condition | | Stop | | OTHER | | Date Services | |
| Height | | Equipment Room | | | | **GAS METER** | + |
| Housekeeping | | **HOOD & DUCT SUPP.** | / | **SUPERVISION** | | Condition | |
| No Smoking | | Condition | | Sprinkler System | | Protection | |
| **CEILING** | + | Serviced | | Fire Alarm System | | **ADDRESS** | + |
| Condition | | Coverage | | | | Adequate | |

PERSON INTERVIEWED: Jason Murton
Remarks Or Instructions For Elimination Of Fire Hazards: ① Chain Compressed GAS ② Remove hold open device
OK 9/26/94

You are hereby requested to remedy the above noted violations of the Fire Prevention Code within 14 days.
A re-inspection will be made on ____.
INSPECTOR: [illegible] Approved Date ____

I-7

DDY
-52 (9-52)
Dept. of State Police
State Fire Marshal

ORIGINAL STORAGE INSPECTION PAGE 2

AUTHORITY: 1941 PA 207
COMPLIANCE REQUIRED
PENALTY: MISDEMEANOR

Firm Name: BUDDY'S PACKARD SUNOCO
P.R. No.:
Terminal Address: 3005 PACKARD
County: WASHTENAW
City: ANN ARBOR
St: MI Zip: 48104
UST Facility #: 0-003-[illegible]

| RULE NO. | REASON |
|---|---|
| | CONT. |

ATTENDANT STATED THAT A CONCRETE FOOTER WAS dug AND poured for the installation of A SUNOCO SIGN AT THE CORNER OF PLATT AND PACKARD ROADS. THE WORKER FOUND PRODUCT IN THE FOOTING EXCAVATION. WHEN THE WORKER CAME INTO THE STATION THE ATTENDANT SAID HE SMELLED LIKE GAS. I (DAVE KLUSMAN) TALKED TO WILLIAM COLE OF PIPELINE ON THE PHONE FROM THE STATION. TOLD MR COLE THAT THERE WAS product detected on the property AT THE BUDDY SUNOCO STATION. A CONFIRM RELEASE MUST BE REPORTED, TANK & LINE TIGHTNESS must be performed, AND SITE ASSESSMENT conducted with REPORT SENT TO STATE FIRE MARSHAL. COPIES OF INVENTORY CONTROL AND RECONCILATIONS REPORTS JUNE, JULY, AUG must be SENT TO DELEGATE FIELD OFFICE Noted ON PAGE #1.

THE CONFIRM RELEASE MUST BE REPORTED IMMEDIATELY TO LANSING OFFICE AT 1-800-[illegible]-78 THE REMAINING REPORTS SUBMITTED TO [illegible]

# ANN ARBOR FIRE DEPARTMENT

Narrative Continuation And Supplement Report Form

Incident No.
Incident Address/Location 3005 Platt

☐ Supplementary Incident Report  Original Date 8-23-94

☐ Additional Incident Page No. 1  Date Of Supplement 8-25-94

Reported By Hasley
Investigated By Hasley
Reviewed By Hasley

---

F/M Hasley responded to a notification of possible hydrocarbons at the construction site on the corner of Packard and Platt. Fumes that smelled like gasoline were detected in the trench along the curb. The call was made by Gus Haengel from the city Engineering Dept.

Upon my arrival, I met with Gus and Dennis O'Donnel, the foreman for the job. The work had been stopped pending my arrival. The odor was noticeable on the east side of the site. Using a flammable gas detector, I determined that there was not an explosion hazard so I allowed work to continue up to within fifty feet of the suspected leak. The manager of Buddy's Service Station came outside and told us that the person that was digging the hole for the new signs noticed the fumes also just a couple of days ago. When the man entered the store after digging the second foundation hole, his clothes reeked of gasoline. He telephoned someone, (manager is not sure who), then filled the hole with concrete.

I contacted Washtenaw County Environmental, and David Klusman came out. David is the UST delegate for the MSP/FM for this county. We are in agreement that the underground plume appears to be coming from 3005 Packard, and not from the old Shell station across the street.

I also contacted the state DNR office. (517) 780-7928. My call was returned the next day by Terry Hiski. His records do not indicate any confirmed release at Buddy's, but records indicate that Shell station had a release some time ago. When the tanks were removed, total remediation was accomplished by Shell Oil finishing January 1994. Eric Larson from the A-Tech Company (810) 344-9505 (maintenance for Shell) was notified. David Wright (A-Tech) called me in response to that contact.

David Klusman is going to order a tightness test for all tanks and lines at the Buddy's Service Station. He will notify me of the results.

Facility No: 0-002107 Leak ID: S-960-94

Michigan State Police
Fire Marshal Division
District 2

# UNDERGROUND STORAGE TANK SUSPECTED RELEASE REPORT

| Owner Information | Location of Tanks |
|---|---|
| PIPELINE OIL SALES INC<br>744 E SOUTH ST<br>JACKSON, MI 49203 | BUDDY'S PACKARD SUNOCO<br>3005 PACKARD<br>ANN ARBOR, MI 48104 |
| | County: WASHTENAW<br>City: |
| Owner Phone: (517) 782-0467 | Location Phone: (517) 782-0467 |

**Date Release Discovered:** 08/31/94

Time Release Discovered:

900AM

Date Release Reported: 08/31/94

Tank Information and Product Released:

Cause: 20,000G, 6000G, 1000G STEEL LINED FIBERGLASS

Product: GASOLINE

Estimated Quantity Lost: invalid quantity datum

Detection Method:

1) STAIND SOILS, GAS ODORS DURNG EXCAV.

Comments (For FMD use only):

900AM, RPT 083194 1005AM, FX

**Reporting Party Information:**

WILLIAM B COLE - PIPELNE OIL SALES IN
OTHER
(517) 782-0467

SEP 21 '94 9:28 FROM MSP FMD LANSING, MI

upgrade 9/15/94 fax
Mark DeKruyter
Enviro Logic 616-342-1100
over till

FM-35 (8-92)
MICHIGAN DEPARTMENT OF STATE POLICE

# RELEASE REPORT FORM

(PLEASE CHECK ONE) ~~SUSPECTED~~ ■ CONFIRMED

IMPLEMENTING AGENCY:

MICHIGAN STATE POLICE
FIRE MARSHAL DIVISION

[redacted]

Person Reporting Release: WILLIAM B. COLE

Telephone (Include Area Code): (517) 782-0467

Company (if not owner/operator): PIPELINE OIL SALES, INC.

## I. OWNERSHIP OF TANKS

IF NEW OWNERS ADDRESS, PLEASE CHECK ☐

PIPELINE OIL SALES INC
OWNER NAME (CORPORATION, INDIVIDUAL, ETC)

OWNER NAME (2ND LINE)

744 E SOUTH ST
STREET ADDRESS

JACKSON MI 49203
CITY STATE ZIP

(517) 782-0467
TELEPHONE (INCLUDE AREA CODE)

WILLIAM B. COLE OR JEFFERY L. HANSON
CONTACT PERSON

## II. LOCATION OF TANKS

IF SAME AS SECTION I, PLEASE CHECK ☐

BOOBY'S MINI MART #28 - PACKARD
FACILITY NAME OR CO. SITE IDENTIFIER

3005 PACKARD RD
STREET ADDRESS (P.O. BOX NOT ACCEPTABLE)

ANN ARBOR MI 48104
CITY STATE ZIP

WASHTENAW
COUNTY TOWNSHIP

(313) 973-2067
TELEPHONE (INCLUDE AREA CODE)

Date Release Discovered: 8-31-94 Time Release Discovered: 9:00 AM

| Size of Tank (gallons) | Substance Released | Construction of Tank | Reason for Believing Release Occurred: (presence of product, failed tightness test, vapors, stains) |
|---|---|---|---|
| 20,000 gal | GASOLINE | STEEL-FIBERGLASS LINED | RECEIVED LETTER FROM WASHTENAW COUNTY ENVIRONMENTAL SERVICES STATING STAINED SOILS |
| 6,000 gal | GASOLINE | STEEL-FIBERGLASS LINED | AND GASOLINE ODOR NOTED DURING EXCAVATION |
| 1,000 gal | KEROSINE | STEEL-FIBERGLASS LINED | FOR ROAD CONSTRUCTION. |

COMMENTS:
ALL TANKS AT THE FACILITY ARE LISTED. AT THIS POINT IT IS UNKNOWN IF A RELEASE HAS OCCURRED AND IF IT HAS, FROM WHICH TANK.

8/31/94

[redacted]

ATTENTION: SEE REVERSE SIDE FOR INSTRUCTIONS

[redacted]

AUTHORITY: 1984 PA 423
COMPLIANCE: Required
PENALTY: Misdemeanor. Civil Penalties not to exceed $5,000 per day, per tank

Anytime, 24 hours a day

Jerry VasPetten

COUNTY OF WASHTENAW

HUMAN SERVICES DEPARTMENT

PUBLIC HEALTH DIVISION

ENVIRONMENTAL HEALTH BUREAU

2355 West Stadium Blvd. P.O. Box 8645 Ann Arbor, MI. 48107-8645

(313) 994-2492

October 4, 1988

Sunoco Gas Station 973-2067 ?
3005 Packard Road
Ann Arbor, MI 48104

RE: Property at 3005 Packard Road

Dear Owner/Manager:

You will be contacted by representatives of the Huron River Pollution Abatement District to conduct a survey of your establishment. During the survey, the type, usage, handling procedures, storage, and disposal of hazardous materials will be reviewed. All drains, waterclosets, plumbing fixtures, etc., in your building will be noted. Later, Abatement District's representatives will dye-test all plumbing fixtures, floor drains, waterclosets, etc., in your building to determine if they are connected to the sanitary sewer or storm sewer.

The Huron River Pollution Abatement District was established by the Washtenaw County Drain Board to locate and eliminate sources of contamination to the Abatement District's storm drains and surface waters. This one-of-a-kind approach to eliminating non-point pollution will be operating for five years beginning January 1, 1987 and ending December 31, 1991.

An earlier pilot project in Ypsilanti and Ann Arbor located and eliminated over 80 non-point pollution sources, thus preventing thousands of gallons of contaminated water from entering our storm drains and surface waters.

Your cooperation and participation are essential for us to be successful in eliminating this type of contamination. Enhanced water quality is beneficial for today's and future generations to safely utilize our area's surface waters to their fullest capacity.

If you have any questions, please feel free to contact me at 994-4893.

Sincerely,

Bradley J. Bucklin

Bradley J. Bucklin
Water Quality Sanitarian

PR

**HURON RIVER POLLUTION ABATEMENT PROJECT** **BUSINESS DATA / DYE-TEST FORM**

1) TAX ID # 12-02-325011 2) SITE EXTENSION # 0 3) BUSINESS ID _____

4) DRAIN DISTRICT CODE # 26 5) PRIORITY # (1) 2 3

6) SURVEY DATE 10/21/88 7) DYE TEST COMPLETED DATE 10/21/88

8) BUSINESS NAME Sunoco Gas Station PHONE # _____

9) STREET # 3005 Packard Rd CONTACT: Jerry Van Petten - Mgr

10) CITY Ann Arbor 11) STATE MI 12) ZIP 48104 13) TWP AAC

Fill in IMPROPER CONNECTION CODE boxes lined to the appropriate descriptions of the problem on site. Use a 1 if the problem is present, or 0 if it is not

| Discharge to Surface | | Discharge to Ground | |
|---|---|---|---|
| Storm Drain X-Connect | | | Septic Field (Sewer Available) |
| 0 | 0 | 0 | 0 |

14) IMPROPER CONNECTION CODE 15) SURVEY LETTER SENT 10/4/88

16) CORRECTION LETTER #1 / / 17) CORRECTION LETTER #2 / /

18) REFERRED FOR ENFORCEMENT / / 19) AUTHORITY REFERRED TO _____

20) CORRECTION VERIFIED ON / / 21) VARIANCE GRANTED Y / N

22) IMPROPER CHEMICAL STORAGE Y / (N)
23) UNDERGROUND STORAGE TANKS (Y) / N
24) NPDES PERMIT DISCHARGE Y / (N)
25) ABOVEGROUND STORAGE TANKS Y / (N)
26) SPECIAL NOTES (See File) Y / (N)
27) HAZARDOUS WASTE GENERATOR Y / (N)

28) ESTIMATE AMOUNT GROSS CHEMICAL STORAGE ON SITE (100kg = 30gal)

| for... | <100kg | 100 - 1000 | >1000kg |
|---|---|---|---|
| circle... | 1 | 2 | (3) |

29) COMMENTS _____

POSTED

FIELD PERSONNEL Brad Buckelew, Doug Adkins

TAX CODE # _____ BUSINESS ID _____

DRAIN DISTRICT # PAAD South

PRIORITY 1

SURVEY DATE: 10-21-88 DYE TEST DATE: 10-21-88

BUSINESS NAME: Sunoco Gas Station

ADDRESS: 3005 Packard Road

CONTACT NAME: Jerry Van Petten TITLE Manager

OWNER Jim Ahearn

ADDRESS _____

IMPROPER CONNECTION Y (N)

_____ STORM

_____ SURFACE

_____ GROUND

SURVEY LETTER DATE: 10/4/88

CORRECTION LETTER #1 _____

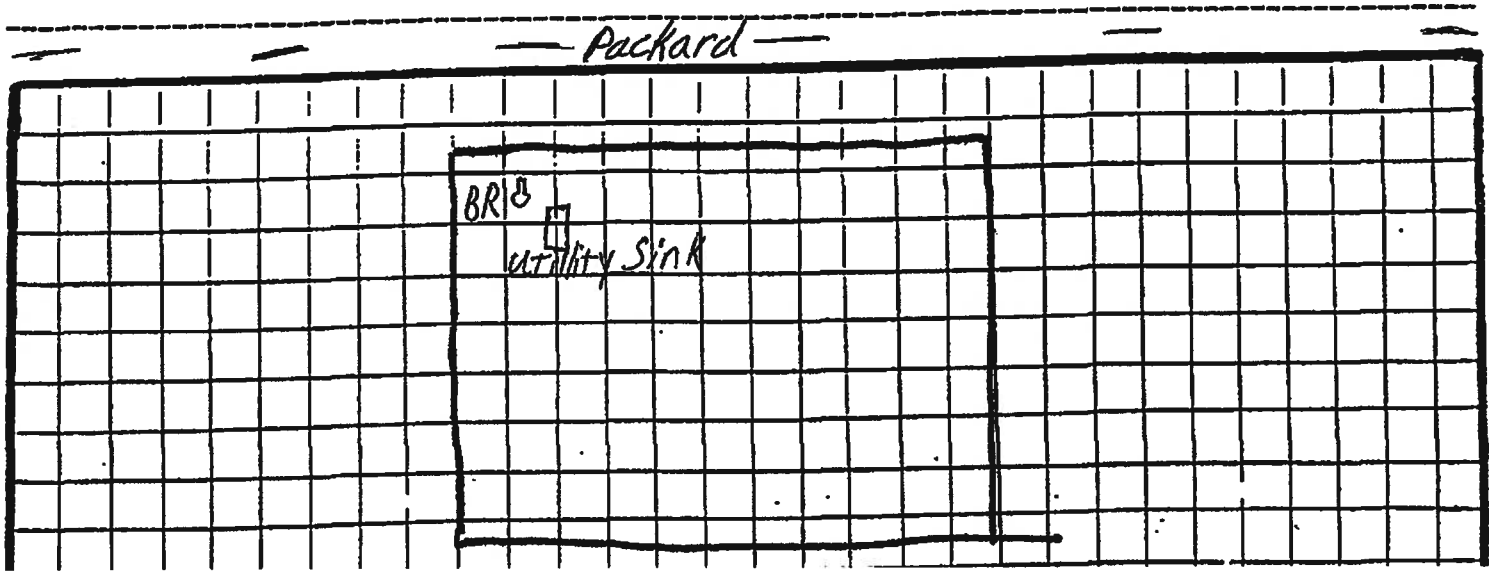
CORRECTION LETTER #2 _____

GIVEN TO AUTHORITY _____

COMPLIANCE VERIFICATION _____

COMMENTS: All indoor Plumbing drains to Sanitary sewer on Platt. dye tested and surveyed 10-21-88 BB DA

AMOUNT OF HAZARDOUS WASTE _____ > 220 Kg/month Y N



HAZARDOUS MATERIAL: Sunoco 3005 Packard

| TYPE | AMOUNT STORED | AMOUNT WASTE/MONTH | PROPER STORAGE | PROPER DISPOSAL | MANIFEST PROPERLY |
|---|---|---|---|---|---|
| 3 USTs gas | 12,500 gallons each | | Y N | Y N | Y N |
| lust Kerosene | 1020 gallons | | Y N | Y N | Y N |
| Motor Oil | 15 gallons | | (Y) N | Y N | Y N |
| Windshield Wiper Fuid | 36 gallons | | (Y) N | Y N | Y N |
| | | | Y N | Y N | Y N |
| | | | Y N | Y N | Y N |
| | | | Y N | Y N | Y N |
| | | | Y N | Y N | Y N |

NPDES Y N required ____ (check if yes)

PIPP Y N required ____ (check if yes)

-4 UST (Y) N capacity _____ contents Gas and Kerosene

ST Y (N) capacity _____ contents _____

GENERAL COMMENTS: NO Garage, Retail Sale

Bradley J. Buckles

SANITARIAN

**WASHTENAW COUNTY HEALTH DEPARTMENT**
**P.O. Box 8645**
**Ann Arbor, Michigan 48107**

Environmental Health
Washtenaw County
Telephone
994-2492

Name of Establishment: Sunoco

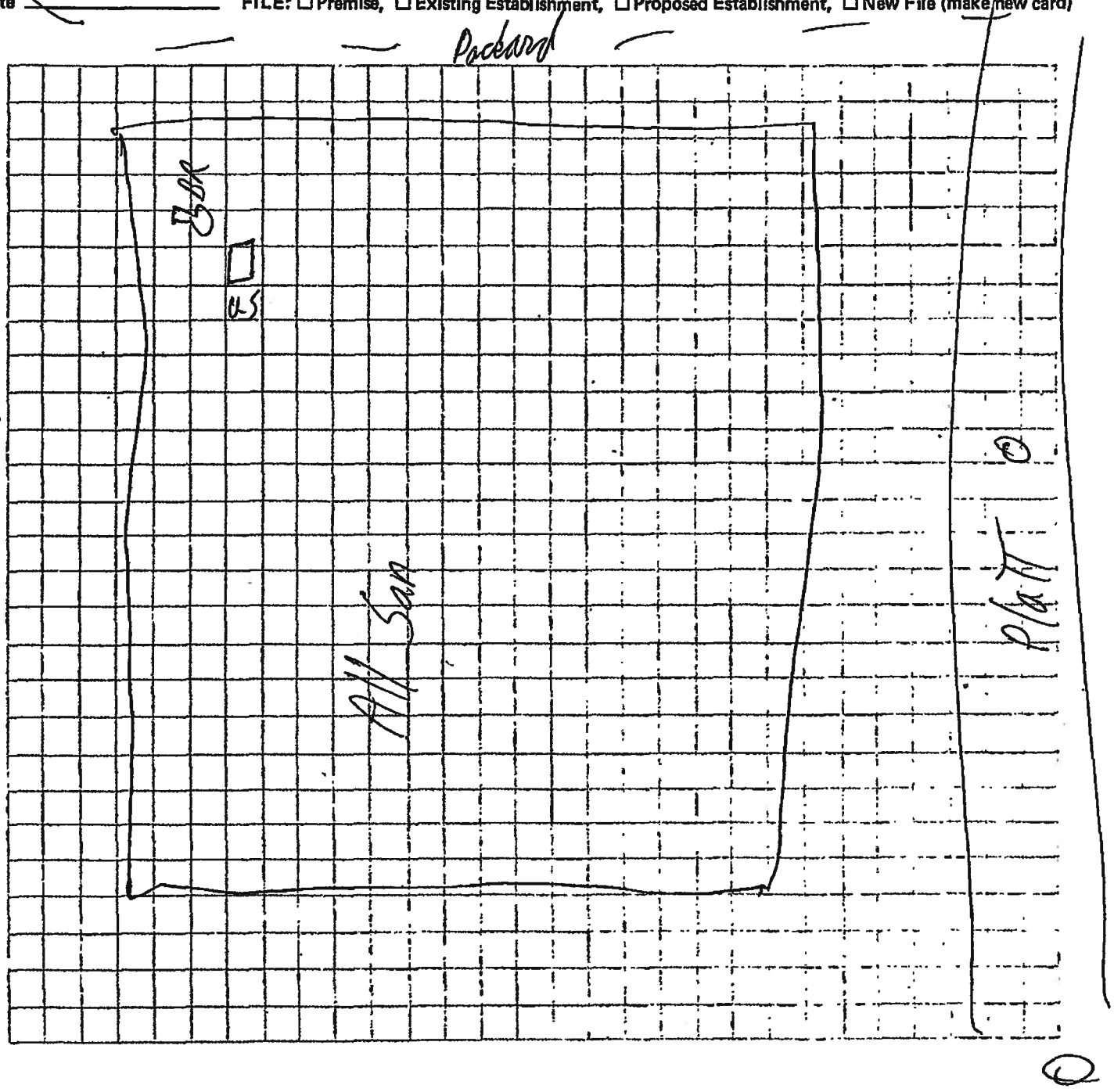
Premise: _____ (number) _____ (Street)

Owner: _____

Location: _____ (City or Township)

Address: 3005 Packard
(Number) (Street) (Post Office)

Date: _____ FILE: ☐ Premise, ☐ Existing Establishment, ☐ Proposed Establishment, ☐ New File (make new card)




Report Received By

Health Department Representative

# Imaging Cover Sheet

THIS RECORD WAS PREPARED FOR IMAGING ON 7-17-06

*** IF YOU ADD RECORDS TO THIS FILE PRIOR TO BEING SCANNED YOU MUST MODIFY THIS FORM IF NECESSARY.

EQUALIZER STICKER:

PARCEL ID#: 09-12-02-325-011

STREET NUMBER: 3005

✓ Confirmed *** *PLACE EQUALIZER GENERATED STICKER TO RIGHT OF TOWNSHIP ONCE ADDRESS IS CONFIRMED.*

___ Approximate

STREET NAME: Packard Rd.

OWNER LAST NAME: South Street Investments

TOWNSHIP: Ann Arbor City, Pittsfield Township

## Types of information imaged

___ Sewage System - Septic Case Number: _____

___ Well Case Number: _____

___ Soil Evaluation – SEV Case Number: _____

___ Time of Sale - TOS Case Number: _____

✓ MISC Special Projects

___ P2

The following information is available for this address:

___ E size drawing Location: _____

___ Complaint(s)

___ Other _____

THIS FILE ALSO CONTAINS INFORMATION FOR THE FOLLOWING ADDRESS(S):

_____

_____

Department of Environmental Quality

Michigan.gov



Storage Tank Information Database

## Storage Tank Facilities List

SID-DEQ

### Facility and Tank Details

**Facility Information:**
Facility ID:00002107
Packard Mini Mart inc
3005 Packard St, Ann Arbor, MI 48104
Phone# : (734) 973-2067

**Owner Information:**
Packard Mini Mart inc
3005 Packard Rd, Ann Arbor, MI 48106
Phone# : (734) 973-2067

| Tank ID | Tank Status | Capacity (in gallons) | Installation Date | Substance Stored | Tank Release Detection | Piping Release Detection | Piping Material | Piping Type | Construction Material | Impressed Device |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Removed from Ground | 6000 | 4/25/1971 12:00:00 AM | Gasoline | | | Galvanized Steel | | Asphalt Coated or Bare Steel | No |
| 2 | Removed from Ground | 20000 | 4/25/1971 12:00:00 AM | Gasoline | | | Galvanized Steel | | Asphalt Coated or Bare Steel | No |
| 4 | Removed from Ground | 1000 | 4/25/1971 12:00:00 AM | FUEL OIL | | | Galvanized Steel | | Asphalt Coated or Bare Steel | No |
| 5 | Currently In Use | 20000 | 12/1/1994 12:00:00 AM | Gasoline | Automatic Tank Gauging, Interstitial Monitoring Double Walled Tank | Automatic Line Leak Detectors, Interstitial Monitoring Double Walled Piping | Galvanized Steel, Double Walled | Pressure | Composite (Steel with Fiberglass), Double Walled | No |

### Release Information

| Leak ID | LUST Site Name | Discovery Date | Substance Released | Release Status | Closed Date | Evaluation | Land Use Restrictions |
|---|---|---|---|---|---|---|---|
| C-0960-94 | Buddy's Mini Mart #28 | 09/15/1994 | Gasoline,Kerosene | Closed | 07/06/1998 | Tier I Evaluation | NONE |



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STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

REBECCA A. HUMPHRIES
DIRECTOR

April 23, 2010

Packard Mini Mart Inc
3005 Packard Rd
Ann Arbor, MI 48106

Dear Owner/Operator:

SUBJECT: Nonpayment of Fee(s) for Underground Storage Tank(s)

The Department of Natural Resources and Environment (DNRE), Waste and Hazardous Materials Division (WHMD), has not received payment of fees for the underground storage tank(s) (UST) located at Packard Mini Mart Inc, 3005 Packard St, Ann Arbor, Michigan, Facility Number 00002107.

Pursuant to Section 21102 (8) of Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, "the owner of an underground storage tank system shall, upon registration or renewal of registration, pay a registration fee of $100 for each underground storage tank included in that underground storage tank system." The fee is owed on any regulated UST that exists at the facility whether the tank is active or not.

You were invoiced for your registration fee(s) on August 9, 2009 Your current balance reflected on the enclosed customer statement and/or previous balance statement is over 30 days past due and must be paid immediately. If a customer statement is not enclosed, remit the amount of the previous balance statement, which reflects any unpaid balance prior to February 2008. If both a customer statement and a previous balance statement are enclosed, you must remit the total of two statements. Please return the statement(s) with your check, indicating your invoice and/or facility ID number, payable to the **"State of Michigan,"** to the DNRE, Cashiers Office, P.O. Box 30657, Lansing, Michigan 48909-8157.

Should you have reason to dispute all or part of these registration fees, you must submit and the WHMD must receive a written statement, together with all documentation in support of your position, within 21 days of the date of this letter. The information must be sent to the DNRE, WHMD, P.O. Box 30241, Lansing, Michigan 48909-7741.

If the WHMD does not receive payment within 30 days of the date of this letter, your UST(s) will be red-tagged and, as such, cannot be filled. Further, you may be subject to escalated enforcement action and referral to the Michigan Department of Treasury, Collection Division.

The WHMD will not accept payment of fees on-site or in a District Office. The tanks will be red-tagged as noted above and will not be de-tagged until payment is received by the DNRE, Cashiers Office, in Lansing.

Change In Ownership

- Documents sufficient to demonstrate that a legal, equitable, or possessory interest of any kind in a UST system or in the property on which a UST system is located was transferred to another person. These documents should include a copy of the instrument of conveyance (e.g., trusts, land contracts, lease agreements, and recorded quit claim or warranty deeds).
- An amended Registration of Underground Storage Tanks form, Form EQP3821 (REV 10/05). As required by Rule 13, Section 280.22(a) of the Michigan Underground Storage Tank Rules, 1999 AACS R 29.2101 et seq. (MUSTR), a new owner of an existing UST system shall register the UST system with the DNRE within 30 days of ownership on the above form.

UST Removal

- An amended Registration of Underground Storage Tanks form, Form EQP 3821(REV 10/05).
- As required by Rule 53, Section 280.71(f) of the MUSTR, the owner or operator shall sign and submit to the DNRE an amended registration form within 30 days of permanent closure or, in place of an amended registration form, a site assessment form, signed by the owner, within 45 days of permanent closure.
- As required by subsection 21102(10) of Part 211, the owner of a UST system is responsible to pay registration fees on USTs that have been closed or removed until notification of the closure or removal is provided to the DNRE.

If you have additional questions concerning this matter, please contact me.

Sincerely,

Ronald J. Horvath, Departmental Analyst
Storage Tank Unit
Storage Tank and Solid Waste Section
Waste and Hazardous Materials Division
517-373-6247

Enclosure
cc: Facility File

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

March 19, 2009

Packard Mini Mart Inc
3005 Packard Rd
Ann Arbor, MI 48106

Dear Owner/Operator:

SUBJECT: Nonsubmittal of Financial Responsibility (i.e. Pollution Insurance) for Underground Storage Tanks

The Department of Environmental Quality, Waste and Hazardous Materials Division (WHMD), has not received proof of financial responsibility (FR) or the FR documentation received was inadequate for the underground storage tanks (USTs) located at Packard Mini Mart Inc, 3005 Packard St, Ann Arbor, Michigan, Facility Number 00002107.

Pursuant to Rule 61, Section 280.90, of the Michigan Underground Storage Tank Rules, 1999 AACS, R 29.2161 et seq., owners/operators of petroleum USTs are required to provide proof of FR for taking corrective action and for compensating third parties for bodily injury and property damage arising from a release by petroleum USTs.

You were notified of this requirement on August 8, 2008, in your annual UST billing.

If the WHMD does not receive proof of FR within 30 days of receipt of this letter, your USTs are subject to red tagging and as such cannot be filled. Further, you may be subject to escalated enforcement action.

If you have previously submitted FR to the WHMD and are in receipt of this letter, you must resubmit. Also, be sure the correct address of where the USTs are located, which are covered under the FR mechanism, is noted on the document or as an attachment. Please include a copy of this letter with your submittal to the address below or you may fax your submittal to 517-335-2245 or email to wieberk@michigan.gov.

If you have any questions, please contact me or visit our Web site at www.michigan.gov/deq.

Sincerely,

Kevin Wieber

Kevin Wieber, HMSI Specialist
Storage Tank Unit
Storage Tank and Solid Waste Section
Waste and Hazardous Materials Division
517-335-7260

HQ

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

Owner Name & Address:

Packard Mini Mart Inc
3005 Packard Rd
Ann Arbor, MI 48106

Location of Tanks:

Packard Mini Mart Inc
3005 Packard St
Ann Arbor, MI 48104
County - Washtenaw
Facility ID - 00002107

RLW SEP 2 6 2009

ATTENTION: Owner or Operator

A Records Investigation was conducted on July 18, 2008, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is approved.

The previous violations have been corrected, based on information Zorah provided.

If you have additional questions concerning this matter, please contact me.

Mark Johns

7-18-08

Date

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Highway
Jackson, MI 49201-1556
Phone: 517-780-7497
Fax: 517-780-7855
Email: johnsm1@michigan.gov

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

Owner Name & Address:

Packard Mini Mart Inc
3005 Packard Rd
Ann Arbor, MI 48106

Location of Tanks:

Packard Mini Mart Inc
3005 Packard St
Ann Arbor, MI 48104
County - Washtenaw
Facility ID - 00002107

ATTENTION: Owner or Operator

A Reinspection was conducted on April 30, 2008, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that there was no action taken by the inspector.

1 Emergency shutoff controls shall be located not more than 100 feet from dispensers.
UST 280.10 (J) (FL\CL Part 3, 6.7)

Special Attention : At attended motor fuel dispensing facilities, the device shall be readily accessible to the attendant. Part 3 6.7.1
Install an emergency electrical disconnect device in an area that meets this requirement.

2 Dispenser shall be in clear view of attendant and be able to communicate.
UST 280.10(J) (FL/CL Part3, Section 9.4.5)

Special Attention : Repair or replace the speaker system so that the attendant can communicate directly with the customers in the dispensing area.

* If these violations are going to be corrected by your supplier - give a copy of this Report to them immediately upon receipt, so they can correct them by June 2 2008.
THE VIOLATIONS LISTED ABOVE MUST BE CORRECTED BY JUNE 2, 2008.

The inspection and violations (if any) were discussed with Zorah at the time of the inspection.

Documentation shall be furnished to the district office identified below verifying that the violation(s), cited in this inspection report have been corrected. The documentation shall be provided by June 02, 2008. If the cited violation(s) are not corrected and/or certification of compliance is not provided by the date specified, a reinspection will be conducted. The owner or operator of this facility will be subject to civil and criminal provisions pursuant to Part 211 of Act 451, including and not limited to placement of tags to the tank(s) prohibiting delivery of product if the stated violations have not been corrected.

If you have additional questions concerning this matter, please contact me.

Mark Johns

5-2-08

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Highway
Jackson, MI 49201-1556
Phone: 517-780-7497
Fax: 517-780-7855
Email: johnsm1@michigan.gov

Date

HQ

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

KLW MAR 2 1 2008

Owner Name & Address:

Packard Mini Mart Inc
3005 Packard Rd
Ann Arbor, MI 48108

Location of Tanks:

Packard Mini Mart Inc
3005 Packard St
Ann Arbor, MI 48104
County - Washtenaw
Facility ID - 00002107

ATTENTION: Owner or Operator

An Existing Facility Inspection was conducted on March 17, 2008, for the above-referenced facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq.; and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that there was no action taken by the inspector.

1 Emergency shutoff controls shall be located not more than 100 feet from dispensers.
UST 280.10 (J) (FL\CL Part 3, 6.7)

Special Attention : At attended motor fuel dispensing facilities, the device shall be readily accessible to the attendant. Part 3 6.7.1
Install an emergency electrical disconnect device in an area that meets this requirement.

2 Line leak detectors shall be tested annually.
Section 280.44(A)

Special Attention : Mail or fax recent test results. Repair or reprogram the leak detectors so that they are testing at least once per month - for each product pipeline.

3 Interstitial or monthly monitoring shall be conducted in accordance with Section 280.44 (C).
Section 280.44(C)

Special Attention : Empty the tank sumps and repair them so they are liquid tight. Test the sump sensors and mail or fax test results. Repair or replace any that do not work properly.

4 An emergency shutoff valve with a fusible link shall be manually tested annually.
UST 280.10(J) (FL/CL Part 3, Section 6.3.9.1)

Special Attention : Mail or fax recent test results.

Waste & Hazardous Materials Division

5 Dispenser shall be in clear view of attendant and be able to communicate.
UST 280.10(J) (FL/CL Part3, Section 9.4.5)

MAR 1 9 2008

Special Attention : Repair or replace the speaker system so that the attendant can communicate directly with the customers in the dispensing area.

6 Fill pipe(s) shall be located no less than 5 feet from any building opening, be properly identified, and be tightly closed when not in use.
UST 280.10 (J) (FL/CL Part 2, Section 2.3.3.4.5)

Special Attention : Identify the product contained in each tank compartment, at each fill pipe.

The inspection and violations (if any) were discussed with Jermaine at the time of the inspection.

Documentation shall be furnished to the district office identified below verifying that the violation(s), cited in this inspection report have been corrected. The documentation shall be provided by April 17, 2008. If the cited violation(s) are not corrected and/or certification of compliance is not provided by the date specified, a reinspection will be conducted. The owner or operator of this facility will be subject to civil and criminal provisions pursuant to Part 211 of Act 451, including and not limited to placement of tags to the tank(s) prohibiting delivery of product if the stated violations have not been corrected.

If you have additional questions concerning this matter, please contact me.

Mark Johns

3-18-08

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Highway
Jackson, MI 49201-1556
Phone: 517-780-7497
Fax: 517-780-7855
Email: johnsm1@michigan.gov

Date

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - WASTE AND HAZARDOUS MATERIALS DIVISION

# AUTOMOTIVE SERVICE STATION CHECKLIST

INSTRUCTIONS: The Hazardous Materials Storage Inspector shall complete this checklist and attach it to an inspection report, one to be retained in the District file and one for the Headquarters file. All boxes shall be completed inserting N\A where non-applicable.

| | |
|---|---|
| FACILITY NAME: Marathon 3005 Packard | FACILITY ID NUMBER: 2107 |
| CONTACT PERSON ON SITE: Jermaine — Phone # 734-973-2067 | FACILITY TYPE: Public / Private |

## OPERATION SECTION

Zora is new mgr.

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 6.7 | Emergency power disconnect ? | S93 | X | |
| 9.2.5.2 | Fire extinguisher, 100 feet - recently | S59 | | X |
| 9.4.5 | Dispenser in view and communicate | S92 | X | |
| 280.93 | Financial Responsibility | U92 | | X |

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 280.22h | Display proof of registration | S63 | | X |
| 280.22a | Registration submitted 30 days | S62 | | X |
| 280.22a | Properly registered & fees paid | S61 | | X |
| 6.2.1 | Electric Cert. | U70 | | X |
| | Miscellaneous violation | S50 | | |

## RECORDS

| | | | | |
|---|---|---|---|---|
| 280.34 | Maintenance records | S65 | | X |
| 280.44a (1) | Line leak detector tested ask 4 | U95 | | |
| 280.41b(1) | Line tightness test - pressure | U88 | N | A |
| 280.41b | Line test - suction every 3 years | U89 | N | A |
| 6.3.9.1. | Emergency valve tested ask 4 | S94 | | |
| 280.34 | Gen. Record Keeping Violation | S60 | | X |

| | | | | |
|---|---|---|---|---|
| 280.34 | Release det records (2yrs & 5 yrs) | S67 | | X |
| 280.31b | C/P tested 6 months & 3 years | U30 | N | A |
| 280.31c | Impressed current, 60 day log | S35 | N | A |
| 280.34 | Cathodic protection records* | S64 | N | A |
| *NOTE- | Includes CP upgrade testing results | | | |

## RELEASE DETECTION

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for tanks | U71 | | X |
| 280.43a | Inventory control (not stand alone) | S42 | | X |
| 280.43b | Manual gauging (less then 550) | S43 | N | A |
| 280.43c | Tank tightness testing | S44 | N | A |
| 280.43d | Automatic tank gauging | U72 | | X |

| | | | | |
|---|---|---|---|---|
| 280.43e | Vapor monitoring (approval req.) | U73 | N | A |
| 280.43f | Groundwater monit. (Stand alone) | U74 | N | A |
| 280.43g | Interstitial monitoring (Stand alone) | U75 | | X |
| 280.43h | S.I.R (Stand alone) | U93 | N | A |
| 280.43h | Other | S49 | | |

## DISPENSER SECTION

| | | | | |
|---|---|---|---|---|
| 6.1 | Dispenser violation | S10 | | X |
| 6.2.3. | Dispenser loc. (10' prop & openings) | S11 | | X |
| 6.3.4. | Disp. Protected; damage/secured | S13 | | X |
| 6.5.1. | Dispenser hose 18 feet or less | S14 | | X |
| 6.6.6. | Splash guard on nozzle | S91 | | X |
| 9.2.5.4. | No smoking, stop motor, container | S22 | | X |
| 9.2.5.4. | Remain out of vehicle in view | S23 | | X |

| | | | | |
|---|---|---|---|---|
| 6.5.2. | Breakaway on hose | S15 | | X |
| 6.3.4.1. | Containment under dispenser | S17 | | X |
| 6.3.9. | Emergency valve installed | S18 | | X |
| 6.1.1. | Automatic self-closing nozzle | S19 | | X |
| 9.4.4. | Operating instructions posted | S25 | | X |
| 6.3.3. | Operates only with handle removed | S12 | | X |
| 6.3.5. | Class 1 Disp. 20 feet from fuel oil | none | N | A |

## UNDERGROUND TANK SECTION

| | | | | |
|---|---|---|---|---|
| 280.20 | Tank misc. violation | S30 | | X |
| 280.20c | Spill containment - Testing request | U51 | | X |
| 280.20c | Spill containment - Inoperative | U101 | | X |
| 2.3.3.4.3. | Tight fitting hose conn (1,000 & up) | U44 | | X |
| 280.20c | Overfill prevention - Testing request | U52 | | X |
| 280.20C | Overfill Prevention - Inoperative | U102 | | X |

| | | | | |
|---|---|---|---|---|
| 2.3.3.4. | Location of fill pipe & identified | U46 | | X |
| 3.7.2.1. | Vent pipes, 12 feet Class 1 liquid | U32 | | X |
| 3.7.2.4. | Vent pipes, Class II & IIIA | U33 | N | A |
| 2.3.3.4. | Drop tube: 6 inches of tank bottom | U45 | | X |
| 2.2.3.1 | Tanks Proper design & Construction | U12 | | X |
| 280.20 | Cathodic protection for tanks | U29 | | X |

## PIPING SECTION

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for piping | U71 | | X |
| 280.44a | Line leak detector installed - ok | U76 | | X |
| 280.20 | Cathodic protection for piping | U29 | N | A |

| | | | | |
|---|---|---|---|---|
| 280.44c | Interstitial (monthly) monitoring (2) | U94 | X | |
| 3.2.2. | Pipe leaks | U62 | | X |
| 280.20b | Piping shall be approved material | U61 | | |

Tank Construction Composite dbl wall Piping Material DW wall rigid fiberglass Has GPS readings been taken ____

Piping; Suction ____ Pressure ____ Sump Sensors: Yes ____ No ____ Tank Monitor Model Simplicity

COMMENTS: (1) last test 10-2007 - test repairs, c/l.d's
(2) empty liquid from both sumps, repair + test sump sensors

INSPECTOR: M. Johns DATE 3-17-08

(EQP 3836 REV. 3/06)

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

Owner Name & Address:

Pipeline Oil Sales Inc
744 E South St
Jackson, MI 49203-4462

Location of Tanks:

Buddy's Packard Marathon
3005 Packard St
Ann Arbor, MI 48108-1936
County - Washtenaw
Facility ID - 00002107

ATTENTION: Chehir Ayachi

A Records Investigation was conducted on April 18, 2005, at the above-subject facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq. and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is approved.

Previous violation has been corrected. Thank you for your cooperation.

The inspection and violations (if any) were discussed with Chehir at the time of the inspection.

If you have additional questions concerning this matter, please contact me.

Mark Johns

4-18-05
Date

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Hgwy
Jackson, MI 49201-1556
Phone: (517) 780-7497
Fax: 517-780-7855

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - STORAGE TANK DIVISION

# AUTOMOTIVE SERVICE STATION CHECKLIST

INSTRUCTIONS: The Hazardous Materials Storage Inspector shall complete this checklist and attach it to an inspection report, one to be retained in the District file and one for the Headquarters file. All boxes shall be completed inserting N\A where non-applicable.

| | |
|---|---|
| FACILITY NAME: Marathon 3005 Packard A.A. | FACILITY ID NUMBER: 2107 |
| CONTACT PERSON ON SITE: Sharon 734-973-2067 | FACILITY TYPE: |

☒ PUBLIC AUTOMOTIVE SERVICE STATION (F31) ☐ PRIVATE AUTOMOTIVE SERVICE STATION (F32)

## FACILITY SECTION

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 4-1 | Dispenser violation | S10 | | X |
| 4-1.1 | Dispenser location | S11 | | X |
| 4-2.5 | Dispenser protected from damage/secured | S13 | | X |
| 4-2.6 | Dispenser hose 18 feet or less | S14 | | X |
| 9-1.6 | Splash guard on nozzle | S91 | | X |
| 4-3.6 | Emergency valve tested (2) | S94 | X | |
| 9-4.5 | Emergency power disconnect | S93 | | X |
| 9-8 | Fire extinguisher, 75 feet | S59 | | X |
| 9-9 | No smoking, stop motor, container | S22 | | X |

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 4-2.7 | Breakaway on hose | S15 | | X |
| 4-2.12 | Containment under dispenser | S17 | | X |
| 4-3.6 | Emergency valve installed | S18 | | X |
| 9-1.1 | Automatic self-closing nozzle | S19 | | X |
| 9-4.7 | Dispenser in view and communicate | S92 | X | |
| 9-9.1 | Remain out of vehicle in view | S23 | | X |
| 9-4.6 | Operating instructions posted | S25 | | X |
| | Miscellaneous violation | S50 | | X |
| | | | | |

Hook speaker back up - due to remodel.

## LEAK DETECTION SECTION TANKS

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for tanks | U71 | | X |
| 280.43a | Inventory control | S42 | | X |
| 280.43b | Manual tank gauging | S43 | N | A |
| 280.43c | Tank tightness testing | S44 | N | A |
| 280.43d | Automatic tank gauging Simplex | U72 | | X |

| | | | | |
|---|---|---|---|---|
| 280.43 | Vapor monitoring | U73 | N | A |
| 280.43f | Groundwater monitoring | U74 | N | A |
| 280.43g | Interstitial monitoring | U75 | | X |
| 280.43h | S.I.R | U93 | N | A |
| 280.43h | Other | S49 | | |

## LEAK DETECTION SECTION PIPING

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for piping | U71 | | X |
| 280.44a | Line leak detector installed elec | U76 | | X |
| 280.41b(1) | Line tightness test\pressure | U88 | | |
| 3-4.1 | Pipe leaks | U62 | | |

| | | | | |
|---|---|---|---|---|
| 280.44c | Interstitial (monthly) monitoring | U94 | | |
| 280.44a | Line leak detector tested | U95 | | X |
| 280.41b | Line tightness test\suction every 3 years | U89 | N | A |

## RECORD KEEPING

| | | | | |
|---|---|---|---|---|
| 280.34 | Record keeping | S60 | | X |
| 280.22a | Properly registered\fees paid | S61 | | X |
| 280.22h | Display proof of registration | S63 | | X |
| 280.93 | Financial Responsibility | U92 | | X |

| | | | | |
|---|---|---|---|---|
| 280.34 | Cathodic protection records | S64 | N | A |
| 280.34 | Maintenance records | S65 | | X |
| 280.34 | Release detection records | S67 | | X |
| 280.22a | O\O & tank registration info correct | S62 | X | |

Left Reg for ownership chg.

## UNDERGROUND TANK SECTION

| | | | | |
|---|---|---|---|---|
| 280.20 | Tank and piping violation (2) | S30 | | X |
| 280.20c | Spill containment | U51 | | X |
| 280.20c | Overfill prevention | U52 | | X |
| 280.20 | Cathodic protection for tanks and piping | U29 | | X |

| | | | | |
|---|---|---|---|---|
| 280.31b | C/P tested 6 months & 3 years | U30 | N | A |
| 2-4.6.5 | Location of fill pipe & identified | U46 | | X |
| 2-4.5.1 | Vent pipes, 12 feet above grade | U32 | | X |
| 2-4.6.4 | Drop tube within 6 inches of tank bottom | U45 | | X |

COMMENTS: recent fire ext - last was '02

(2) under disp 5 - starting to leak.

INSPECTOR: M. Johns DATE 2-10-05

Moultan Gas 800-858-1908
Wapakoneta OH
2 LP racks - no protection

(EQP3836 REV. 6/98)

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

Owner Name & Address:

Pipeline Oil Sales Inc
744 E South St
Jackson, MI 49203-4462

Location of Tanks:

Buddy's Packard Marathon
3005 Packard St
Ann Arbor, MI 48108-1936
County - Washtenaw
Facility ID - 00002107

ATTENTION: Chehir Ayachi

A Reinspection was conducted on March 21, 2005, at the above-subject facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq. and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is temporarily approved.

1 An emergency shutoff valve with a fusible link shall be manually tested annually.
UST 280.10(J) (FL/CL Part 3, Section 4-3.6)

Special Attention : Mail or fax the most recent test results. Also, the emergency shut off valve under dispenser # 5 appears to be developing a leak. Repair or replace this valve.

A copy of this Report is being mailed to the facility. FINAL NOTICE!

The inspection and violations (if any) were discussed with Chehir at the time of the inspection.

Documentation shall be furnished to the district office identified below verifying that the violation(s), cited in this inspection report have been corrected. The documentation shall be provided by April 22, 2005. If the cited violation(s) are not corrected and/or certification of compliance is not provided by the date specified, a reinspection will be conducted. The owner or operator of this facility will be subject to civil and criminal provisions pursuant to Part 211 of Act 451, including and not limited to placement of tags to the tank(s) prohibiting delivery of product if the stated violations have not been corrected.

If you have additional questions concerning this matter, please contact me.

Mark Johns

3-22-05

Date

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Hgwy
Jackson, MI 49201-1556
Phone: (517) 780-7497
Fax: 517-780-7855

DEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE AND HAZARDOUS MATERIALS DIVISION

# FACILITY INSPECTION REPORT

Owner Name & Address:

Pipeline Oil Sales Inc
744 E South St
Jackson, MI 49203-4462

Location of Tanks:

Buddy's Packard Marathon
3005 Packard St
Ann Arbor, MI 48108-1936
County - Washtenaw
Facility ID - 00002107

ATTENTION: Chehir Ayachi

A(n) existing facility inspection was conducted on February 11, 2005, at the above-subject facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq. and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 2003 AACS R 29.5101 et seq. The inspection showed that the facility is temporarily approved.

1 An emergency shutoff valve with a fusible link shall be manually tested annually.
UST 280.10(J) (FL/CL Part 3, Section 4-3.6)

Special Attention : Mail or fax the most recent test results. Also, the emergency shut off valve under dispenser # 5 appears to be developing a leak. Repair or replace this valve.

2 Dispenser shall be in clear view of attendant and be able to communicate.
UST 280.10(J) (FL/CL Part3, Section 9.4.5)

Special Attention : Have the speaker system reinstalled and operating when I return for reinspection. The operator must be able to communicate with the customers in the dispensing area - from the control console.

3 Registration shall be submitted within 30 days of tank or owner status change.
UST 280.22(A)

Special Attention : I left a Registration form for your completion, with instructions to return it to this office. This is required because of ownership change of this facility.

A copy of this Report is being mailed to the facility. Have your fire extinguishers recertified on an annual basis. The last time they were recertified was in 2002.

The inspection and violations (if any) were discussed with Sharon at the time of the inspection.

Documentation shall be furnished to the district office identified below verifying that the violation(s), cited in this inspection report have been corrected. The documentation shall be provided by March 14, 2005. If the cited violation(s) are not corrected and/or certification of compliance is not provided by the date specified, a reinspection will be conducted. The owner or operator of this facility will be subject to civil and criminal provisions pursuant to Part 211 of Act 451, including and not limited to placement of tags to the tank(s) prohibiting delivery of product if the stated violations have not been corrected.

If you have additional questions concerning this matter, please contact me.

Mark Johns

2-11-05

Date

Mark Johns
Hazardous Materials Storage Inspector
Jackson District Office
301 E Louis B Glick Hgwy
Jackson, MI 49201-1556
Phone: (517) 780-7497
Fax: 517-780-7855

STATE OF MICHIGAN

JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

*"Better Service for a Better Environment"*

HOLLISTER BUILDING, PO BOX 30473, LANSING MI, 48909-7973

INTERNET: www.deq.state.mi.us

**RUSSELL J. HARDING, Director**

REPLY TO:

STORAGE TANK DIVISION
JACKSON DISTRICT OFFICE
301 E LOUIS B GLICK HIGHWAY
Jackson, MI 49201 - 1556
FAX: (517) 780-7855

March 18, 2002

PIPELINE OIL SALES INC
744 E SOUTH ST
JACKSON, MI 49203

Dear PIPELINE OIL SALES INC:

SUBJECT: BUDDY'S PACKARD MARATHON
Facility ID 00002107
3005 PACKARD
ANN ARBOR, WASHTENAW County
Facility Type - Public Automotive Service

A(n) Reinspection At Site was conducted on March 18, 2002 at the subject facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq. and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 1992 AACS R 29.4101 et seq. The inspection showed that The Facility Is Approved.

Previous violations corrected. Thank you for your cooperation.

The inspection and violations (if any) were discussed with John Miller at the time of the inspection.

If you have additional questions concerning this matter, please contact me.

Sincerely,

Mark Johns

Mark Johns
Hazardous Materials Storage Inspector
Storage Tank Division
(517) 780 7497

STATE OF MICHIGAN

JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

*"Better Service for a Better Environment"*

HOLLISTER BUILDING, PO BOX 30473, LANSING MI, 48909-7973

INTERNET: www.deq.state.mi.us

**RUSSELL J. HARDING, Director**

REPLY TO:

STORAGE TANK DIVISION
JACKSON DISTRICT OFFICE
301 E LOUIS B GLICK HIGHWAY
Jackson, MI 49201 - 1556
FAX: (517) 780-7855

February 13, 2002

PIPELINE OIL SALES INC
744 E SOUTH ST
JACKSON, MI 49203

Dear PIPELINE OIL SALES INC:

SUBJECT: BUDDY'S PACKARD MARATHON
Facility ID 00002107
3005 PACKARD
ANN ARBOR, WASHTENAW County
Facility Type - Public Automotive Service

A(n) Existing Facility Inspection was conducted on February 12, 2002 at the subject facility for compliance with Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Michigan Underground Storage Tank Rules (MUSTR), 1999 AACS R 29.2101 et seq. and the applicable sections of the rules for the Storage and Handling of Flammable and Combustible Liquids, 1992 AACS R 29.4101 et seq. The inspection showed that The Facility Is Temporarily Approved.

1 Interstitial or monthly monitoring shall be conducted in accordance with 280.44 (C). Section 280.44(C)

Special Attention : The Sump Sensors in the tank sumps must be tested and put back in their original brackets near the bottom of the tank sumps. If surface water or ground water is entering the tank sumps, you will need to repair them as you are required to maintain the sumps in a liquidtight manner.

The inspection and violations (if any) were discussed with Mary Heimerdinger at the time of the inspection.

A reinspection for the violations will be conducted on or after March 13, 2002. Please note that failure to bring the facility into compliance subjects you to the civil and criminal provisions of Part 211 of Act 451, including and not limited to placement of red-tags to the tank(s) prohibiting delivery of product.

If you have additional questions concerning this matter, please contact me.

Sincerely,

Mark Johns

Mark Johns
Hazardous Materials Storage Inspector
Storage Tank Division
(517) 780 7497

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - STORAGE TANK DIVISION

# AUTOMOTIVE SERVICE STATION CHECKLIST

INSTRUCTIONS: The Hazardous Materials Storage Inspector shall complete this checklist and attach it to an inspection report, one to be retained in the District file and one for the Headquarters file. All boxes shall be completed inserting N\A where non-applicable.

| | |
|---|---|
| FACILITY NAME: Buddys Parkland Marathon | FACILITY ID NUMBER: 2107 |
| CONTACT PERSON ON SITE: Mary Heimerdinger 734-973-2067 | FACILITY TYPE: |

☒ PUBLIC AUTOMOTIVE SERVICE STATION (F31) ☐ PRIVATE AUTOMOTIVE SERVICE STATION (F32)

## FACILITY SECTION

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 4-1 | Dispenser violation | S10 | | X |
| 4-1.1 | Dispenser location | S11 | | X |
| 4-2.5 | Dispenser protected from damage/secured | S13 | | X |
| 4-2.6 | Dispenser hose 18 feet or less | S14 | | X |
| 9-1.6 | Splash guard on nozzle | S91 | | X |
| 4-3.6 | Emergency valve tested | S94 | | X |
| 9-4.5 | Emergency power disconnect | S93 | | X |
| 9-8 | Fire extinguisher, 75 feet | S59 | | X |
| 9-9 | No smoking, stop motor, container | S22 | | X |

| SECTION | | CODE | VIO | PASS |
|---|---|---|---|---|
| 4-2.7 | Breakaway on hose | S15 | | X |
| 4-2.12 | Containment under dispenser | S17 | | X |
| 4-3.6 | Emergency valve installed | S18 | | X |
| 9-1.1 | Automatic self-closing nozzle | S19 | | X |
| 9-4.7 | Dispenser in view and communicate | S92 | | X |
| 9-9.1 | Remain out of vehicle in view | S23 | | X |
| 9-4.6 | Operating instructions posted | S25 | | X |
| | Miscellaneous violation | S50 | | X |
| | | | | |

## LEAK DETECTION SECTION TANKS

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for tanks | U71 | | X |
| 280.43a | Inventory control | S42 | | X |
| 280.43b | Manual tank gauging | S43 | N | A |
| 280.43c | Tank tightness testing | S44 | | X |
| 280.43d | Automatic tank gauging TLS 350 | U72 | | X |

| | | | | |
|---|---|---|---|---|
| 280.43 | Vapor monitoring | U73 | N | A |
| 280.43f | Groundwater monitoring | U74 | N | A |
| 280.43g | Interstitial monitoring | U75 | | X |
| 280.43h | S.I.R | U93 | N | A |
| 280.43h | Other | S49 | N | A |

## LEAK DETECTION SECTION PIPING

| | | | | |
|---|---|---|---|---|
| 280.40 | Release detection for piping | U71 | X | |
| 280.44a | Line leak detector installed | U76 | | X |
| 280.41b(1) | Line tightness test\pressure | U88 | | X |
| 3-4.1 | Pipe leaks | U62 | | X |

| | | | | |
|---|---|---|---|---|
| 280.44c | Interstitial (monthly) monitoring | U94 | X | |
| 280.44a | Line leak detector tested | U95 | | X |
| 280.41b | Line tightness test\suction every 3 years | U89 | N | A |

## RECORD KEEPING

| | | | | |
|---|---|---|---|---|
| 280.34 | Record keeping | S60 | | X |
| 280.22a | Properly registered\fees paid | S61 | | X |
| 280.22h | Display proof of registration | S63 | | X |
| 280.93 | Financial Responsibility | U92 | | |

| | | | | |
|---|---|---|---|---|
| 280.34 | Cathodic protection records | S64 | N | A |
| 280.34 | Maintenance records | S65 | | X |
| 280.34 | Release detection records | S67 | | X |
| 280.22a | O\O & tank registration info correct | S62 | | X |

## UNDERGROUND TANK SECTION

| | | | | |
|---|---|---|---|---|
| 280.20 | Tank and piping violation | S30 | | |
| 280.20c | Spill containment | U51 | | X |
| 280.20c | Overfill prevention | U52 | | X |
| 280.20 | Cathodic protection for tanks and piping | U29 | N | A |

| | | | | |
|---|---|---|---|---|
| 280.31b | C/P tested 6 months & 3 years | U30 | N | A |
| 2-4.6.5 | Location of fill pipe & identified | U46 | | X |
| 2-4.5.1 | Vent pipes, 12 feet above grade | U32 | | X |
| 2-4.6.4 | Drop tube within 6 inches of tank bottom | U45 | | X |

COMMENTS: Sump sensors must be in vertical position near bottom of tank sump - in order to work properly

INSPECTOR: M. Johns DATE 2-12-02

(EQP3836 REV. 6/98)

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
STORAGE TANK DIVISION



## Facility and Tank Data Listing

Date : 02/12/2002

**Owner Name & Address :** PIPELINE OIL SALES INC 744 E SOUTH ST JACKSON JACKSON MI USA 49203

| Facility ID | County | Facility Name | Street Address | City | Zip | Manager | Mgr. Tel |
|---|---|---|---|---|---|---|---|
| 00002107 | WASHTENAW | BUDDY'S PACKARD MARATHON | 3005 PACKARD | ANN ARBOR | 48104 | Terry Hiske | 517-780-7928 |

| Tank ID | Status | Product | Capacity | Age | Mat. of Construction | Piping Material | Piping Type | RD (Tanks) | RD (Piping) |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Removed from Ground | Gasoline | 20,000 | 31 | Asphalt Coated or Bare Steel | Galvanized Steel | | | |
| 4 | Removed from Ground | FUEL OIL | 1,000 | 31 | Asphalt Coated or Bare Steel | Galvanized Steel | | | |
| 5 | Currently In Use | Gasoline | 20,000 | 8 | Composite(Steel w/Fiberglass),Double Walled | Double Walled,Fiberglass reinforced plastic | Pressure | Automatic Tank Gauging,Inter Monitoring Double Walled Tank | Automatic Line Lea Detectors,Interstiti Monitoring Double Walled Piping |
| 1 | Removed from Ground | Gasoline | 6,000 | 31 | Asphalt Coated or Bare Steel | Galvanized Steel | | | |

FM-28 (1-93)
MICHIGAN DEPARTMENT OF STATE POLICE

# NOTIFICATION OF UNDERGROUND STORAGE TANK REMOVAL, CLOSURE OR CHANGE-IN-SERVICE

PLEASE TYPE OR PRINT — SEE REVERSE SIDE FOR INSTRUCTIONS

IMPLEMENTING AGENCY:
MICHIGAN STATE POLICE
FIRE MARSHAL DIVISION

Facility Number (see invoice): 2107

Date Received: 8/10/94 | Date Entered in Computer: 8/11/94 | Data Entry Clerk Initials

94 AUG 10 PM 1:47 FIRE MARSHAL DIVISION-HQ

## I. OWNERSHIP OF TANKS

IF NEW OWNERS ADDRESS, PLEASE CHECK ☐

Pipeline Oil Sales
OWNER NAME (CORPORATION/INDIVIDUAL, ETC.)

7448 E. South Street
STREET ADDRESS

Jackson — Michigan — 49203
CITY — STATE — ZIP

Jackson — Summit
COUNTY — TOWNSHIP

(517) 782-9471
TELEPHONE (INCLUDE AREA CODE)

Bill Cole
CONTACT PERSON AT LOCATION

## II. LOCATION OF TANKS

IF SAME AS SECTION I, PLEASE CHECK ☐

Buddy's Packard Sunoco
FACILITY NAME OR ID. SITE IDENTIFIER

3005 Packard
STREET ADDRESS (P.O. BOX NOT ACCEPTABLE)

Ann Arbor — Michigan — 48104
CITY — STATE — ZIP

Washtenaw — City of Ann Arbor
COUNTY — TOWNSHIP

(313) 973-2067
TELEPHONE (INCLUDE AREA CODE)

## TANK INFORMATION

Project Action Date: As soon As approved! ≈ Sept 19, 1994

| TANK NUMBER AS INDICATED ON UST INVOICE | PRODUCT LAST STORED IN TANK | SIZE OF TANK (gallons) | INDICATE CLOSURE ACTION TO BE TAKEN: 1 = REMOVAL, 2 = CHANGE-IN-SERVICE, 3 = CLOSE IN PLACE |
|---|---|---|---|
| 1 | Gasoline | 6,000 | 1 |
| 2 | Gasoline | 20,000 | 1 |
| 4 | Fuel oil | 1,000 | 1 |
| | | | |
| | | | |

ATTACH CONTINUATION SHEETS IF NECESSARY

Notification Submitted By (Print Name): Kim J. Dagenais
Company: R.W. Mercer Company
Signature: Kim J. Dagenais
Date: Aug. 9, 1994
Telephone Number & Area Code: (517) 787-2960

DO NOT WRITE BELOW THIS LINE

## APPROVAL NOTICE

Approval is given to perform the indicated activity at the above facility location. Action indicated above may commence on or after: 9/10/94 Expiration Date: 3/10/95. If action is not taken by the expiration date, you must submit another notification.

Authorizing Signature: Karen Richardson | Date

Confirmation ☐ O/O ☐ Field Office | Date Mailed: 8/11/94 | Void | S.A. | Date Received

Reason Void

AUTHORITY: 1984 PA 423, as amended
COMPLIANCE: Required
PENALTIES: Any owner/operator who fails to notify is subject to a misdemeanor and civil penalties not to exceed $5,000 per day for each tank

DISTRIBUTION
RETURN ALL 4 SHEETS TO FIRE MARSHAL DIVISION

upgrade 9/15/94 fax
Mark DeKruyter
Enviro Logic 616-342-1100
over fill

FM-35 (8-92)
MICHIGAN DEPARTMENT OF STATE POLICE

# RELEASE REPORT FORM

(PLEASE CHECK ONE) ☒ ~~SUSPECTED~~ ■ CONFIRMED

IMPLEMENTING AGENCY:
MICHIGAN STATE POLICE
FIRE MARSHAL DIVISION

[redacted]

Person Reporting Release: WILLIAM B. COLE

KJZ SEP 19 1994

Company (if not owner/operator): PIPELINE OIL SALES, INC.

Telephone (Include Area Code): (517) 782-0467

## I. OWNERSHIP OF TANKS

IF NEW OWNERS ADDRESS, PLEASE CHECK ☐

PIPELINE OIL SALES, INC.
OWNER NAME (CORPORATION/INDIVIDUAL, ETC.)

OWNER NAME (2ND LINE)

744 E SOUTH ST
STREET ADDRESS

JACKSON MI 49203
CITY STATE ZIP

(517) 782-0467
TELEPHONE (INCLUDE AREA CODE)

WILLIAM B COLE OR JEFFERY L. HANSON
CONTACT PERSON

## II. LOCATION OF TANKS

IF SAME AS SECTION I, PLEASE CHECK ☐

BUDDY'S MINI MARTS #28 - PACKARD
FACILITY NAME OR CO. SITE IDENTIFIER

3005 PACKARD RD
STREET ADDRESS (P.O. BOX NOT ACCEPTABLE)

ANN ARBOR MI 48104
CITY STATE ZIP

WASHTENAW
COUNTY TOWNSHIP

(313) 973-2067
TELEPHONE (INCLUDE AREA CODE)

Date Release Discovered: 8-31-94 Time Release Discovered: 9:00 AM

| Size of Tank (gallons) | Substance Released | Construction of Tank | Reason for Believing Release Occurred: (presence of product, failed tightness test, vapors, stains) |
|---|---|---|---|
| 20,000 gal | GASOLINE | STEEL-FIBERGLASS LINED | RECEIVED LETTER FROM WASHTENAW COUNTY DEPT OF |
| 6,000 gal | GASOLINE | STEEL-FIBERGLASS LINED | ENVIRONMENTAL SERVICES STATING STAINED SOILS |
| 1,000 gal | KEROSINE | STEEL-FIBERGLASS LINED | AND GASOLINE ODOR NOTED DURING EXCAVATION |
| | | | FOR ROAD CONSTRUCTION. |

COMMENTS:
ALL TANKS AT THE FACILITY ARE LISTED. AT THIS POINT IT IS UNKNOWN IF A RELEASE HAS OCCURED AND IF IT HAS, FROM WHICH TANK.

8/31/94

Date/Time Reported (FMD USE ONLY) [illegible] Authorized Signature [illegible]

ATTENTION: SEE REVERSE SIDE FOR INSTRUCTIONS

DISTRIBUTION: FMD USE ONLY
WHITE: FIRE MARSHAL DIVISION/HAZARDOUS MATERIALS SECTION
CANARY: FIRE MARSHAL DIVISION FIELD OFFICE
PINK: DEPT. OF MANAGEMENT & BUDGET
GOLDENROD: OWNER
FAX COPY: DNR FIELD OFFICE

AUTHORITY: 1984 PA 423
COMPLIANCE: Required
PENALTY: Misdemeanor. Civil Penalties not to exceed $5,000 per day, per tank

(MI-SP-92)
MICHIGAN DEPARTMENT OF STATE POLICE

# RELEASE REPORT FORM

(PLEASE CHECK ONE) ☐ SUSPECTED ■ CONFIRMED 0-002107

IMPLEMENTING AGENCY:
MICHIGAN STATE POLICE
FIRE MARSHAL DIVISION

| FMD USE ONLY | Facility Number 2107 |
|---|---|
| Upgrade/Cancel Date | Incident Number C-94 |
| Data Entry Clerk Initials & Date | |

Person Reporting Release:
Mark H. DeKruyter, Project Manager

Company (if not owner/operator)
ENVIROLOGIC TECHNOLOGIES, INC.

Telephone (Include Area Code)
( 616 ) 342-1100

## I. OWNERSHIP OF TANKS

IF NEW OWNERS ADDRESS, PLEASE CHECK ☐

Pipeline Oil Sales, Inc.
OWNER NAME (CORPORATION/INDIVIDUAL, ETC.)

OWNER NAME (2ND LINE)

744 East South St.
STREET ADDRESS

Jackson, MI 49203
CITY STATE ZIP

(517 ) 782-0467
TELEPHONE (INCLUDE AREA CODE)

William B. Cole
CONTACT PERSON

## II. LOCATION OF TANKS

IF SAME AS SECTION I, PLEASE CHECK ☐

Buddy's Packard Sunoco
FACILITY NAME OR CO. SITE IDENTIFIER

3005 Packard
STREET ADDRESS (P.O. BOX NOT ACCEPTABLE)

Ann Arbor, MI 48104
CITY STATE ZIP

Washtenaw
COUNTY TOWNSHIP

( )
TELEPHONE (INCLUDE AREA CODE)

Date Release Discovered: 9-15-94 Time Release Discovered: 11:10 A.M.

| Size of Tank (gallons) | Substance Released | Construction of Tank | Reason for Believing Release Occurred: (presence of product, failed tightness test, vapors, stains) |
|---|---|---|---|
| 6,000 | gasoline | Galv. steel | Petroleum staining and odors in the |
| 20,000 | gasoline | Galv. steel | soil from soil borings. |
| 1,000 | kerosene | Galv. steel | |
| | | | |

COMMENTS:
Suspected release reported 8-31-94. Tank and line testing performed on 9-13-94 by R.W. Mercer Company. Test results received 9-14-94. Tanks and lines tested tight. Site check (soil boring around system) performed 9-15-94. Release appears to be from overfill.

[redacted]

ATTENTION: SEE REVERSE SIDE FOR INSTRUCTIONS.

[redacted]

AUTHORITY: 1984 PA 423
COMPLIANCE: Required
PENALTY: Misdemeanor. Civil Penalties not to exceed $5,000 per day, per tank.

2107

# UNDERGROUND STORAGE TANK DELEGATION PROGRAM

FM-52D (2/94)
MICHIGAN STATE POLICE
Fire Marshal Division

Type of Inspection: Closure

AUTHORITY: 1984 PA 423
COMPLIANCE: REQUIRED
PENALTY: MISDEMEANOR

FIRM: Firm Name: Pipeline Oil Inc — F.R. No.:
Terminal Address: 3005 Packard Rd — County: Washtenaw
City: Ann Arbor — St: MI — Zip: 48104 — UST Facility #: 0-002107

Name & Mailing Address of Firm Submitting Plans
R-W-Mercer Co
2322 Brooklyn Rd Jackson MI 49203
Telephone:

Delegated Field Office
Washtenaw County Health Department
4101 Washtenaw Ave., Box 8645
Ann Arbor, MI 48107-8645
Telephone: 313/971-4542

SITE INSPECTION: X Approved ___ Disapp. — Sign. of Inspector: Michael Morehouse #8203 — Date: 11/18/94
*CONTACT FIELD OFFICE FOR FINAL INSPECTION PRIOR TO PLACING INTO SERVICE
*CERTIFICATE OF ELECTRICAL APPROVAL REQUIRED FROM INSPECTING AUTHORITY HAVING JURISDICTION

INSP.
1st ___ Approved X Disapp. — Del. Inspector Sign. & ID No.: Michael Morehouse #8203 — Date: 11/16/94
2nd ___ Approved X Disapp. — Del. Inspector Sign. & ID No.: Michael Morehouse #8203 — Date: 11/17/94
3rd ___ Approved ___ Disapp. — Del. Inspector Sign. & ID No. — Date:

| RDIASOPNSROVED | RULE NO. | REASON |
|---|---|---|
| | | The UST owner is Responsible to provide the DNR UST Div. with a Confirmed release report and a Closure Registration form. |

RECEIVED DEC 1994 DNR-DISTRICT 13
94 DEC 29 PM 12:03 RECEIVED DNR-UST DIVISION

| 1 | 2 TC | 3 CO | 4 Term No. | 5 Firm Name | 6 Phone No. |
|---|---|---|---|---|---|
| 9 | | | | | |

TANK FOR AG USE ONLY — TC = Trans Code: 1 = Fl/Cl, 2 = LPG

7 Firm Mailing Address: 744 E. South ST — 8 City: Jackson MI — 9 St. — 10 Zip
11 Contact Person: Bill Cole — 12 Phone No.
13 Terminal Address: 3005 Packard Rd — 14 City: Ann Arbor — 15 St.: MI — 16 Zip: 48104

17 City — 18 FDID — 19 Terminal Type: LP-- ___ Plant ___ Dist. Point ___ Indust. Plant X Motor Fueling ___ Other
FL/HAZ MAT-- ___ Bulk ___ Pipeline ___ Refinery ___ Industrial ___ Marine ___ Oil Well ___ Other ___ Service Station

| TANK FOR AGENCY USE ONLY | Tank No. | Tank Class | Serial No. | Manufacturer | Yr | Capacity (gal) |
|---|---|---|---|---|---|---|
| | 1 | Bare S | / | Unknown | ? | 1000 |
| | 2 | Bare S | / | " | 26 | 6000 |
| | 3 | L | / | " double Compartment 8000/2000 | 26 | 20,000 |

UST Release Study/MUSTFA Survey
(Internal Use Only)

[] RELEASE
[] CLOSURE
[X] BOTH

Used at Closure and Release Site Inspections

**1. Facility Information** Bill Cole

Owner/Operator (O/O) Name: Pipline Oil Inc SFM FacID#: 0-002107

Facility Name: Buddys Mini Mart

Tank Location (street address): 3005 Packard

Contact Person on Site: Jeff Gorton

Relationship of Contact Person to O/O: Prime Contractor

Contractor Name: Mercer Co. 2322 Brooklyn Jackson MI 49203

**********

**2. Inspection Information**

Arrival Date and Time: 11/16/94 Inspector: 8203 Morehouse

Date Removed [X] or Closed In Place [] 94/11/16 AND/OR

Date of Release: 94/11/16 and prior

Who Discovered Release (name): Complaint (8202 Klusman) # 4-00-3393-94

Release Discovered (how was release discovered and when):

Evidence of Leakage - wet Soil Kerosene 1000 gal gasoline in overfill pan/Stained Soil above gasoline tank

**********

**3. UST System Information** (mark box for each tank observed)
NOTE: Tank Number does not need to match tank registration number.

| | Substance Released: | Age of System: | Size of UST: |
|---|---|---|---|
| Tank: 1 | Kerosene | ? | 1000 g |
| 2 | Gasoline | 26 | 6000 g |
| 3 | Gasoline | 26 | 20,000 g |
| | | 2 Comp | 8000/12000 |

**********

Material of Construction:

| | | | | |
|---|---|---|---|---|
| Tank: 1 | [X] Steel | [] FRP | [] Concrete | [X] Other lined |
| 2 | [X] | [] | [] | [X] lined |
| 3 | [X] | [] | [] | [X] lined |

| | | | |
|---|---|---|---|
| Pipe: 1 | [X] Steel | [] FRP | [] Other |
| 2 | [X] | [] | [] |
| 3 | [X] | [] | [] |

Corrosion Protection:

Tank: 1 [] FRP [] Steel (STIP3) [] Steel (clad) [] Steel (jacketed)
2 [] [] [] []
3 [] [] [] []

1 [] Impressed Current [X] None [X] Other Relined
2 [] [X] [X] Relined
3 [] [X] [] Relined

Pipe: 1 [] FRP [] Steel (Factory Coated) [X] Steel (galvanized) [] Polyethylene
2 [] [] [X] []
3 [] [] [X] []

1 [] Anode [] Bare Steel [] None [] Other_____
2 [] [] [] [] _____
3 [] [] [] [] _____

**********

System Design:

Tank: 1 [X] Single Wall [] Double Wall [] Steel (Jacketed) [] Other_____
2 [X] [] [] [] _____
3 [X] [] [] [] _____

Pipe: 1 [X] Single Wall [] Double Wall [] Flexible pipe [] Other_____
2 [X] [] [] [] _____
3 [X] [] [] [] _____

**********

4. Evidence of Release: (mark all that apply) OR [] No Evidence of Release

Failed Leak Detection Method (includes tightness test) Specify Method
1 [] _____
2 [] _____
3 [] _____

**********

Free Product Observed:

1 [] In Sewer/Utility [X] In Excavation (Wet or Dry)
2 [] [X]
3 [] [X]

1 [] On Surface Water [] Other_____
2 [] [] _____
3 [] [] _____

**********

Stained Soil:

1 [] At Fillpipe [] At Dispenser
2 [X] [X]
3 [X] [X]

1 [] In Excavation [] In Pipe Trench
2 [X] []
3 [X] []

Source of Release:

1 [X] From Piping [] From Dispenser
2 [X] []
3 [X] []

1 [] From Tank [X] From a Spill/Overfill
2 [] [X]
3 [] [X]

**********

Method of Detection:

| | Field Instrument Detection OR | Lab Analysis of Sample OR | Direct observation |
|---|---|---|---|
| 1 | [] | [] | [X] |
| 2 | [] | [] | [X] |
| 3 | [] | [] | [X] |

**********

5. Action Taken:

| | | | | |
|---|---|---|---|---|
| UST Emptied | 1 | [X] Yes | [] No | [] N/A |
| | 2 | [X] | [] | [] |
| | 3 | [X] | [] | [] |
| Pipe Emptied | 1 | [X] Yes | [] No | [] N/A |
| | 2 | [X] | [] | [] |
| | 3 | [X] | [] | [] |
| Free Product Removed | 1 | [] Yes | [] No | [X] N/A |
| | 2 | [X] | [] | [] |
| | 3 | [X] | [] | [] |

UST filled in place with: _____

6. Were Site Assessment Samples Taken?

| | | | |
|---|---|---|---|
| 1 | [X] Yes | [] No | [] N/A |
| 2 | [X] | [] | [] |
| 3 | [X] | [] | [] |

Environmental Company name: EnviroLogic (Kalamazoo)
Dave Nowak
616-342-1100

*Please complete this report and forward to:*
*Michigan State Police - Fire Marshal Division*
*Hazardous Materials Section*
*P.O. Box 30157*
*Lansing, MI 48909*

kjz/l:relstudy
January 1994
HMSI & Delegated

# UNDERGROUND STORAGE TANK DELEGATION PROGRAM

FM-52D (2/94)
MICHIGAN STATE POLICE
Fire Marshal Division

Type of Inspection: HAZ-MAT INVESTIGATION

AUTHORITY: 1984 PA 423
COMPLIANCE: REQUIRED
PENALTY: MISDEMEANOR

**FIRM INFO**

Firm Name: BUDDY'S PACKARD SUNOCO
P.E. No.:
Terminal Address: 3005 PACKARD
County: WASHTENAW
City: ANN ARBOR
St: MI
Zip: 48104
UST Facility #: 0-00217

Name & Mailing Address of Firm Submitting Plans
PIPELINE OIL SALES INC.
744 E. SOUTH ST
JACKSON, MI 49203
ATTN: William B. Cole
Telephone: 517-782-0467

Delegated Field Office: 2107
Washtenaw County Health Department
4101 Washtenaw Ave., Box 8645
Ann Arbor, MI 48107-8645
Telephone: 313/971-4542

**SITE INSP**

___Approved ✓Disapp. | Sign. of Inspector: David Klusman #8202 | Date: 94/08/24

*CONTACT FIELD OFFICE FOR FINAL INSPECTION PRIOR TO PLACING INTO SERVICE
*CERTIFICATE OF ELECTRICAL APPROVAL REQUIRED FROM INSPECTING AUTHORITY HAVING JURISDICTION

**INSP.**

1st ___Approved ✓Disapp. | Del. Inspector Sign. & ID No.: David Klusman | Date: 94/08/24
2nd ___Approved ___Disapp. | Del. Inspector Sign. & ID No. | Date:
3rd ___Approved ___Disapp. | Del. Inspector Sign. & ID No. | Date:

**REASONS DISAPPROVED**

| RULE NO. | REASON |
|---|---|
| 280.51 | OWNERS AND OPERATORS OF UST SYSTEM MUST FOLLOW THE PROCEDURES IN 280.52 TO DETERMINE THE SOURCE OF OFF-SITE IMPACT. |
| 280.52 | OWNER/OPERATOR SHALL TEST TANKS, PRODUCT LINES, AND TANK SYSTEM TO DETERMINE IF A LEAK EXIST, IF LEAK EXIST, OWNER/OPERATOR SHALL PERFORM A SITE ASSESSMENT. |

**TERMINAL INFO**

| 1 | 2 TC | 3 CO | 4 Term No. | 5 Firm Name | 6 Phone No. |
|---|---|---|---|---|---|
| 19 | | | | BUDDY'S PACKARD SUNOCO | 313-973-2067 |

AG USE ONLY
TC = Trans Code
1 = Fl/Cl
2 = LPG

| 7 Firm Mailing Address | 8 City | 9 St. | 10 Zip |
|---|---|---|---|
| 3005 PACKARD | ANN ARBOR | MI | 48104 |

| 11 Contact Person | 12 Phone No. |
|---|---|
| William B. COLE | 517-782-0467 |

| 13 Terminal Address | 14 City | 15 St. | 16 Zip |
|---|---|---|---|
| 744 E. SOUTH ST. | JACKSON | MI | 49203 |

17 City | 18 FDID | 19 Terminal Type: LP-- ___Plant ___Dist. Point ___Indust. Plant ✓Motor Fueling ___Other

FL/HAZ MAT-- ___Bulk ___Pipeline ___Refinery ___Industrial ___Marine ___Oil Well ___Other ✓Service Station.

**TANK INFORMATION**

| Tank No. | Tank Class | Serial No. | Manufacturer | Tr | Capacity (gal) |
|---|---|---|---|---|---|
| | | | [illegible] | | |
| | | | | | |
| | | | [illegible] | | |
| | | | | | |
| | | | | | |

MJM

BODY
FM-52 (9-92)
MI Dept. of State Police
State Fire Marshal

ORIGINAL STORAGE INSPECTION PAGE 2

AUTHORITY: 1941 PA 207
COMPLIANCE: REQUIRED
PENALTY: MISDEMEANOR

| FINRMO | | | |
|---|---|---|---|
| Fire Name: BUDDY'S PACKARD SUNOCO | | | P.R. No.: |
| Terminal Address: 3005 PACKARD | | | County: WASHTENAW |
| City: ANN ARBOR | St: MI | Zip: 48104 | UST Facility #: 0-00217 |

| REASONS DISAPPROVED | RULE NO. | REASON |
|---|---|---|
| | | 2107 |
| | 280.50 | OWNER/OPERATOR OF UST SHALL REPORT TO THE STATE FIRE MARSAL A CONFIRMED RELEASE AS SPECIFIED IN SECTION 280.61 |
| | 280.61 | WITHIN 24 HOURS REPORT THE RELEASE BY TELEPHONE 1-800-642-4878, OR ELECTRONIC FAX. |

UST Release Study/MUSTFA Survey
(Internal Use Only)

[✓] RELEASE
[] CLOSURE
[] BOTH

Used at Closure and Release Site Inspections

1. Facility Information

Owner/Operator (O/O) Name: PIPELINE OIL SALES, INC. SFM FacID#: ~~0-002107~~ 0-002107

Facility Name: BUDDY'S PACKARD SUNOCO

Tank Location (street address): 3005 PACKARD

Contact Person on Site: WILLIAM B. COLE

Relationship of Contact Person to O/O: EMPLOYEE

Contractor Name:

**********

2. Inspection Information

Arrival Date and Time: 4:15 PM Inspector: DAVE KLUSMAN #8202

Date Removed [] or Closed In Place [] : __/__/__ AND/OR

Date of Release: 94/08/24

Who Discovered Release (name): DENNIS W. HASLEY ANN ARBOR FIRE MARSHAL

Release Discovered (how was release discovered and when):

FOUND IN EXCAVATION FOR ROAD CONSTRUCTION ON PLATT ROAD IN ANN ARBOR

**********

3. UST System Information (mark box for each tank observed)
NOTE: Tank Number does not need to match tank registration number.

| | Substance Released: | Age of System: | Size of UST: |
|---|---|---|---|
| Tank: 1 | GAS | 23 | 6,000 |
| 2 | GAS | 23 | 20,000 |
| 3 | | | |

**********

Material of Construction:

| | | | | |
|---|---|---|---|---|
| Tank: 1 | [✓] Steel | [] FRP | [] Concrete | [] Other |
| 2 | [✓] | [] | [] | [] |
| 3 | [] | [] | [] | [] |
| Pipe: 1 | [✓] Steel | [] FRP | | [] Other |
| 2 | [✓] | [] | | [] |
| 3 | [] | [] | | [] |

Corrosion Protection:

Tank: 1 [] FRP [] Steel (STIP3) [] Steel (clad) [] Steel (jacketed)
2 [] [] [] []
3 [] [] [] []

1 [] Impressed Current [✓] None [] Other _____
2 [] [✓] [] _____
3 [] [] [] _____

Pipe: 1 [] FRP [] Steel (Factory Coated) [✓] Steel (galvanized) [] Polyethylene
2 [] [] [✓] []
3 [] [] [] []

1 [] Anode [] Bare Steel [] None [] Other _____
2 [] [] [] [] _____
3 [] [] [] [] _____

**********

System Design:

Tank: 1 [✓] Single Wall [] Double Wall [] Steel (Jacketed) [] Other _____
2 [] [] [] [] _____
3 [] [] [] [] _____

Pipe: 1 [✓] Single Wall [] Double Wall [] Flexible pipe [] Other _____
2 [] [] [] [] _____
3 [] [] [] [] _____

**********

4. Evidence of Release: (mark all that apply) OR [] No Evidence of Release

Failed Leak Detection Method (includes tightness test) Specify Method
1 [] INVENTORY CONTROL
2 [] _____
3 [] _____

**********

Free Product Observed:

1 [] In Sewer/Utility [✓] In Excavation (Wet or Dry) ROAD EXCAVATION
2 [] [✓]
3 [] []

1 [] On Surface Water [] Other _____
2 [] [] _____
3 [] [] _____

**********

Stained Soil:

1 [] At Fillpipe [] At Dispenser
2 [] []
3 [] []

1 [✓] In Excavation [] In Pipe Trench
2 [✓] []
3 [] []

STAINING IN ROAD EXCAVATION

Source of Release:

1 [] From Piping [] From Dispenser
2 [] []
3 [] []

UNKNOWN

1 [] From Tank [] From a Spill/Overfill
2 [] []
3 [] []

**********

Method of Detection:

| | Field Instrument Detection OR | Lab Analysis of Sample OR | Direct observation |
|---|---|---|---|
| 1 | [] | [] | [] |
| 2 | [] | [] | [] |
| 3 | [] | [] | [] |

**********

5. Action Taken:

ORDER: - SITE ASSESSMENT
- TANK & PIPING TIGHTNESS TESTING

| | | | | |
|---|---|---|---|---|
| UST Emptied | 1 [] | Yes | [] No | [] N/A |
| | 2 [] | | [] | [] |
| | 3 [] | | [] | [] |
| Pipe Emptied | 1 [] | Yes | [] No | [] N/A |
| | 2 [] | | [] | [] |
| | 3 [] | | [] | [] |
| Free Product Removed | 1 [] | Yes | [] No | [] N/A |
| | 2 [] | | [] | [] |
| | 3 [] | | [] | [] |

UST filled in place with: _____

6. Were Site Assessment Samples Taken?

| | | | |
|---|---|---|---|
| 1 | [] Yes | [] No | [] N/A |
| 2 | [] | [] | [] |
| 3 | [] | [] | [] |

Environmental Company name: _____

*Please complete this report and forward to:*
*Michigan State Police - Fire Marshal Division*
*Hazardous Materials Section*
*P.O. Box 30157*
*Lansing, MI 48909*

kjz/l:relstudy
January 1994
HMSI & Delegated

**3005 Packard**
3005 Packard
Ann Arbor, MI 48104

Inquiry Number: 2791628.3
June 11, 2010

# Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

6/11/10

**Site Name:**
3005 Packard
3005 Packard
Ann Arbor, MI 48104

**Client Name:**
AKT Environmental Consultants
22725 Orchard Lake Road
Farmington Hills, MI 48336

EDR Inquiry # 2791628.3

Contact: Jessica Cory

EDR® Environmental Data Resources Inc

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***Certified Sanborn Results:***

| | |
|---|---|
| **Site Name:** | 3005 Packard |
| **Address:** | 3005 Packard |
| **City, State, Zip:** | Ann Arbor, MI 48104 |
| **Cross Street:** | |
| **P.O. #** | NA |
| **Project:** | 6588F-1-17 |
| **Certification #** | A780-4E79-AA01 |

Sanborn® Library search results
Certification # A780-4E79-AA01

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# APPENDIX G

# PREVIOUS ENVIRONMENTAL REPORTS

**ENVIROLOGIC**
**TECHNOLOGIES INC.**

FEB 1995
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# PHASE I HYDROGEOLOGIC STUDY REPORT
# BUDDY'S PACKARD SUNOCO
# 3005 PACKARD ROAD
# ANN ARBOR, MICHIGAN

Prepared for:

PIPELINE OIL SALES, INC.
744 EAST SOUTH STREET
JACKSON, MICHIGAN 49203

**- FEBRUARY 8, 1995 -**

Prepared by:

**ENVIROLOGIC TECHNOLOGIES, INC.**
2960 Interstate Parkway
Kalamazoo, Michigan 49001
(616) 342-1100

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# PHASE I HYDROGEOLOGIC STUDY REPORT
# BUDDY'S PACKARD SUNOCO
# ANN ARBOR, MICHIGAN

## INTRODUCTION

### Purpose

This report has been prepared by Envirologic Technologies, Inc. (Envirologic), on behalf of Pipeline Oil Sales, Inc. (Pipeline), in accordance with the Michigan Leaking Underground Storage Tank Act, Public Act 478 of 1988, as amended (Act 478). This report describes the activities and results of a Phase I Hydrogeologic Study conducted at Buddy's Packard Sunoco, Ann Arbor, Michigan.

### Project Description

The Buddy's Packard Sunoco facility is located at 3005 Packard Road, Ann Arbor, Michigan. Specifically, the site is located in the SW 1/4 of the SW 1/4 of Section 2, Township 3 South, Range 6 East on the Ypsilanti West, Michigan United States Geologic Survey (USGS) 7.5 Minute Topographic Quadrangle Map, Pittsfield Township, Washtenaw County, Michigan (refer to Figure 1). The facility is currently a service station/convenience store which retails gasoline.

**Project Background**

Prior to an Underground Storage Tank (UST) system upgrade (i.e., new tanks, piping and pumps were installed during November and December of 1994), the facility utilized three (3) underground storage tanks (USTs), ranging in capacity from 1,000 to 20,000 gallons (refer to Figure 2). The USTs were utilized for the storage of regular unleaded gasoline, midgrade unleaded gasoline, premium unleaded gasoline and kerosene fuel.

Site Check

On August 31, 1994, Pipeline reported a Suspected Release to the Michigan State Police - Fire Marshall Division. In accordance with the Michigan UST Rules (January, 1991), all UST systems were tested for leaks (tightness test) and on September 15, 1994 a Site Check was performed. The results of the tightness tests indicated that no UST system leaks were present. However, the Site Check, which included completing three hand-augered soil borings (HSB-1, HSB-2 and HSB-3) in the vicinity of the USTs, soil sampling and field screening with an Organic Vapor Analyzer (OVA), indicated petroleum odors (vapors) and staining (refer to Figure 2). Based on the field screening results from the Site Check a Confirmed Release was reported to the Michigan Department of Natural Resources (MDNR) on September 15, 1994. An Initial Abatement Report was submitted to MDNR on September 29, 1994.

Initial Assessment

In accordance with Act 478, an Initial Assessment was completed at this facility on November 3 and 4, 1994. Initial Assessment field activities included the advancement of nine soil borings (SB-1 through SB-9), soil sampling and analysis, installation of one temporary monitoring well (SB-5/Temp-1) and groundwater sampling and analysis.

The laboratory analyses indicated that both soil and groundwater exhibited concentrations of petroleum contaminants above MERA Type B Cleanup Criteria. Field observations also indicated the presence of product that appeared to be associated with the former Kerosene UST system. An Initial Assessment Report was submitted to the MDNR on November 10, 1994. Based on the discovery of free product during the Initial Assessment, and in accordance with Act 478, a Free Product Report was submitted to the MDNR on November 21, 1994.

Environmental Monitoring of UST Removal

On November 16, 17 and 18, 1994, Envirologic performed environmental monitoring and collected excavation soil samples for potential closure during removal of the former kerosene and gasoline UST systems (refer to Figure 3). The UST systems were removed (decommissioned) in response to a total UST systems upgrade for the Buddy's Packard Sunoco facility.

All three USTs and associated piping were excavated and removed by Keith Fransted Construction, Inc. of Concord, Michigan. Limited soil removal was performed due to the presence of obvious residual soil contamination and because most of the soils were too wet and clay-rich to be recompacted. Six soil samples were collected from each excavation in accordance with the MDNR Guidance Document, *Verification Of Soil Remediation* (MDNR, April 1994, Revision 1). Additionally, a four-inch PVC free product recovery well (RW-1) with a five-foot screen was placed in the Kerosene excavation prior to backfilling with clean fill. Soil samples from the both the kerosene and gasoline UST excavations were submitted to KAR Laboratories, Inc.(KAR), of Kalamazoo, Michigan for analysis (refer to Appendix A for the soil analytical reports). The laboratory analyses indicated that soil contamination above MERA Type B Cleanup Criteria is still present in the vicinity of the former kerosene and gasoline UST excavations (refer to Table 1).

Based on the results of the previous investigations, a Phase I Hydrogeologic Study was undertaken with field activities starting on January 9, 1995.

**Table 1**

Summary Environmental Monitoring of UST Removal Soil Analytical Results

| Sample Location | Sample Depth (feet) | Scan 2 Compounds | | | | MTBE (ug/kg) | Scan 7 Compounds | Total Lead (mg/kg) |
|---|---|---|---|---|---|---|---|---|
| | | Benzene (ug/kg) | Toluene (ug/kg) | Ethyl Benzene (ug/kg) | Total Xylenes (ug/kg) | | Naphthalene (ug/kg) | |
| Kero East Wall | 6.5 | **25** | <10 | 350 | 68 | <100 | 660 | 10 |
| Kero North Wall | 5.0 | 15 | 11 | <10 | 27 | <100 | <330 | 11 |
| Kero West Wall | 6.0 | **190** | 15 | **2,400** | 4,125 | <100 | 710 | 12 |
| Kero South Wall | 6.0 | **1,600** | 280 | **5,900** | **35,600** | <2000[c] | 1,300 | 9 |
| Kero East Floor | 9.0 | **99** | 34 | 350 | 459 | <100 | 390 | 8 |
| Kero West Floor | 9.0 | **350** | 41 | **2,900** | 2,236 | <100 | 400 | 12 |
| South Wall* | 8.0 | <10 | 19 | <10 | 75 | <100 | <330 | 9 |
| North Wall* | 6.0 | <10 | 28 | <10 | 39 | 160 | <330 | 8 |
| East Wall North* | 7.0 | **420** | 9,000 | 1,300 | 3,190 | <100 | 390 | 8 |
| East Wall South * | 7.0 | <10 | 16 | <10 | 25 | <100 | <330 | 11 |
| West Wall North* | 7.0 | **780** | 200 | **2,100** | **7,000** | <100 | 550 | 8 |
| West Wall South* | 7.0 | **580** | <10 | **2,700** | **18,600** | <500[c] | 430 | 8 |
| **MERA[a] Type B** | ---- | **24** | **16,000** | **1,500** | **5,600** | **4,600** | **5,000** | **21.0[b]** |

NOTES:
1. Samples collected on November 16 and 18, 1994.
2. < (less than) indicates not detected followed by method detection limit.
3. * = Samples collected from gasoline UST excavation.
4. [a] = MERA Operational Memorandum #8, Revision 3, February 4, 1994.
5. [b] = MERA Operational Memorandum #15, September 30, 1993.
6. [c] = Elevated detection limit caused by sample matrix interference.

## PHASE I HYDROGEOLOGIC STUDY PROGRAM

A Phase I Hydrogeologic Study was implemented on January 9, 1995. The Phase I investigation included the advancement of five soil borings, soil sampling, the installation of four groundwater monitoring wells, and groundwater sampling and analysis. The following describes these activities and results in more detail.

### Soil Borings and Soil Analysis

Five soil borings (MW-1, MW-2, MW-2D, MW-3 and SB-10) were advanced on-site during the Phase I Investigation, beginning on January 9, 1995 (refer to Figure 4). All soil borings were advanced using a hollow-stem auger (HSA) drilling rig. All drilling was performed by West Michigan Drilling, a Division of Envirologic Technologies, Inc. of Kalamazoo, Michigan.

Soil samples were collected at approximately five foot vertical intervals utilizing a 24-inch-long standard split-barrel sampler, in accordance with the standard penetration test ASTM D-1586. All soil samples were classified (described) by a geologist, field screened for total volatile organic compounds (VOCs) using an OVA in the field at the time of collection (refer to Appendix B for the soil boring logs).

Soil cuttings were containerized in MDOT approved 55-gallon steel drums and the borings were either converted into groundwater monitoring wells, or abandoned with a bentonite slurry grout.

All drilling equipment coming into contact with the soil was steam cleaned prior to arrival on-site and between each boring location. The split-barrel sampler was cleaned/decontaminated with a phosphate free detergent and rinsed with fresh and deionized water between each sample.

One soil sample from each soil boring was selected for laboratory analysis. The soil samples were submitted to KAR for analysis of MDNR Scan 2 compounds (benzene, toluene, ethyl benzene and total xylenes(BTEX)), MDNR Scan 7 compounds (poly-nuclear aromatic hydrocarbons (PNAs)), methyl tert-butyl ether (MTBE), and total lead.

The soil samples were placed in the proper sample containers provided by KAR, stored in a cooler with cold packs and delivered to the lab within the specified holding time for the parameters listed above. All shipping and handling of the soil samples were conducted utilizing Envirologic's standard Chain-of-Custody protocol.

**Monitoring Well Installation**

Four of the five HSA soil borings were completed as groundwater monitoring wells (MW-1, MW-2, MW-2D and MW-3). The monitoring wells were constructed with five foot long, two-inch inside diameter (I.D.), PVC well screens with 0.01-inch (#10 slot) openings. Three monitoring wells were set to intersect the water table at a total depth of approximately 15 feet (MW-1, MW-2 and MW-3). One monitoring well (MW-2D) was set deeper into the aquifer at a total depth of 30 feet. Two-inch I.D. PVC riser pipe was placed above the top of the screen to approximately 0.5 foot below ground level (bgl).

The HSA borings were completed by placing a coarse silica sand filter pack (Global #5 sand) around the well screens to approximately two feet above the top of the screen as the HSAs were pulled from the borehole. The remaining annular space was sealed with a bentonite grout to approximately one foot bgl. All monitoring wells were completed with a steel casing protector at the ground surface to protect the integrity of the well (refer to Appendix B for the well logs).

**Elevation and Location Survey**

An elevation and location survey of the newly installed groundwater monitoring wells was performed on January 12, 1995. Top of casing (TOC) and ground surface elevations were surveyed with an automatic level to the nearest 0.01 foot utilizing an on-site arbitrary benchmark of 100.00 feet. Horizontal map locations were measured with a fiberglass tape.

**Groundwater Sampling and Analysis**

All groundwater monitoring wells were developed at least 72 hours prior to sampling using a centrifugal pump or bailing, with surging methods. Development was considered complete when the purge water was relatively sediment free.

All monitoring wells were sampled on January 17, 1995. The method of sampling consisted of removing approximately three times the volume of standing water within each well with a stainless-steel bailer prior to obtaining a groundwater sample. Water samples were decanted from the bailer to appropriate sample containers provided by KAR. The groundwater samples were submitted for analysis of BTEX, PNAs, MTBE and dissolved lead. Samples for dissolved lead analyses were filtered by KAR.

All development and purge water was containerized in MDOT approved 55-gallon steel drums and temporarily stored on-site pending analysis and disposal.

## PHASE I HYDROGEOLOGIC STUDY RESULTS

### Regional Geology

According to the Hydrogeologic Atlas of Michigan (WMU, 1981) the regional glacial geology near Ann Arbor is dominated by deltaic sediments and moraines deposited during the last glacial period. Beach ridges and lake-bed plains are also present in the Ann Arbor area. The thickness of the glacial deposits in the area ranges from 200 to 400 feet.

Beneath the glacial deposits is bedrock, consisting of the Early Mississippian/Late Devonian age Antrim Shale (WMU, 1981). This bedrock unit is approximately 100-150 feet thick.

### Site Geology

The logs from soil borings advanced during the Initial Assessment and the Phase I Hydrogeologic Study were used to determine the surficial geology of the site. The geology consists of four distinct units. The first unit encountered is a fill unit. The fill consists of one to three feet of brown sand and gravel with some silt and clay. Underlying the fill unit is a gray clay unit. The clay unit has fractures, is seven to nine feet thick, is plastic and contains trace amounts of sand and gravel. Underlying the clay unit is a unit of interbedded clay and fine sand. The sand zones within this unit are saturated. The lateral continuity of the sand zones is not well known. This unit is five to seven feet thick. Underlying the interbedded clay and sand unit is a gravel unit. The

gravel unit contains some medium to coarse sand, trace amounts of silt and is saturated. This gravel unit extends from the base of the interbedded clay and sand unit to at least the depth of the borings. Refer to Figures 5 and 6 for two geologic cross sections of the site.

**Site Hydrogeologic Conditions**

Site hydrogeologic conditions have been determined through the installation and sampling of on-site monitoring wells. Monitoring wells MW-1, MW-2 and MW-3 are screened across the saturated sand zones within the interbedded clay and sand unit. Based upon the current data, the saturated sand zones appear to be connected. Monitoring well MW-2D is screened within the lower gravel unit.

Data collected from monitoring wells MW-1, MW-2, MW-2D and MW-3 indicate a thin, semi-confined aquifer within the interbedded clay and sand unit and a confined aquifer within the gravel layer. Preliminary data suggest that these two aquifers are not hydraulically connected at this location, as indicated by the extreme difference in piezometric heads observed between nested monitoring wells MW-2 and MW-2D; the 9.7 feet of piezometric head difference (January 17, 1995) over the 15 feet that separate the two well screens yields a downward vertical gradient of approximately 0.65 feet/foot (refer to Table 2). Because the actual hydraulic connection or migration rate between the two aquifers depends on the thickness, continuity and vertical permeability of the clay

**Table 2**

**Groundwater and Monitoring Well Elevation Data**

| Well I.D. | Ground Elevation (feet) | TOC Elevation (feet) | January 17, 1995 Water Depth (feet) | January 17, 1995 Water Elevation (feet) | February 6, 1995 Water Depth (feet) | February 6, 1995 Water Elevation (feet) |
|---|---|---|---|---|---|---|
| MW-1 | 100.61 | 100.00 | 6.82 | 93.18 | 6.65 | 93.35 |
| MW-2 | 101.55 | 100.66 | 6.78 | 93.88 | 6.41 | 94.25 |
| MW-2D | 101.61 | 100.81 | 16.63 | 84.18 | 16.49 | 84.32 |
| MW-3 | 103.02 | 102.46 | 8.37 | 94.09 | 7.77 | 94.69 |

NOTES:

1. All elevations are relative to an on-site arbitrary benchmark of 100.00 feet,
2. TOC = Top-of-Casing.

aquitard separating the two aquifers and because this information is not currently available, the potential connection between the aquifers cannot be determined at this time.

Depths to groundwater from below each well's TOC were measured on January 17 and February 6, 1995 (refer to Table 2). The predominant groundwater flow direction in the semi-confined aquifer is north-northeast (refer to Figure 7). Groundwater flow in the lower confined aquifer could not be determined because only one monitoring well is screened in the gravel unit.

The approximate horizontal piezometric gradient in the semi-confined aquifer is 0.008 feet/foot (January 17, 1995) The horizontal piezometric gradient was calculated by dividing the difference in the piezometric head between monitoring wells MW-1 and MW-2 by the horizontal distance separating monitoring wells MW-1 and MW-2.

The presence of groundwater contamination south (upgradient) of the former UST excavations, as presented below, suggests that, (1) addition piezometric and hydrogeologic data (monitoring wells) are needed to verify the north-northeast groundwater flow direction and/or (2) the potential for an upgradient source(s) of contamination should be investigated.

**Distribution of Contaminants**

Soil

The results of the soil analyses from the Initial Assessment (soil borings SB-1 through SB-9) and Phase I Hydrogeologic Study (soil borings MW-1, MW-3 and SB-10) indicate that selected BTEX contaminants are present above MERA Type B Cleanup Criteria in the vicinity of the former kerosene and gasoline UST excavations. PNAs (naphthalene) and MTBE were also detected, however, their concentrations are below MERA Type B Cleanup Criteria. Total lead was detected at all soil boring locations below MERA Default Type A Cleanup Criteria (MDNR, September 30, 1993). Table 3 presents a summary of the soil analytical results received from the Initial Assessment and Phase I Hydrogeologic Study (refer to Appendix A for the soil analytical reports).

The horizontal extent of soil contamination has been defined north and northeast of the former gasoline UST excavation and in the vicinity of soil boring SB-3 (refer to Figure 8). The horizontal extent of soil contamination has not been defined in all other areas surrounding the former kerosene and gasoline UST excavations. Soil contamination appears to extend off-site southwest of the former kerosene and gasoline UST excavations (refer to Figure 8). The vertical extent of soil contamination has not been delineated but is believed to extend to the saturated sand in some areas as indicated by the groundwater results presented below.

**Table 3**

Summary of Initial Assessment and Phase I Soil Analytical Results

| Sample Location | Depth of Sample (feet) | Scan 2 Compounds | | | | MTBE (ug/kg) | Scan 7 Compounds | Total Lead (mg/kg) |
|---|---|---|---|---|---|---|---|---|
| | | Benzene (ug/kg) | Toluene (ug/kg) | Ethyl Benzene (ug/kg) | Total Xylenes (ug/kg) | | Naphthalene (ug/kg) | |
| SB-1* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 6.4 |
| SB-2* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 6.3 |
| SB-3* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 9.2 |
| SB-3* | 10 - 12 | <10 | <10 | <10 | <30 | <100 | <330 | 5.1 |
| SB-4* | 4 - 6 | **25** | 620 | 700 | 2,900 | <100 | 390 | 12.1 |
| SB-4* | 9 - 11 | <10 | <10 | <10 | <30 | <100 | <330 | 3.5 |
| SB-5* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 4.5 |
| SB-5* | 9 - 11 | **340** | <10 | <10 | <30 | <100 | <330 | 5.3 |
| SB-8* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 5.5 |
| SB-9* | 4 - 6 | <10 | <10 | <10 | <30 | <100 | <330 | 5.7 |
| MW-1 | 4 - 6 | <10 | <10 | <10 | <10 | <100 | <330 | 8 |
| SB-10 | 4 - 6 | **160** | 45 | 210 | 231 | <100 | 560 | 8 |
| MW-3 | 4 - 6 | **430** | 110 | 1100 | **6100** | 180 | 900 | 12 |
| **MERA[a] Type B** | ---- | **24** | **16,000** | **1,500** | **5,600** | **4,600** | **5,000** | **21.0[b]** |

NOTES:
1. * = samples collected on November 4, 1994 during Intial Assessment activities.
2. < (less than) indicates not detected followed by method detection limit.
3. [a] = **MERA Operational Memorandum #8, Revision 3, February 4, 1994.**
4. [b] = **MERA Operational Memorandum #15, Septamber 30, 1993.**

Groundwater

The groundwater analytical results from the Phase I Hydrogeologic Study indicate that selected BTEX compounds and MTBE are present above MERA Type B Cleanup Criteria in upgradient monitoring wells MW-2 and MW-3, which are screened in the semi-confined aquifer (refer to Table 4). The groundwater analytical results for PNAs and dissolved lead in the semi-confined aquifer indicate non-detect concentrations (below MERA Type A Cleanup Criteria) for all three wells (MW-1, MW-2 and MW-3). However, the water analytical results collected from temporary monitoring well SB-5/Temp-1 during the Initial Assessment yielded 15 ug/l naphthalene and 5.8 ug/l acenaphthylene.

The horizontal extent of BTEX and MTBE contamination in the semi-confined aquifer has been defined northwest of the former gasoline UST excavation, near monitoring well MW-1 (refer to Figure 9). The horizontal extent of groundwater contamination in the semi-confined aquifer has not been defined in all other areas surrounding the former kerosene and gasoline UST excavations. Groundwater contamination appears to extend upgradient (south-southwest) of the former kerosene and gasoline UST excavations (refer to Figure 9), suggesting a possible off-site source of the contaminants. It's also possible that the interbedded clay and saturated fine sand unit is not continuous between monitoring well locations MW-1, MW-2 and MW-3 and that the static piezometric data presented above may be erroneous. Additional piezometric and hydrogeologic data

(monitoring wells) are needed to verify the continuity of the unit and the north-northeast groundwater flow direction. Possible upgradient sources of contamination should also be investigated.

The vertical extent of groundwater contamination in the semi-confined aquifer has not been defined, but is likely to be limited to the saturated sand that is interbedded with clay.

No BTEX compounds, MTBE, PNAs or dissolved lead were detected in groundwater monitoring well MW-2D, which is screened in the lower confined aquifer (refer to Table 4 and Figure 9). Please refer to Appendix C for the groundwater analytical reports.

**Table 4**

Summary of Phase I Groundwater Analytical Results

| Sample Location | Scan 2 Compounds | | | | MTBE (ug/l) | Scan 7 Compounds (ug/l) | Dissolved Lead (mg/l) |
|---|---|---|---|---|---|---|---|
| | Benzene (ug/l) | Ethyl Bezene (ug/l) | Toluene (ug/l) | Total Xylenes (ug/l) | | | |
| MW-1 | <1 | <1 | <1 | <1 | <50 | <5 | <0.003 |
| MW-2 | **440** | <1 | <1 | <1 | **2800** | <5 | <0.003 |
| MW-2D | <1 | <1 | <1 | <1 | <50 | <5 | <0.003 |
| MW-3 | **3.1** | <1 | 5.9 | 4.7 | **21,000** | <5 | <0.003 |
| **MERA[a] Type B** | **1.2** | **680** | **790** | **280** | **230** | **----** | **0.004[b]** |

NOTES: 1. Samples collected on January 17, 1995.
2. < (less than) indicate not detected followed by method detection limit.
3. **[a] = MERA Operational Memorandum #8, Revision 3, February 4, 1994.**
4. **[b] = MERA Operational Memorandum #15, September 30, 1993.**

## SUMMARY AND CONCLUSIONS

A Phase I Hydrogeologic Study was implemented on January 9, 1995. The Phase I investigation included the advancement of five soil borings (MW-1, MW-2, MW-2D, MW-3 and SB-10), soil sampling, the installation of four groundwater monitoring wells, and groundwater sampling and analysis. The following describes these activities and results in more detail.

One soil sample from each soil boring was selected for laboratory analysis. The soil samples were submitted to KAR for analysis of BTEX, PNAs, MTBE, and total lead.

Four of the five HSA soil borings were completed as groundwater monitoring wells. Three monitoring wells were set to intersect the water table at a total depth of approximately 15 feet (MW-1, MW-2 and MW-3). One monitoring well (MW-2D) was set deeper into the aquifer at a total depth of 30 feet.

The monitoring wells were sampled on January 17, 1995. The groundwater samples were submitted for analysis of BTEX, PNAs, MTBE and dissolved lead.

The logs from soil borings advanced during the Initial Assessment and the Phase I Hydrogeologic Study were used to determine the surficial geology of the site. The geology consists of four distinct units, an upper fill unit, a fractured gray clay unit, an interbedded clay and fine sand unit and a lower gravel unit.

Site hydrogeologic conditions were determined through the installation and sampling of monitoring wells MW-1, MW-2 and MW-3, screened in the interbedded clay and sand unit, and monitoring well MW-2D, screened within the lower gravel unit. These wells identified a semi-confined aquifer within the interbedded clay and sand unit and a confined aquifer within the gravel layer. Preliminary piezometric head data suggest that these two aquifers are not hydraulically connected, however, the actual hydraulic connection or migration rate between the two aquifers needs to be determined based upon the thickness, continuity and vertical permeability of the clay aquitard separating the two aquifers.

The predominant groundwater flow direction and gradient in the semi-confined aquifer is north-northeast and 0.008 feet/foot, respectively. Groundwater flow in the lower confined aquifer could not be determined because only one monitoring well is screened in the gravel unit.

The results of the soil analyses from the Initial Assessment (soil borings SB-1 through SB-9) and Phase I Hydrogeologic Study (soil borings MW-1, MW-3 and SB-10) indicate that selected BTEX contaminants are present above MERA Type B Cleanup Criteria in

the vicinity of the former kerosene and gasoline UST excavations. PNAs and MTBE were also detected, however, their concentrations are below MERA Type B Cleanup Criteria. Total lead was detected at all soil boring locations below MERA Default Type A Cleanup Criteria (MDNR, September 30, 1993). Refer to Table 3 and Figure 8 for summaries of the soil analytical results from the Initial Assessment and Phase I Hydrogeologic Study.

The horizontal extent of soil contamination has been defined north and northeast of the former gasoline UST excavation and in the vicinity of soil boring SB-3. The horizontal extent of soil contamination has not been defined in all other areas surrounding the former kerosene and gasoline UST excavations. Soil contamination appears to extend off-site southwest of the former kerosene and gasoline UST excavations (refer to Figure 8). The vertical extent of soil contamination has not been delineated, but is believed to extend to the saturated sand in some areas as indicated by the groundwater results presented below.

The groundwater analytical results from the Phase I Hydrogeologic Study indicate that selected BTEX compounds and MTBE are present above MERA Type B Cleanup Criteria in upgradient monitoring wells MW-2 and MW-3, which are screened in the semi-confined aquifer. The groundwater analytical results for PNAs and dissolved lead in the semi-confined aquifer indicate non-detect concentrations (below MERA Type A Cleanup Criteria) for all three wells (MW-1, MW-2 and MW-3). Refer to Table 4 and

Figure 9 for summaries of the groundwater soil analytical results from Phase I Hydrogeologic Study.

The horizontal extent of BTEX and MTBE contamination in the semi-confined aquifer has been defined northwest of the former gasoline UST excavation, near monitoring well MW-1. The horizontal extent of groundwater contamination in the semi-confined aquifer has not been defined in all other areas surrounding the former kerosene and gasoline UST excavations. Groundwater contamination appears to extend upgradient (southwest) of the former kerosene and gasoline UST excavations. The vertical extent of groundwater contamination in the semi-confined aquifer has not been defined, but is likely to be limited to the saturated sand that is interbedded with clay.

No BTEX compounds, MTBE, PNAs or dissolved lead were detected in groundwater monitoring well MW-2D, which is screened in the lower confined.

As suggested above, the presence of groundwater contamination south (upgradient) of the former UST excavations indicates that; (1) addition piezometric data (monitoring wells) are needed to verify the north-northeast groundwater flow direction and/or (2) the potential for an upgradient source of contamination should be investigated.

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**General**

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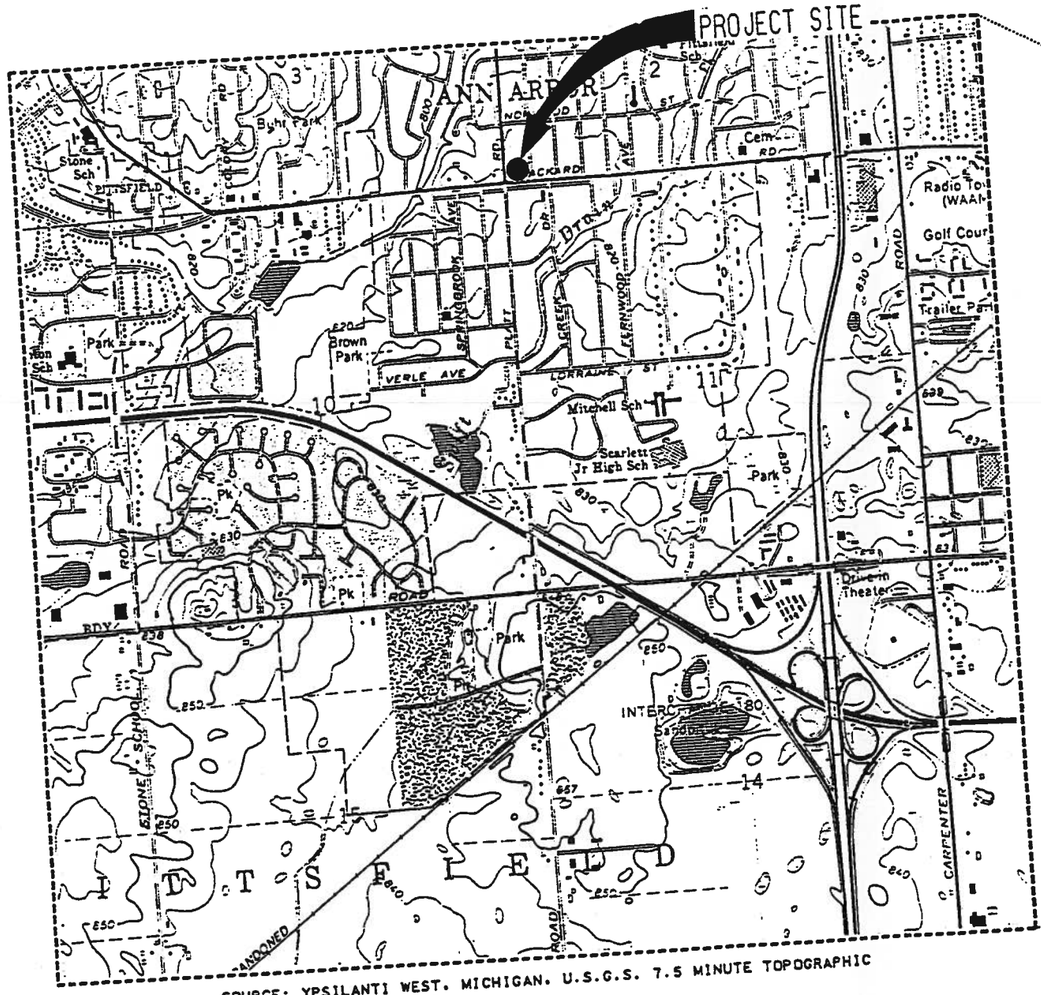
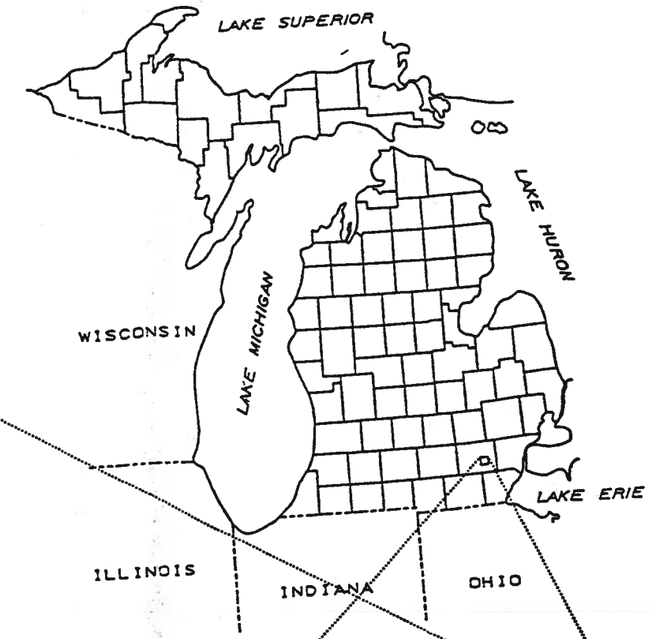
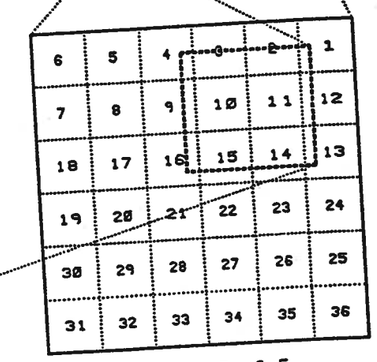
Western Michigan University (WMU), "Hydrogeologic Atlas of Michigan", Department of Geology, College of Arts and Sciences, 1981

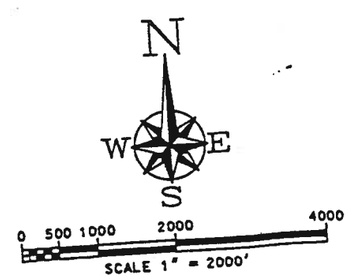



SOURCE: YPSILANTI WEST, MICHIGAN, U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP




T.3 S., R. 6 E.
PITTSFIELD TOWNSHIP
WASHTENAW COUNTY, MICHIGAN




# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

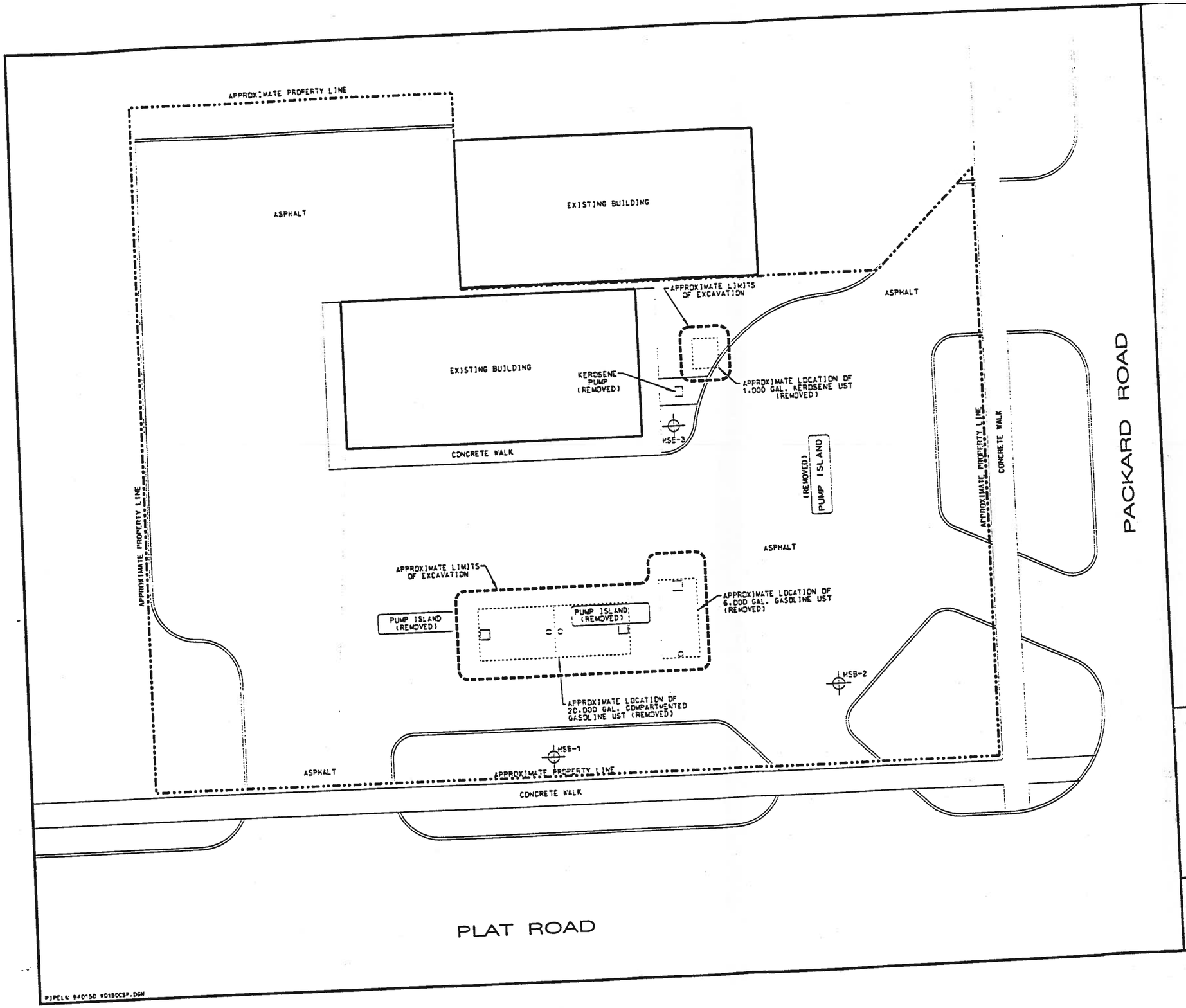
## LOCATION MAP

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH: (616)342-1100 FAX: (616)342-4945

PROJECT NO. 940150

FIGURE NO: 1

PIPELN 940150 40150-LC.DGN




LEGEND

⊕ SITE CHECK SOIL BORING LOCATION

N E S W

SCALE: 1" = 20'

0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

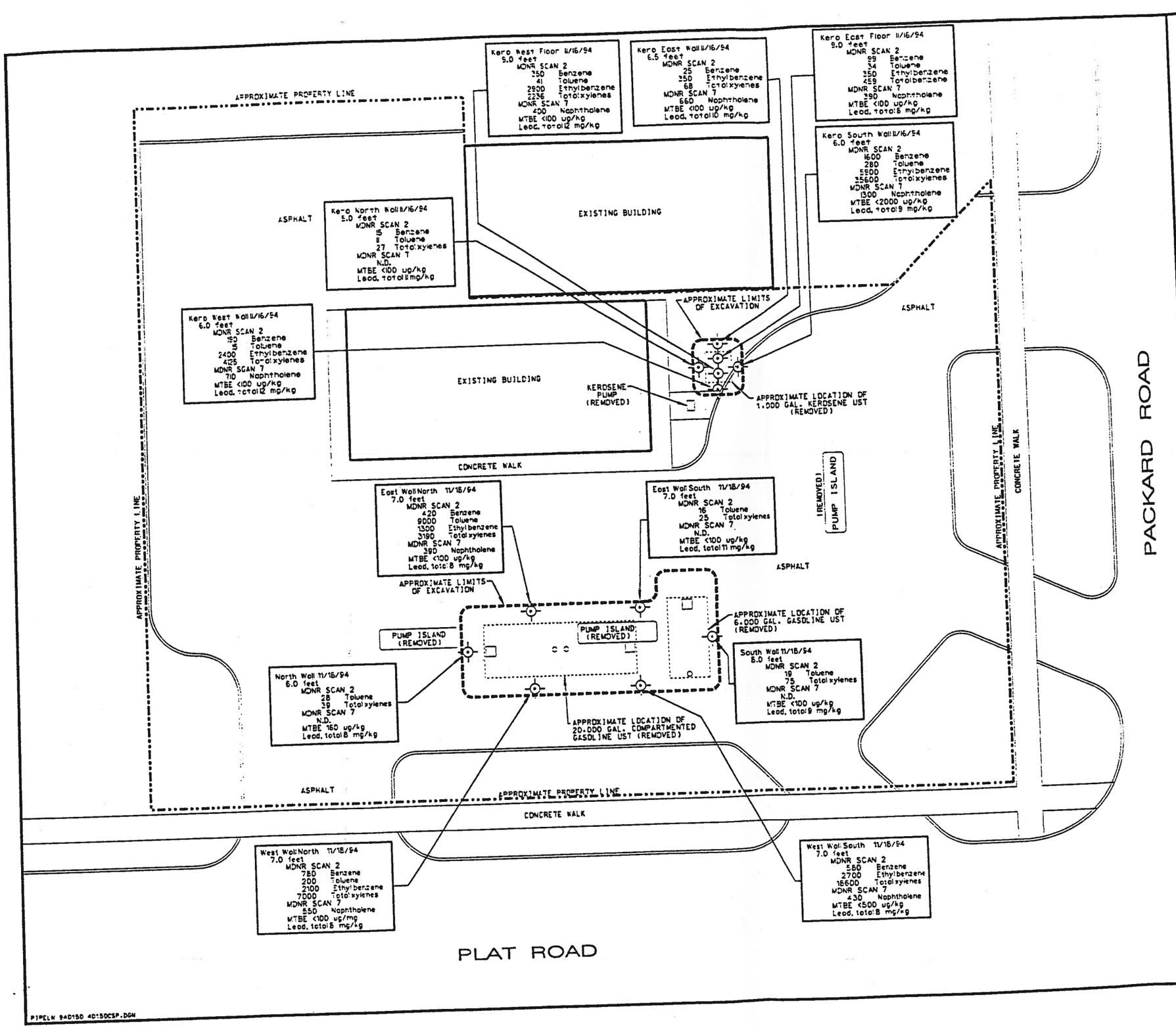
## SITE PLAN

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150

FIGURE NO: 2

PJPELN 940150 9D150CSP.DGN




## LEGEND

⊕ EXCAVATION SAMPLE LOCATION

N E S W

SCALE: 1" = 20'

0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## SOIL RESULTS FOR ENVIRONMENTAL MONITORING OF UST REMOVAL

ENVIROLOGIC TECHNOLOGIES, INC.
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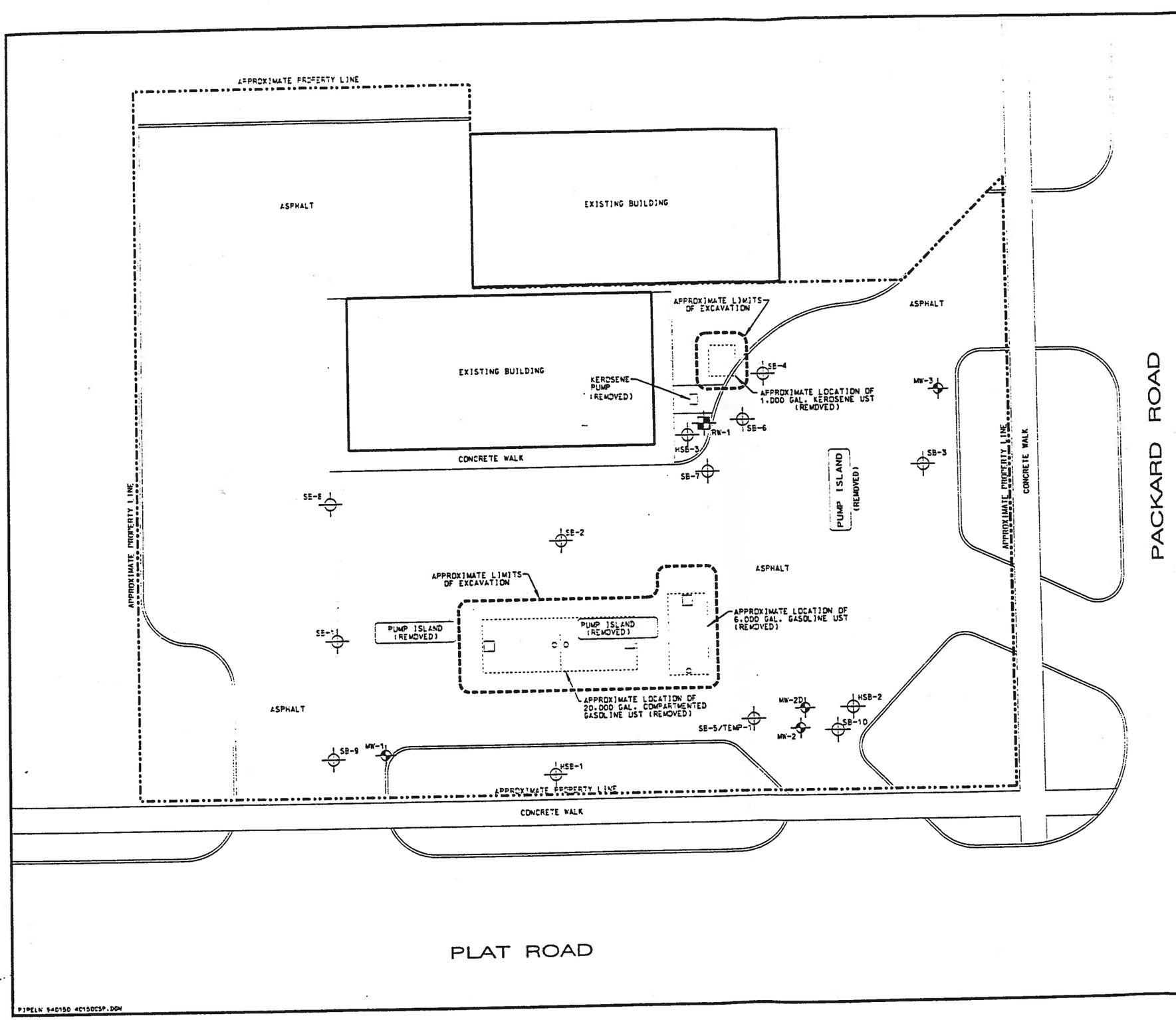
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150

FIGURE NO: 3

PIPELN 940150 4D:SDCSP.DGN




## LEGEND

- SOIL BORING LOCATION
- FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/16/94)
- MONITORING WELL LOCATION

N E S W

SCALE: 1" = 20'

0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## SOIL BORING AND MONITORING WELL LOCATION MAP

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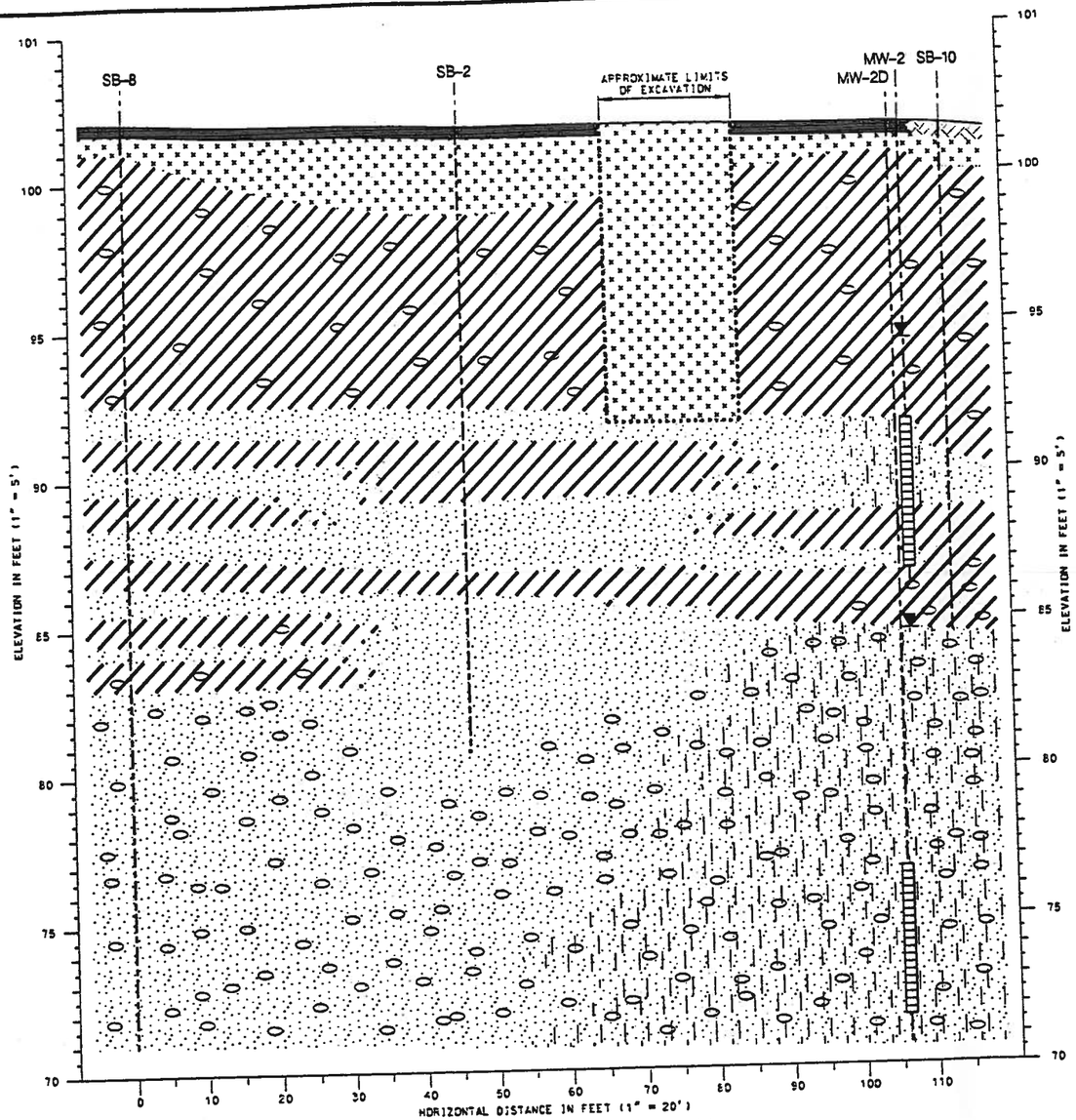
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150

FIGURE NO: 4

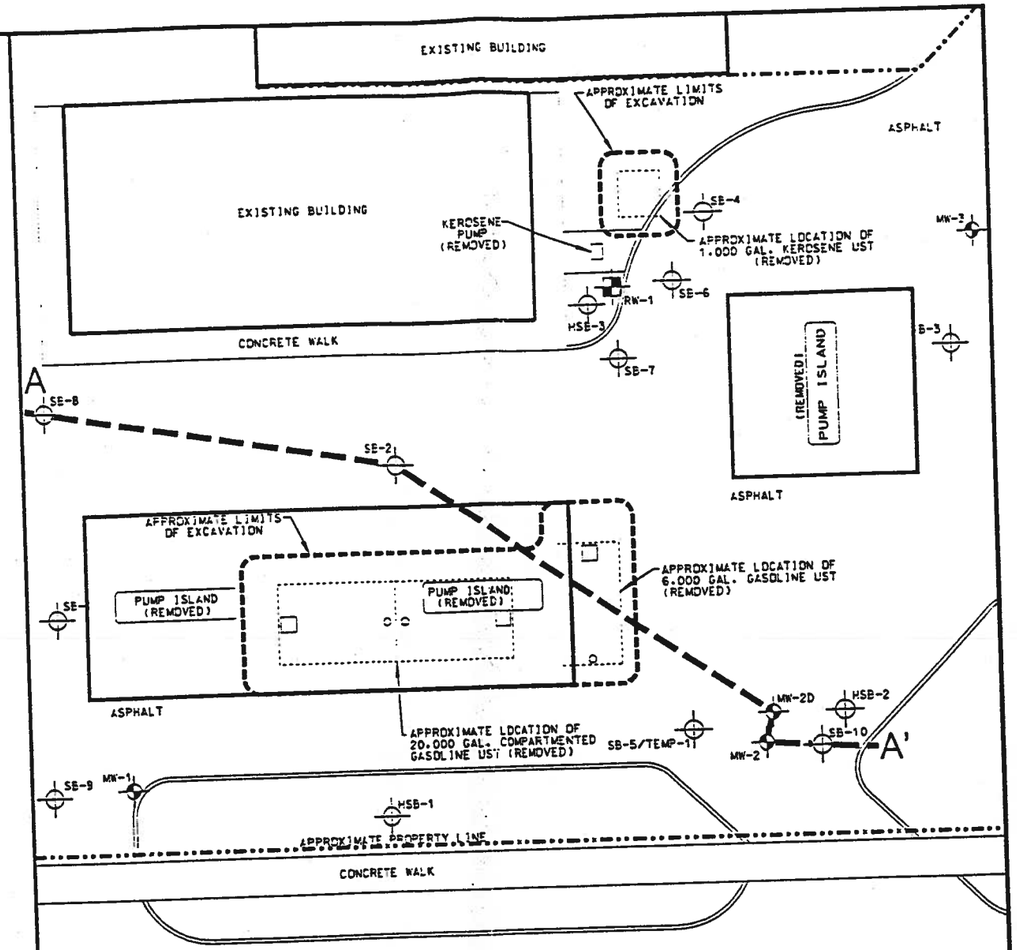
PIPELN 940150 4C150C3P.DGN




CROSS-SECTION A – A'

LEGEND

ASPHALT
MISC. FILL
SILT
GRAVEL
STATIC WATER LEVEL JANUARY 17, 1995
TOPSOIL
SAND
CLAY
SCREENED INTERVAL



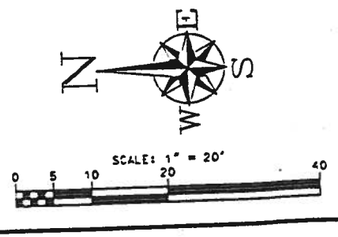

LEGEND

SOIL BORING LOCATION

FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

MONITORING WELL LOCATION

CROSS-SECTION A – A'




BUDDY'S PACKARD SUNOCO
3005 PACKARD
ANN ARBOR, MICHIGAN 48104

GEOLOGIC CROSS-SECTION
A – A'

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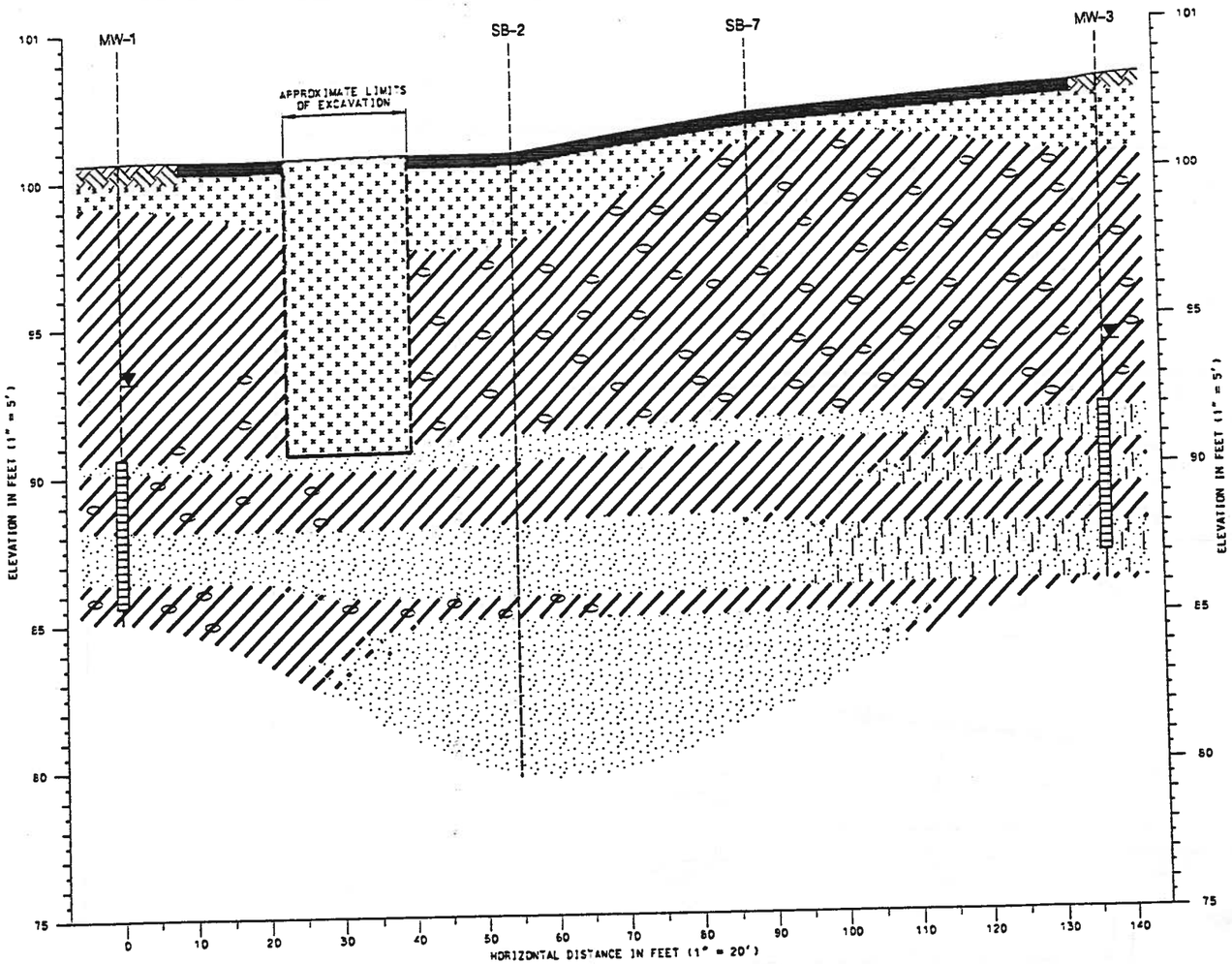
PROJECT NO: 940150
FIGURE NO: 5

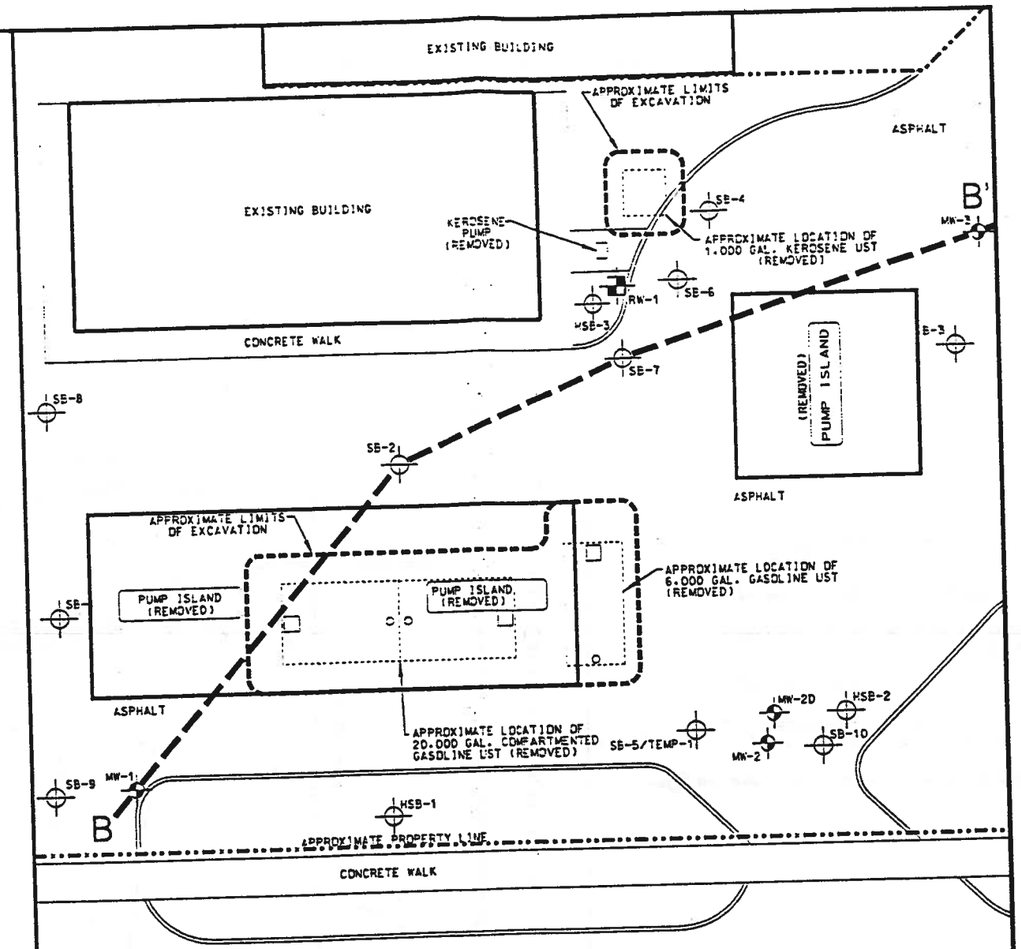
PIPELN 940150 40:50XS1.DGN




CROSS-SECTION B – B'

LEGEND

ASPHALT
MISC. FILL
SILT
GRAVEL
STATIC WATER LEVEL JANUARY 17, 1995
TOPSOIL
SAND
CLAY
SCREENED INTERVAL

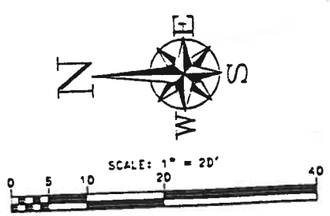



SOIL BORING LOCATION

FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

MONITORING WELL LOCATION

CROSS-SECTION B – B'




# BUDDY'S PACKARD SUNOCO

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## GEOLOGIC CROSS-SECTION B – B'

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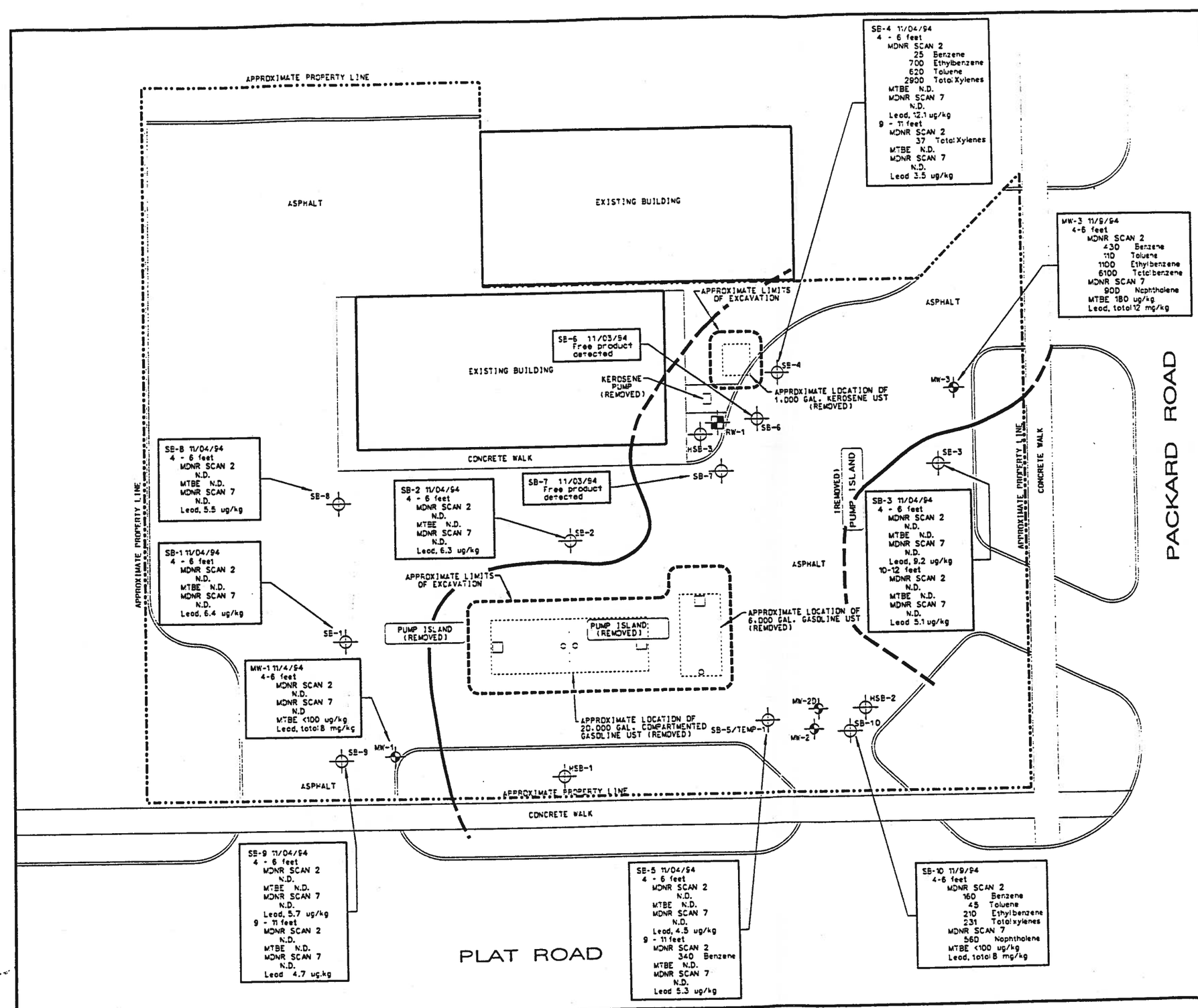
PROJECT NO: 940150

FIGURE NO: 6

PIPELN 940150 40150XS1.DGN




## LEGEND

- SOIL BORING LOCATION
- EXISTING FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)
- MONITORING WELL LOCATION
- APPROXIMATE EXTENT OF SOIL CONTAMINATION (DASHED WHERE INFERRED)

NOTE: SOIL RESULTS REPORTED AS ug/kg
N.D. = NOT DETECTED

N S E W

SCALE: 1" = 20'
0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## DISTRIBUTION OF SOIL CONTAMINATION

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150
FIGURE NO: 8

PIPELN 940150 40150CSP.DGN

APPROXIMATE PROPERTY LINE

ASPHALT

EXISTING BUILDING

EXISTING BUILDING

MW-3 1/17/95
MDNR SCAN 2
3.1 Benzene
5.9 Toluene
4.7 Total xylenes
MTBE 21,000 ug/L
Lead, dissolved <0.003 ug/L

APPROXIMATE LIMITS OF EXCAVATION

ASPHALT

KEROSENE PUMP (REMOVED)

APPROXIMATE LOCATION OF 1,000 GAL. KEROSENE UST (REMOVED)

MW-3

RW-1

CONCRETE WALK

(REMOVED) PUMP ISLAND

APPROXIMATE PROPERTY LINE

CONCRETE WALK

PACKARD ROAD

APPROXIMATE PROPERTY LINE

ASPHALT

APPROXIMATE LIMITS OF EXCAVATION

PUMP ISLAND (REMOVED)

PUMP ISLAND (REMOVED)

APPROXIMATE LOCATION OF 6,000 GAL. GASOLINE UST (REMOVED)

MW-1 1/17/95
MDNR SCAN 2
N.D.
MDNR SCAN 7
N.D.
MTBE <50 ug/L
Lead, dissolved <0.003 mg/L

APPROXIMATE LOCATION OF 20,000 GAL. COMPARTMENTED GASOLINE UST (REMOVED)

MW-2D

MW-2

MW-1

ASPHALT

APPROXIMATE PROPERTY LINE

CONCRETE WALK

MW-2 1/17/95
MDNR SCAN 2
440 Benzene
MDNR SCAN 7
N.D.
MTBE 2800 ug/L
Lead, dissolved <0.003 mg/L

MW-2D 1/17/95
MDNR SCAN 2
N.D.
MDNR SCAN 7
N.D.
MTBE <50 ug/L
Lead, dissolved <0.003 mg/L

PLAT ROAD

## LEGEND

MONITORING WELL LOCATION

EXISTING FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION. DASHED WHERE INFERRED.

NOTE: ALL RESULTS REPORTED AS ug/L UNLESS OTHERWISE STATED

N.D. = NOT DETECTED

N W E S

SCALE: 1" = 20'

0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## DISTRIBUTION OF GROUNDWATER CONTAMINATION

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150

FIGURE NO: 9

PIPELN 940150 4D150CSP.DGN

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-1



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

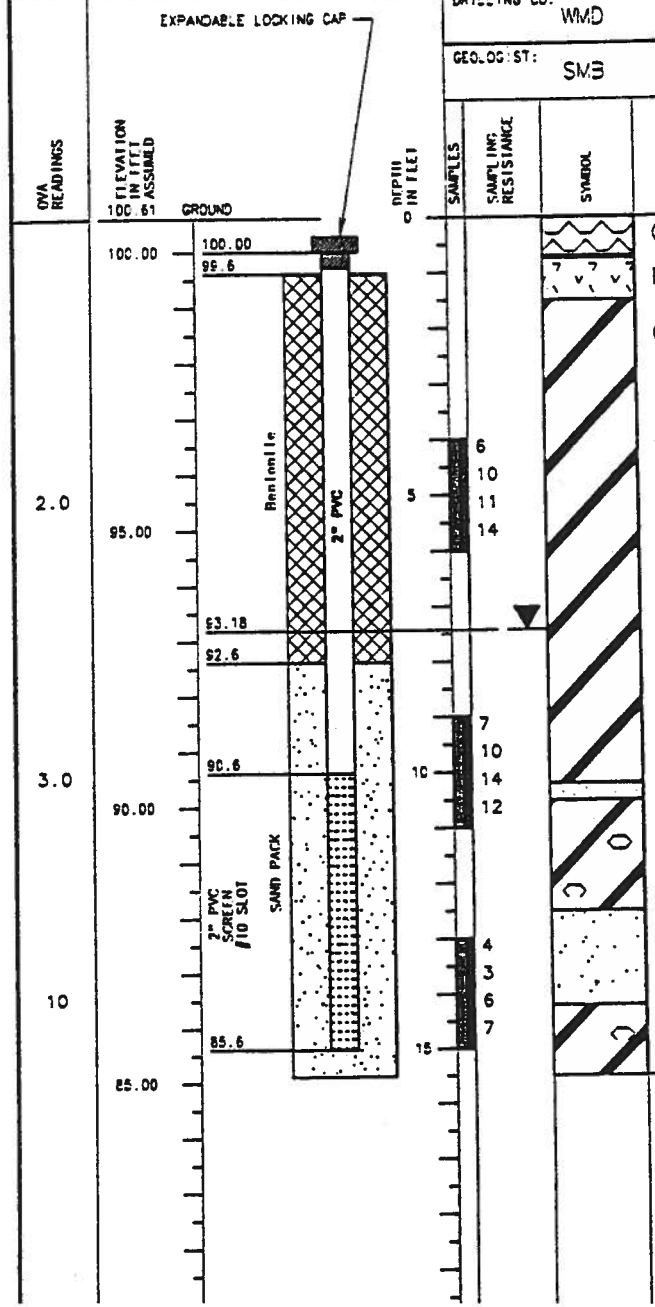
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 11:50 AM

GEOLOGIST: SMB

COMPLETION DATE: 1/9/94 2:15 PM




Gross and Topsoil

FILL

CLAY
Brown, organic matter, hard, dry.

CLAY
Brown, fractured, hard, dry.

CLAY
Brown, fractured, hard, dry.

SAND
Brown, fine to medium, moist.

CLAY
Gray, plastic, trace gravel, damp.

SAND
Gray, fine to medium, wet.

CLAY
Gray, plastic, trace gravel, damp.

Total depth = 15.5 feet

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2

SHEET 1 of 1

CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

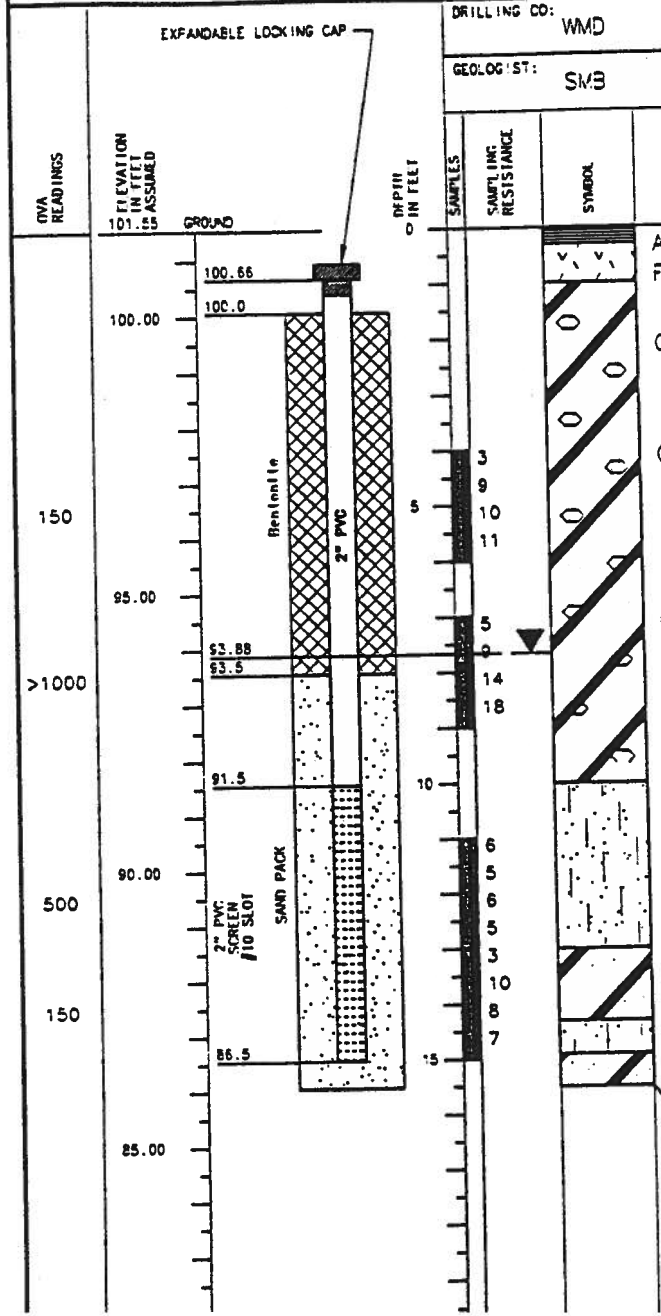
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 2:25 PM

GEOLOGIST: SMB

COMPLETION DATE: 1/9/95 5:30 PM



ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2D



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

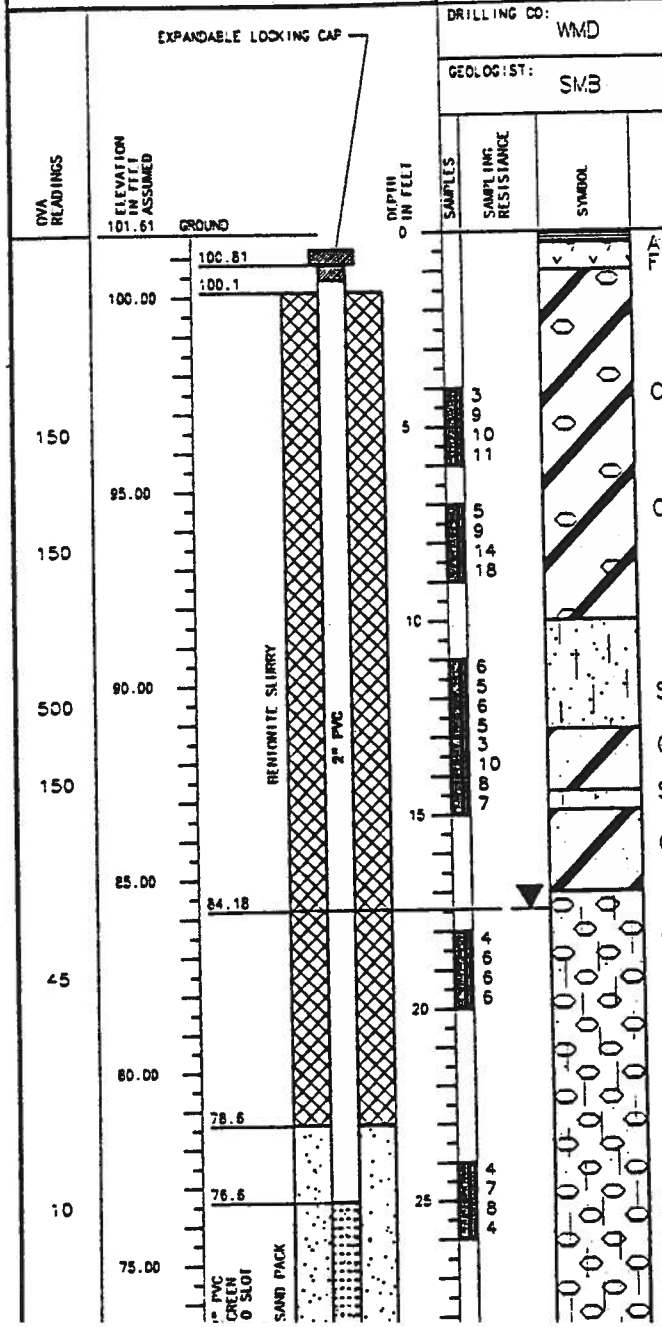
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/10/95 11:00 AM

GEOLOGIST: SMB

COMPLETION DATE: 1/10/95 2:15 PM




ASPHALT
FILL

CLAY
Brown, blue mottled, orgoinc matter, dry.

CLAY
Brown, trace gravel, dry.

SAND
Gray, fine, with silt, wet.

CLAY
Gray, plastic, some sand, moist.

SAND
Gray, fine, with silt, wet.

CLAY
Gray, plastic, some sand, moist.

GRAVEL
Gray, fine, with medium to coarse grained sand, trace silt, wet.

GRAVEL
Gray, fine, with medium to coarse grained sand, trace

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# LOG OF MW-3



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

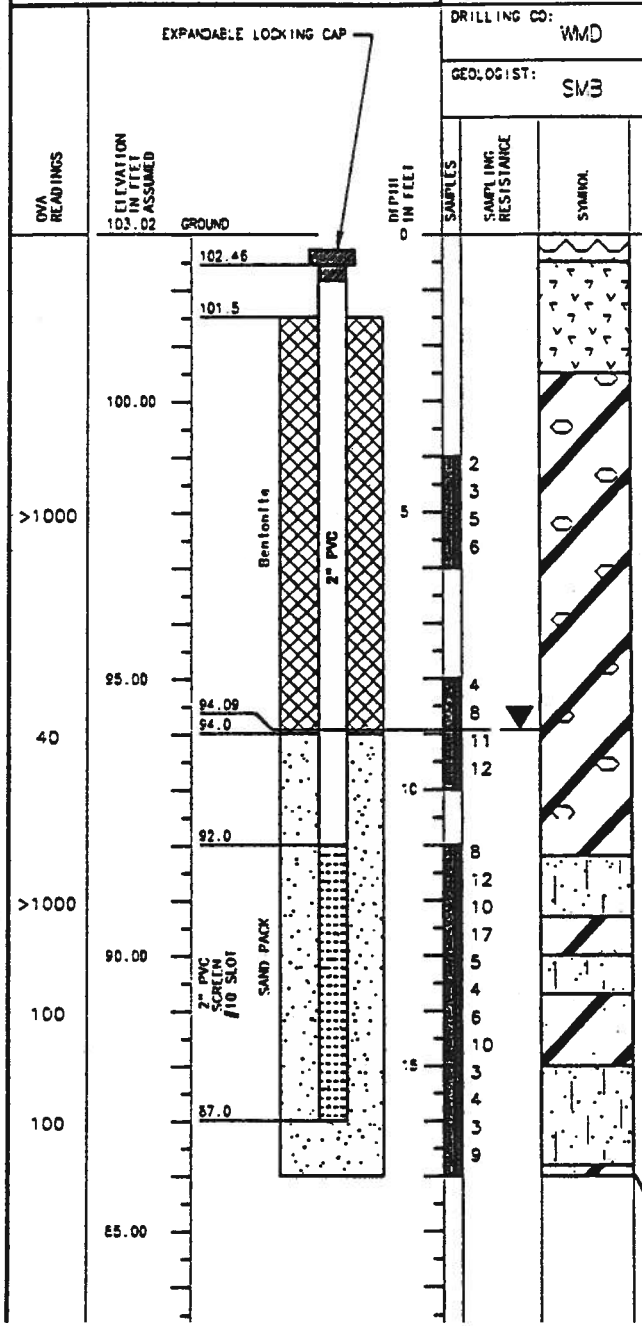
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 8:50 AM

GEOLOGIST: SMB

COMPLETION DATE: 1/9/95 10:45 AM



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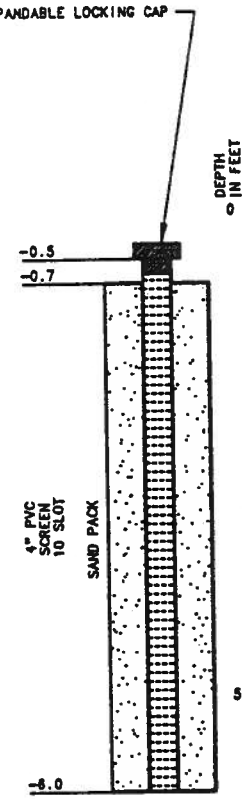
(616) 342-1100

# LOG OF RW-1

| | |
|---|---|
| CLIENT: | PIPELINE - BUDDY'S PACKARD SUNOCO 940150 |
| LOCATION: | ANN ARBOR, MICHIGAN |
| DRILLING CO: | Keith Fransted Constr. |
| START DATE: | 11/18/94 |
| GEOLOGIST: | DHN |
| COMPLETION DATE: | 11/18/94 |




| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT 3" |
| | | | | | FILL<br>Sand and gravel, damp. |
| | | | | | CLAY<br>Brown, mottled, low plasticity, some sand and gravel, organic matter, wet at 3'. Product observed. |
| | 5 | | | | CLAY<br>Dark brown, medium plasticity, some sand, moist |
| | | | | | Total depth = 6.0 feet |
| | 10 | | | | |

NOTE:
Recovery well RW-1 was installed by placing the casine in an open excavation. Sail was then backfilled around the casing.

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# LOG OF HSB-1



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: ETI - HANDAUGER

START DATE: 9/15/94 11:15 AM

GEOLOGIST: JRP

COMPLETION DATE: 9/15/94 11:35 AM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | GRASS AND TOPSOIL |
| >1000 | | | | | CLAY<br>Brown to green, hard, damp. |
| >1000 | | | | | CLAY<br>Brown to green, hard, dry. |
| >1000 | 5 | | | | Total depth = 5.25 feet |
| | 10 | | | | |

BACKFILL

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# LOG OF HSB-2



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: ETI - HANDAUGER

START DATE: 9/15/94 12:00 PM

GEOLOGIST: JRP

COMPLETION DATE: 9/15/94 12:25 PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | GRASS AND TOPSOIL |
| >1000 | | | | | CLAY<br>Brown to green, hard, damp. |
| >1000 | | | | | |
| | | | | | CLAY<br>Brown to green, hard, dry. |
| >1000 | 5 | | | | Total depth = 5.25 feet |
| | 10 | | | | |

BACKFILL

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# LOG OF HSB-3



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: ETI - HANDAUGER

START DATE: 9/15/94 12:25 PM

GEOLOGIST: JRP

COMPLETION DATE: 9/15/94 12:45 PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | FILL<br>Black, sand, trace gravel, damp. |
| >1000 | | | | | |
| | | | | | Water in the hole at 2 feet. |
| | | | | | CLAY<br>Black to green, plastic, damp. |
| >1000 | | | | | Total depth = 3.5 feet |
| | 5 | | | | |
| | 10 | | | | |

BACKFILL

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# LOG OF SB-1



CLIENT: PIPELINE – BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-3-94 9:40AM

GEOLOGIST: SMB

COMPLETION DATE: 11-3-94 10:40AM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 4" ASPHALT |
| | | | | | FILL<br>Sand and gravel, dry. |
| | | | | | CLAY<br>Bluish green, roots and stems, damp. |
| | | | 4 | | CLAY<br>Mottled brown and gray, trace gravel, hard, dry. |
| 30 | 5 | | 5 | | |
| | | | 6 | | |
| | | | 7 | | |
| | | | 3 | | |
| | | | 5 | | CLAY<br>Gray, soft, trace sand and silt, slightly plastic, moist. |
| 10 | | | 7 | | |
| | | | 6 | | |
| | | | 4 | | |
| | | | 6 | | CLAY<br>Mottled brown and gray, trace gravel, hard, dry, occasional sand layers, very moist. |
| 3 | | | 10 | | |
| | | | 11 | | |
| | 10 | | 5 | | |
| | | | 6 | | SAND<br>Gray, some clay, very moist. |
| 2 | | | 7 | | |
| | | | 8 | | |
| | | | 3 | | CLAY<br>Gray, plastic, soft, moist. |
| | | | 3 | | |
| 2 | | | 4 | | |
| | | | 5 | | |
| | | | 2 | | |
| | | | 3 | | |
| 10 | 15 | | 3 | | |
| | | | 4 | | SAND<br>Gray, fine grained, with silt, trace clay, wet. |
| | | | 5 | | |
| | | | 5 | | |
| 35 | | | 3 | | CLAY<br>Gray, plastic, soft, moist. |
| | | | 2 | | |
| | | | 1 | | SAND<br>Gray, fine, with silt, trace clay, wet. |
| | | | 4 | | |
| 2 | | | 2 | | CLAY<br>Gray, plastic, moist. |
| | | | 2 | | |
| | 20 | | | | SAND<br>Gray, medium grained, some gravel, poorly sorted, wet. |
| | | | | | Total depth = 20.0 feet |

BENTONITE SLURRY

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KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF SB-2



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-3-94 10:50AM

GEOLOGIST: SMB

COMPLETION DATE: 11-3-94 11:50AM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 3" ASPHALT |
| | | | | | FILL<br>Sand and gravel, dry. |
| | | | | | FILL<br>Brown clay, some sand and gravel, dry. |
| 2 | 5 | | 4<br>6<br>9<br>11 | | CLAY<br>Mottled brown and gray, fractured, trace gravel, damp. |
| 20 | 10 | | 4<br>7<br>11<br>14 | | CLAY<br>Brown, hard, dry. |
| | | | | | SAND<br>Greenish gray, medium and fine grained, moderately sorted, wet. |
| | | | | | CLAY<br>Gray, soft, plastic, damp. |
| 40 | 15 | | 5<br>6<br>9<br>11 | | SAND<br>Gray, fine grained, well sorted, wet. |
| | | | | | CLAY<br>Gray, plastic, trace gravel, damp. |
| | | | | | SAND<br>Gray, fine and medium grained, well sorted, wet. |
| 40 | 20 | | 5<br>6<br>11<br>14 | | SAND<br>Gray, coarse grained, moderately sorted, wet. |

BENTONITE SLURRY

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# LOG OF SB-3



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11/3/94 1:00 PM

GEOLOGIST: SMB

COMPLETION DATE: 11/3/94 2:20 PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT |
| | | | | | FILL<br>Sand and gravel. |
| | | | 2 | | CLAY<br>Mottled, brown, plastic, dry. |
| | | | 3 | | |
| >1000 | 5 | | 5 | | |
| | | | 6 | | |
| | | | 3 | | |
| | | | 5 | | |
| 750 | | | 7 | | |
| | | | 9 | | |
| | | | 4 | | CLAY<br>Brown, plastic, some silt, trace sand, damp. |
| 50 | | | 8 | | |
| | | | 12 | | |
| | | | 16 | | |
| | 10 | | 5 | | |
| | | | 10 | | |
| 100 | | | 17 | | |
| | | | 22 | | CLAY<br>Gray, plastic, trace gravel, damp. |
| | | | 5 | | |
| | | | 8 | | |
| 950 | | | 12 | | SAND<br>Gray, some silt, wet. |
| | | | 11 | | |
| | | | 2 | | |
| | | | 5 | | |
| 750 | 15 | | 5 | | CLAY<br>Gray, plastic, trace gravel, damp. |
| | | | 6 | | |
| | | | 5 | | SAND<br>Gray, with clay, some silt, wet. |
| | | | 6 | | |
| 550 | | | 6 | | |
| | | | 8 | | CLAY<br>Gray, plastic, damp. |
| | | | | | Total depth = 18.0 feet |
| | 20 | | | | |

BENTONITE SLURRY

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF SB-4



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-3-94 3:05PM

GEOLOGIST: SMB

COMPLETION DATE: 11-3-94 4:00PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 3" ASPHALT<br>FILL<br>Sand and gravel, dry. |
| >1000 | 5 | | 2<br>2<br>4<br>5 | | CLAY<br>Mottled, brown and bluish gray, trace gravel, damp. |
| 600 | 10 | | 3<br>7<br>6<br>10 | | SAND<br>Brown, medium grained, some coarse grained, wet. |
| | | | | | CLAY<br>Gray, plastic, hard, damp. |
| 150 | 15 | | 3<br>6<br>6<br>8 | | SAND<br>Gray, fine grained, some silt, well sorted, wet.<br>CLAY<br>Gray, plastic, hard, damp. |
| | 20 | | | | |

BENTONITE SLURRY

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
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(616) 342-1100

# LOG OF SB-5/TEMP-1



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-3-94 4:10PM

GEOLOGIST: SMB

COMPLETION DATE: 11-3-94 5:25PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 4" ASPHALT |
| | | | | | FILL<br>Sand and gravel, dry. |
| | | | | | FILL<br>Green and brown clay, fractured, plastic, trace silt, damp. |
| 5 | 5 | | 5<br>8<br>11<br>14 | | CLAY<br>Brown, bluish gray fractures, trace gravel, hard, dry. |
| >1000 | 10 | | 6<br>9<br>9<br>12 | | CLAY<br>Gray, plastic, trace silt, dry.<br>Sand seams, fine grained, well sorted, some silt, dry.<br>CLAY<br>Gray, plastic, trace silt, dry. |
| >1000 | | | 5<br>5<br>9<br>13 | | SAND<br>Gray, fine grained, with silt, wet. |
| >1000 | 15 | | | | GRAVEL<br>Gray, fine, wet.<br>CLAY<br>Gray, plastic, damp.<br>Total depth = 16.0 Feet |
| | 20 | | | | |

BENTONITE SLURRY

SCREEN

NOTE:
Temporary monitoring well TEMP-1 was removed after a groundwater sample was obtained for analysis.

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# LOG OF SB-6



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11/3/94 2:45 PM

GEOLOGIST: SMB

COMPLETION DATE: 11/3/94 3:00 PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT 3" |
| | | | | | FILL<br>Sand and gravel, damp. |
| | Bentonite Chips | | | | |
| | | | | | CLAY<br>Brown, mottled, low plastisticity, some sand and gravel, organic matter, wet at 3'. Product was observed in soil sample. |
| | | | | | EOB |
| | 5 | | | | |
| | 10 | | | | |

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(616) 342-1100

# LOG OF SB-7



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11/3/94 2:45 PM

GEOLOGIST: SMB

COMPLETION DATE: 11/3/94 3:00 PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT 3" |
| | | | | | FILL<br>Sand and gravel, damp. |
| | Bentonite Chips | | | | |
| | | | | | CLAY<br>Brown, mottled, low plastisticity, some sand and gravel, organic matter, wet at 3'. Product was observed in soil sample. |
| | | | | | EOB |
| | 5 | | | | |
| | 10 | | | | |

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# LOG OF SB-8



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-4-94 9:20AM

GEOLOGIST: SMB

COMPLETION DATE: 11-4-94 11:15AM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 3" ASPHALT |
| | | | | | FILL<br>Sand and gravel, damp. |
| | | | | | CLAY<br>Dark green and brown, trace silt and gravel, plastic, damp. |
| | | | 4 | | |
| | | | 5 | | |
| 1 | 5 | | 5 | | CLAY<br>Brown, bluish gray fractures, trace silt and gravel, dry. |
| | | | 4 | | |
| | | | | | CLAY<br>Brown, plastic, trace gravel, hard, damp. |
| | | | 6 | | |
| | | | 8 | | |
| 2 | 10 | | 9 | | SAND<br>Brown, fine and medium grained, well sorted, wet. |
| | | | 9 | | |
| | | | 4 | | |
| | | | 4 | | |
| 5 | | | 8 | | Clay and sand in alternating layers (seams).<br>CLAY<br>Gray, trace gravel, damp.<br>SAND<br>Gray, medium and fine grained, well sorted, wet. |
| | | | 7 | | |
| | | | 6 | | |
| | | | 8 | | |
| 9 | 15 | | 9 | | |
| | | | 20 | | |
| | | | 6 | | |
| | | | 8 | | |
| 20 | | | 6 | | GRAVEL<br>Gray, trace clay, wet. |
| | | | 6 | | |
| | | | 6 | | CLAY<br>Gray, trace gravel, damp. |
| | | | 8 | | |
| 20 | 20 | | 7 | | |
| | | | 7 | | |
| | | | 6 | | |
| | | | 7 | | |
| 5 | | | 8 | | |
| | | | 9 | | |
| | | | 8 | | GRAVEL<br>Gray, fine and medium, some coarse grained sand, wet. |
| | | | 9 | | |
| 25 | 25 | | 18 | | |

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# LOG OF SB-9



CLIENT: PIPELINE - BUDDY'S PARCKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

ELEVATIONS:

SURFACE: TOP OF CASING:

STATIC WATER LEVEL:

DRILLING CO: WMD

START DATE: 11-4-94 11:25AM

GEOLOGIST: SMB

COMPLETION DATE: 11-4-94 12:15PM

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | 3" ASPHALT |
| | | | | | FILL<br>Sand and gravel, dry. |
| | | | | | CLAY<br>Greenish brown, and bluish gray, mottled, trace gravel and silt, damp. |
| 100 | 5 | | 5<br>7<br>12<br>14 | | CLAY<br>Brown and bluish gray, mottled, trace silt and gravel, dry. |
| | | | | | CLAY<br>Gray, trace gravel, damp. |
| 6 | 10 | | 6<br>9<br>15<br>12 | | SAND<br>Brown, fine and medium grained, moderately sorted, moist. |
| | | | | | CLAY<br>Gray, damp. |
| | 15 | | | | |
| | 20 | | | | |

BENTONITE SLURRY

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF SB-10



CLIENT: PIPELN - Buddy's Packard Sunoco - 940150

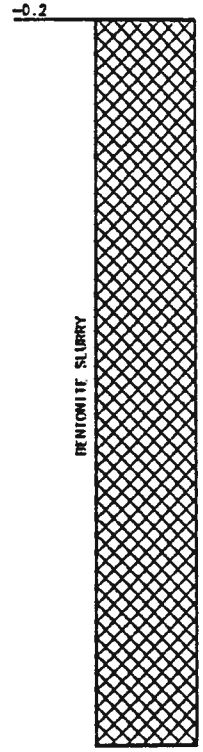
LOCATION: 3005 Packard, Ann Arbor, MI

DRILLING CO: WMD

START DATE: 1-9-95 2:25PM

GEOLOGIST: SMB

COMPLETION DATE: 1-9-95 3:50PM




| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | Grass and topsoil, 6". FILL Dark brown medium grained sand, trace gravel, dry. |
| >1000 | 5 | | 3, 9, 10, 11 | | CLAY Mottled blue and brown, roots and stems, dry. |
| 150 | | | 5, 9, 14, 18 | | CLAY Brown, trace gravel, dry. |
| >1000 | 10 | | 3, 6, 7, 10 | | CLAY Gray, plastic, soft, damp. |
| 8 | | | 4, 3, 6, 7 | | |
| 3 | 15 | | 4, 5, 7, 9 | | CLAY Gray, with fine grained sand, trace gravel, moist. Occasional 1" sand seams, moist. |
| | 20 | | | | Total depth = 17.0 feet |
| | 25 | | | | |

**ENVIROLOGIC**
**TECHNOLOGIES INC.**

# PHASE II HYDROGEOLOGICAL STUDY
# WORK PLAN
# BUDDY'S PACKARD SUNOCO
# 3005 PACKARD ROAD
# ANN ARBOR, MICHIGAN

**Prepared for:**

**PIPELINE OIL SALES**
**744 EAST SOUTH STREET**
**JACKSON, MICHIGAN 49203**

**- APRIL 6, 1995 -**

Prepared by:

**ENVIROLOGIC TECHNOLOGIES, INC.**
2960 Interstate Parkway
Kalamazoo, Michigan 49001
(616) 342-1100

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# PHASE II HYDROGEOLOGICAL STUDY WORK PLAN FOR BUDDY'S PACKARD SUNOCO ~~JACKSON~~, MICHIGAN

Ann Arbor

## INTRODUCTION

### Purpose

This Phase II Hydrogeological Study Work Plan, for an additional investigation, is being prepared in accordance with the Michigan Leaking Underground Storage Tank Act, Part 213 of the Natural Resources and Environmental Protection Act (N.R.E.P.A.). The purpose of the Phase II Hydrogeological Study is to determine the vertical and horizontal extent of soil and groundwater contamination. This work plan is being submitted by Envirologic Technologies, Inc., (Envirologic) on behalf of Pipeline Oil Sales.

### Background Information

The Buddy's Packard Sunoco facility is located at 3005 Packard Road, Ann Arbor, Michigan (Figure 1). This site utilized three (3) underground storage tank systems (USTs) (Figure 2). The USTs were utilized for the storage of regular unleaded gasoline, midgrade unleaded gasoline, premium unleaded gasoline, and kerosene fuel.

The Michigan State Fire Marshal's Office was notified of a confirmed release within the 24-hour deadline on September 15, 1994, due to field observations and field screening results using an Organic Vapor Analyzer (OVA) during a Site Check. As required by Part 213 of the N.R.E.P.A., an Initial Abatement Report (September 29, 1994), Initial

Assessment Report (November 10, 1994), and Phase I Hydrogeologic Study Status Report (February 8, 1995), were submitted to Michigan Department of Natural Resources.

The Phase I Site Investigation included the advancement of five soil borings and the installation of four monitoring wells. The Phase I Hydrogeologic Study Report, submitted on February 8, 1995, indicated that further investigation was needed to define the vertical and horizontal extent of soil and groundwater contamination. Details of the proposed Phase II Hydrogeologic Study are described below.

## PHASE II WORK PLAN

### Soil Boring Completion

Eleven soil borings (eight of which will be converted to monitoring wells) will be advanced on-site and on properties adjacent to the Buddy's Packard Sunoco site to investigate the horizontal and vertical extent of soil contamination. The proposed locations are illustrated on Figure 3. The borings will be installed using the hollow stem auger drilling method. Split-barrel samples will be obtained at a minimum of five foot intervals during the installation of the soil borings. Samples will be screened for VOCs with an OVA and field classified by an Envirologic geologist. Soil samples will be submitted to a laboratory for analysis of MDNR Scan 2 compounds, MDNR Scan 7 compounds, methyl tert-butyl ether (MTBE), and total lead.

All downhole drilling equipment will be steam-cleaned between borings. Split-barrel samplers will be decontaminated/cleaned in a Liquinox solution, rinsed with fresh water and finally rinsed with deionized water.

### Monitoring Well Installation

Eight of the eleven soil borings will be converted to monitoring wells during this phase of investigation (refer to Figure 3). Five of the proposed monitoring wells will be installed in the semi-confined aquifer within the interbedded clay and sand unit to investigate the horizontal of extent of groundwater contamination. Three of the proposed monitoring

wells will be installed in the gravel aquifer (lower aquifer) located beneath the semi-confined aquifer. Monitoring wells installed in the lower aquifer will be nested with three of the semi-confined aquifer monitoring wells to investigate the possible vertical migration of groundwater contamination. All monitoring wells will be installed through the hollow stem augers.

The semi-confined aquifer monitoring wells will be set with 60 percent of the screens below saturation and 40 percent above. The gravel aquifer monitoring wells will be set with the screens at the top of the gravel unit (just below the interbedded clay and sand unit). Semi-confined aquifer monitoring wells will be constructed with a ten-foot long (to investigate the possible presence of free product) and lower aquifer monitoring wells will be constructed with a five-foot long #10 slot, schedule 40 PVC screens. All monitoring wells will be completed, below grade, with two inch diameter, schedule 40 PVC riser. A sand pack will then be placed around the well screens from total depth to a depth of two feet above the top of the screen. The remaining annular space will be grouted with a bentonite slurry to prevent vertical migration along the borehole.

The wells will be equipped with locking expandable plugs to prevent tampering or accidental filling. Flush mount protective covers will then be cemented in place around the wells to protect them from vehicle traffic.

**Monitoring Well Development and Survey**

The newly installed monitoring wells will be developed by pumping and surging with either a centrifugal pump, QED pneumatic development pump, or a bailer. The wells will be developed until relatively sediment free. Purge water discharged from the wells will be temporarily contained in 55-gallon steel drums until disposal.

Top-of-casing and ground elevations for each well will be surveyed relative to existing wells and the on-site reference datum. The monitoring wells and/or soil borings will be horizontally located with respect to on site and off-site features.

**Static Water Level Measurements**

Static water level measurements will be obtained prior to groundwater sampling. The measurements will be taken after the well caps are removed and the water levels have had sufficient time to equilibrate. Static levels will then be measured from the top-of-casing to the nearest 0.01 foot. An electronic water level indicator will be used to take the measurements. The results will be recorded on a Static Water Level Data Sheet. During the static water level measurements the wells will be checked for signs of lighter than water immiscible phases.

The water level instrument will be decontaminated/cleaned prior to each use utilizing a Liquinox detergent wash, a fresh water rinse, followed by a deionized water rinse.

**Monitoring Well Sampling**

All monitoring wells on-site will be sampled. The wells will be purged of at least three well casing volumes prior to sampling. Samples will be collected using a stainless steel bailer. The groundwater samples will be collected in the proper containers for the analysis being performed. Disposable rope will be used when sampling the monitoring wells to prevent cross contamination. The bailer will be disassembled and decontaminated/cleaned with Liquinox solution, rinsed with fresh water, and finally rinsed with deionized water.

The groundwater samples will be submitted to a laboratory for analysis of MDNR Scan 2 compounds, MDNR Scan 7 compounds, MTBE, and dissolved lead. Chain-of-Custody procedures will be maintained throughout the sampling event.

**Data Analysis and Report Preparation**

The results of the Phase II Hydrogeological Study will be summarized and presented in a report.

The accumulated data will be analyzed to determine if the extent of contamination has been fully determined. If the extent of contamination has not been determined, the report may recommend additional work.

**Project Schedule**

The Extended Phase II Hydrogeologic Study Work Plan will be implemented within 30 days of submittal to the MDNR. Potential changes in the schedule due to weather conditions, the bidding process, subcontractor and equipment availability, completion of laboratory analyses, and unforeseen developments, are not included.

If the extent of groundwater contamination is successfully defined during the proposed Extended Phase II Hydrogeologic Study, a Remediation Feasibility Study and Corrective Action Plan will be prepared in accordance with Part 213 of the N.R.E.P.A. Remediation Feasibility Study and Corrective Action Plan activities may include, but may not be limited to, a pilot study aquifer test characterize the aquifer and/or vadose zone.

## REFERENCES


### Soil Boring and Monitoring Well Installation

Michigan Department of Public Health, "Michigan Water Well Grouting Manual - A Guide For The Contractor," Groundwater Quality Control Section, Division of Water Supply, Bureau of Environmental and Occupational Health, Lansing, Michigan, GW-3-302, 83 p., 1988

United States Environmental Protection Agency (USEPA), "Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells," Environmental Monitoring Systems Laboratory, Las Vegas, Nevada, EPA 600/4-89/034, National Water Well Association, Dublin, Ohio, 398 p., 1989

USEPA, "A Compendium of Superfund Field Operations Methods," Office of Emergency and Remedial Response, Washington, D.C., EPA/540/P-87/001, OSWER 9355.0-14, 1987

USEPA, "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document," Office of Waste Programs Enforcement, Office of Solid Waste and Emergency Response, Washington, D.C., OSWER-9950.1, 317 p., 1986

### Soil and Groundwater Sampling

Illinois State Water Survey, "Practical Guide For Groundwater Sampling," Champaign, Illinois, ISWS Contract Report 374, 1985

USEPA, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA - Interim Final," Office of Emergency and Remedial Response, Washington, D.C., EPA/540/G-89/004, OSWER 9355.3-01, 1988

USEPA, "A Compendium of Superfund Field Operations Methods," Office of Emergency and Remedial Response, Washington, D.C., EPA/540/P-87/001, OSWER 9355.0-14, 1987-A

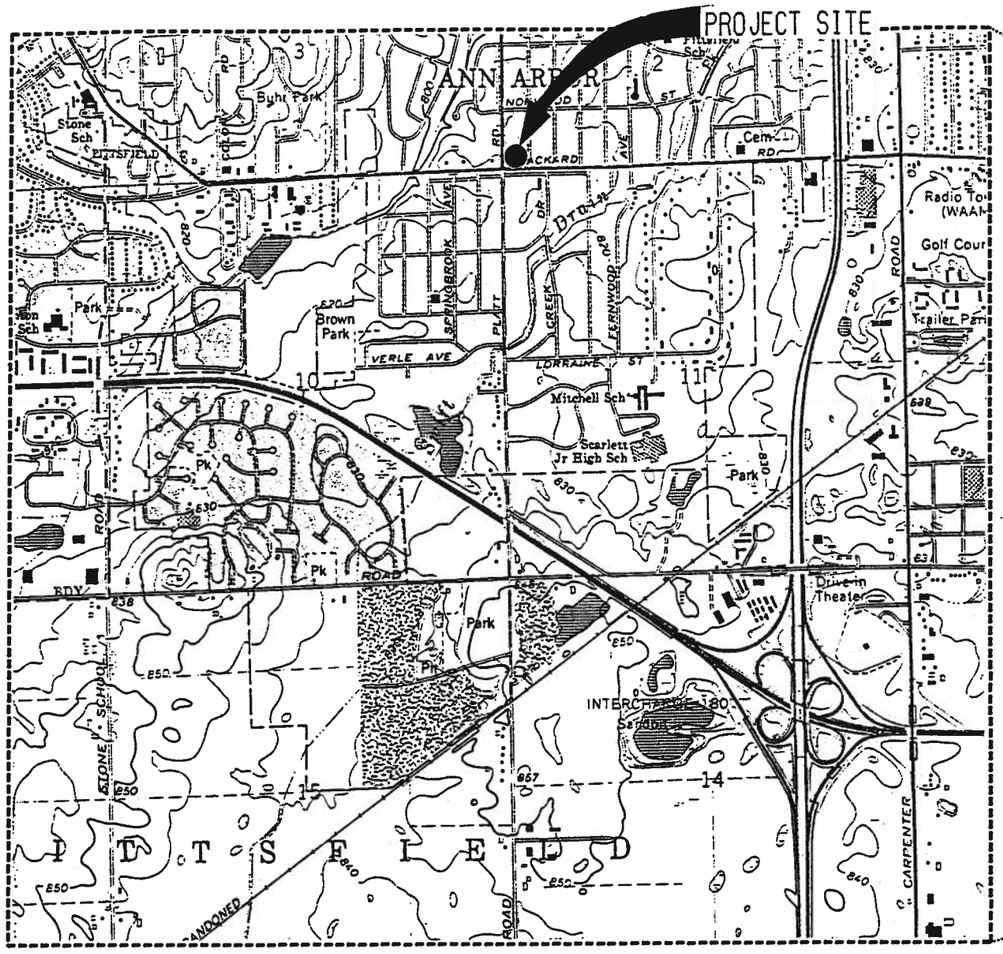
USEPA, "Ground-Water Monitoring Seminar Series - Technical Papers," Office of Research and Development, CERI-87-7, 1987-B

## REFERENCES - CONTINUED

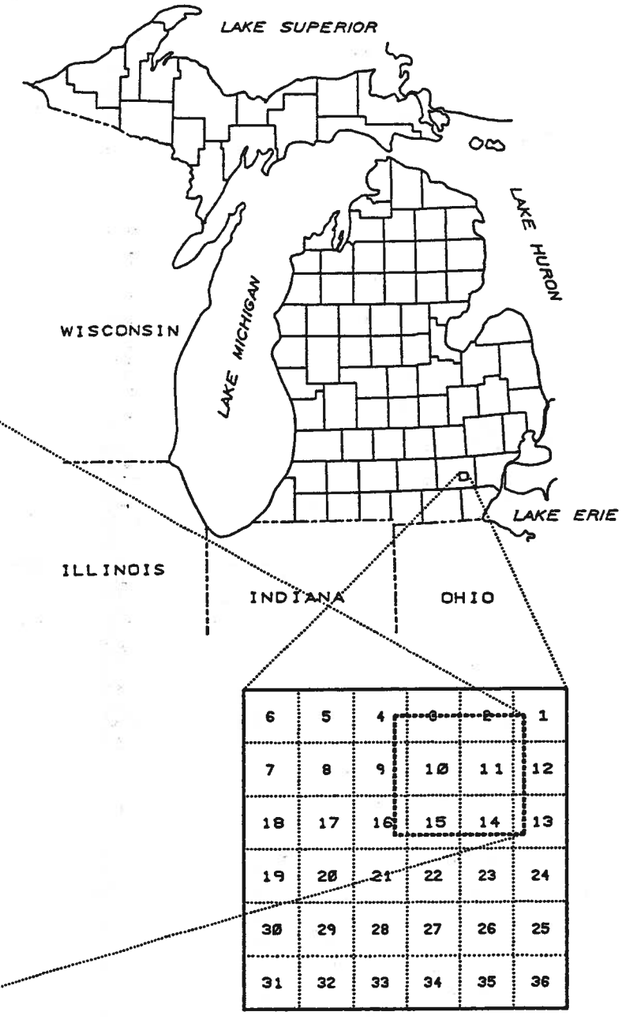
USEPA, "Handbook of Ground Water," Robert S. Kerr Environmental Research Laboratory, Ada, Oklahoma, EPA/625/6- 87/016, 212 p., 1987-C

USEPA, "Manual of Groundwater Quality Sampling Procedures," Robert S. Kerr Environmental Research Laboratory, Office of Research and Development, Ada, Oklahoma, 92 p., 1981

USEPA, "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document," Office of Waste Programs Enforcement, Office of Solid Waste and Emergency Response, Washington, D.C., OSWER-9950.1, 317 p., 1986




SOURCE: YPSILANTI WEST, MICHIGAN, U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP




T.3 S., R. 6 E.
PITTSFIELD TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

N
W E
S

0 500 1000 2000 4000
SCALE 1" = 2000'

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## LOCATION MAP

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH: (616)342-1100 FAX: (616)342-4945

PROJECT NO. 940150

FIGURE NO: 1

PIPELN 940150 40150-LC.DGN

APPROXIMATE PROPERTY LINE

ASPHALT

EXISTING BUILDING

EXISTING BUILDING

APPROXIMATE LIMITS OF EXCAVATION

ASPHALT

KERDSENE PUMP (REMOVED)

APPROXIMATE LOCATION OF 1,000 GAL. KERDSENE UST (REMOVED)

HSB-3

CONCRETE WALK

(REMOVED) PUMP ISLAND

APPROXIMATE PROPERTY LINE

CONCRETE WALK

PACKARD ROAD

APPROXIMATE PROPERTY LINE

ASPHALT

APPROXIMATE LIMITS OF EXCAVATION

PUMP ISLAND (REMOVED)

PUMP ISLAND (REMOVED)

APPROXIMATE LOCATION OF 6,000 GAL. GASOLINE UST (REMOVED)

HSB-2

APPROXIMATE LOCATION OF 20,000 GAL. COMPARTMENTED GASOLINE UST (REMOVED)

HSB-1

ASPHALT

APPROXIMATE PROPERTY LINE

CONCRETE WALK

PLAT ROAD

LEGEND

SITE CHECK SOIL BORING LOCATION

N E S W

SCALE: 1" = 20'

0 5 10 20 40

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

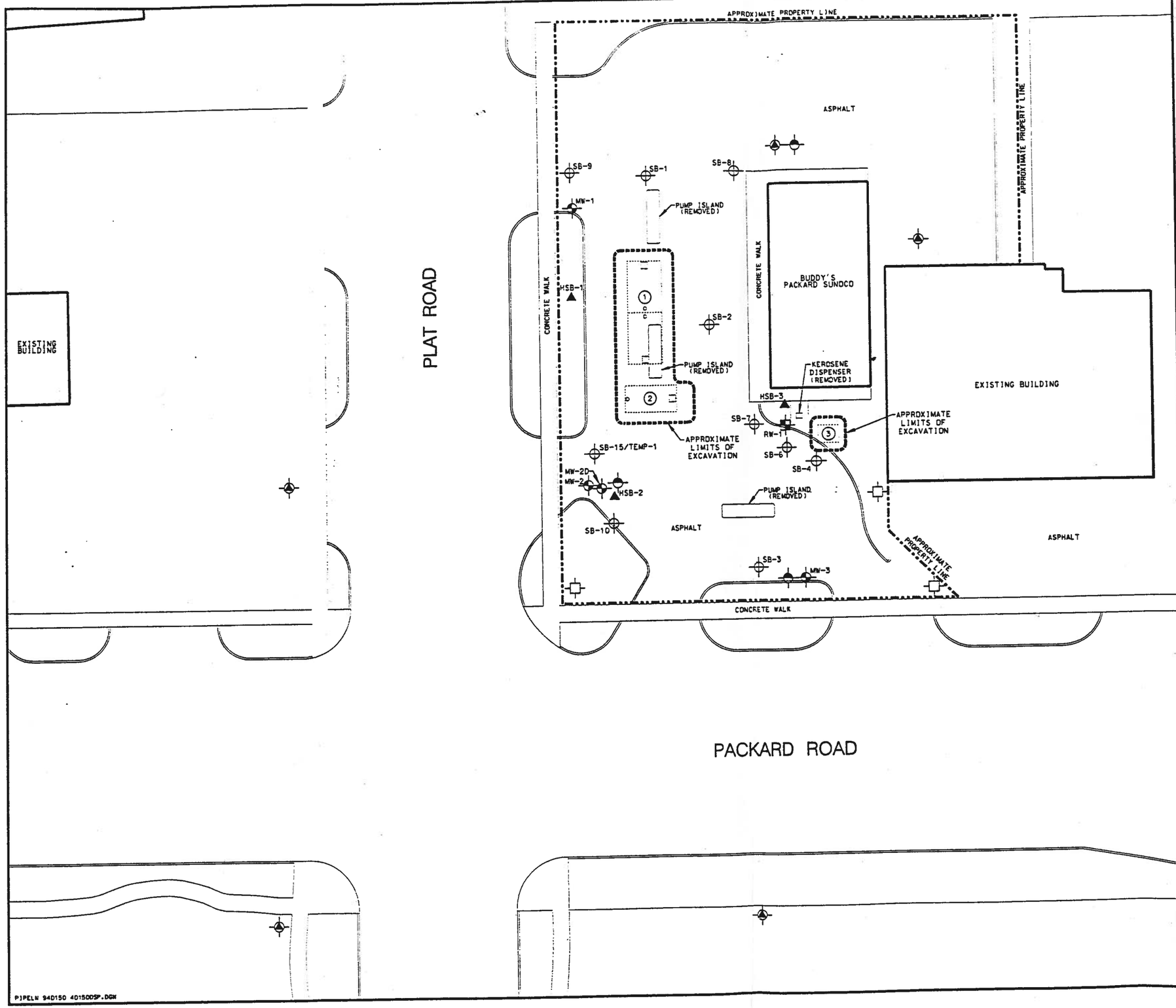
## SITE PLAN

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH:(616) 342-1100 FAX:(616) 342-4945

PROJECT NO: 940150

FIGURE NO: 2

PIPELN 940150 40150CSP.DGN




## TANK TABLE

| TANK No. | CAPACITY | CONTENTS | STATUS |
|---|---|---|---|
| 1 | 20,000 GAL.* | GASOLINE | REMOVED |
| 2 | 6,000 GAL. | GASOLINE | REMOVED |
| 3 | 1,000 GAL. | KEROSENE | REMOVED |

*TANK No. 1 IS A COMPARTMENTED TANK

NOTE: ALL TANK LOCATIONS ARE APPROXIMATE

## LEGEND

- EXISTING HAND AUGER BORING LOCATION
- EXISTING SOIL BORING LOCATION
- EXISTING MONITORING WELL LOCATION
- EXISTING RECOVERY WELL LOCATION
- PROPOSED SHALLOW MONITORING WELL LOCATION
- PROPOSED INTERMEDIATE MONITORING WELL LOCATION
- PROPOSED SOIL BORING LOCATION

N W E S

SCALE 1" = 30'

0 5 10 20 30 60

# BUDDY'S PACKARD SUNOCO

3005 PACKARD
ANN ARBOR, MICHIGAN 48104

## PROPOSED SOIL BORING AND MONITORING WELL LOCATIONS

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49001
PH: (616) 342-1100 FAX: (616) 342-4945

PROJECT NO: 940150

FIGURE NO: 3

PJPELN 940150 401500SP.DGN

10/147 9

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION

DEQ

# LEAKING UNDERGROUND STORAGE TANK
# FINAL ASSESSMENT REPORT

**INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY.** The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit a report within the stated time period may result in Administrative Penalties as provided for in Part 213, Section 21321 of Act 451, P. A. 1994 as amended.

| | |
|---|---|
| FACILITY NAME: Buddy's Packard Sunoco #28 | FACILITY ID NUMBER: 0-002107 |
| ADDRESS: 3005 Packard & Plat, Ann Arbor, MI<br>COUNTY: Washtenaw | MERA SITE ID NUMBER: Unknown |
| DATE(S) RELEASE DISCOVERED: 8/31/94 - Suspected<br>9/29/94 - Confirmed | CONFIRMED RELEASE NUMBER(s): Unknown |
| O/O NAME: Pipeline Oil Sales, Inc. | MUSTFA CLAIM NUMBER: Not Applicable |
| O/O ADDRESS: 744 E. South Street, Jackson, MI | |
| CONTACT PERSON: Jeffery Hanson | PHONE NUMBER: (517) 782-0467 |

**ANSWER ALL QUESTIONS (DO NOT LEAVE BLANKS):**

1. Has the UST been emptied? X Yes ___ No (If no, explain why):
2. Free product present: a. Currently? ___ YES X NO If YES, total gallons recovered since last report: NA
   b. Previously? X YES ___ NO If YES, total gallons recovered to date: 0.125 gallons
3. Have vapors been identified in any confined spaces (basement, sewers)? ___ YES X NO
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: None
5. *Estimated distance and direction from point of release to nearest:*

   *a. Private well: 1 Mile to NE* *b. Municipal well: > 1 Mile* *c. Surface water/wetland: Swift Drain located 1100 feet to the southeast*
6. Since last report: a. cubic yards of soil remediated: 870 b. gallons of groundwater remediated: 0
7. Totals to date: a. cubic yards of soil remediated: 870 b. gallons of groundwater remediated: 0
8. Michigan RBCA Site Classification (1-4): 4

**CERTIFICATION OF REPORT COMPLETION**

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate and complete. I certify that it was submitted to the USTD on August 28, 1997.
(date submitted-REQUIRED)

* LNSastry 8/28/97

CP Original Signature - Required — Date

James Alfonsi
PRINT QC Project Manager's Name

L. N. Sastry, CPG
PRINT CP's Name

Fluor Daniel GTI, Inc.
Consultant

23937 Research Drive, Farmington Hills, Michigan 48335
Address

810-473-0720
Phone Number

810-473-0892
Fax Number

* **I am relying, in part, upon information provided by Envirologic Technologies, Inc., the accuracy of which I cannot independently verify.**

AUG 1997
RECEIVED
DEQ-JACKSON

## LIST OF ATTACHMENTS

(Include as Required and Check Box if Attached)
Attachments 1, 2, 6-12, 16-18, and 22-28 are to be submitted if applicable.
Attachments 3-5, 13-15, and 19-21 are found in the back of this document and should be completed and submitted when necessary.

| ATTACHMENT NUMBER | DESCRIPTION |
|---|---|
| 4 | Laboratory Results Table for Soils |
| 5 | Tier I RBSL / Tier II or Tier III SSTL Comparison Table for Soils |
| 6 | Site Map Showing Soil Sampling Locations, Maximum Contaminant Concentrations, and Sampling Depths |
| 8 | Cross Sections Showing the Vertical and Horizontal Distribution of Soil Contaminants |
| 9 | Soil Boring Logs |
| 11 | Groundwater Gradient Map |
| 14 | Laboratory Results Table for Groundwater |
| 15 | Tier I RBSL / Tier II or Tier III SSTL Comparison Table for Groundwater |
| 16 | Site Map Showing Groundwater Sampling Locations, Maximum Contaminant Concentrations, and Location of Contaminant Plume |

## 1.0 REPORTING AND RESPONSE TO RELEASES INVOLVING FREE PRODUCT

**A.** Has free product been encountered subsequent to submission of the Initial Assessment Report?
__ Yes _X_ **No**

**If "No", skip to Section 2.0. If "Yes", continue with question "B" below.**

## 2.0 DELINEATION OF THE EXTENT OF CONTAMINATION

**A.** Were additional site assessment activities conducted subsequent to the submission of the Initial Assessment Report? _X_ **Yes** __ No

**B.** If "Yes", what environmental media were further investigated?
*(Check all that apply)*:

_X_ **Soil** _X_**Groundwater** _Air _Surface Water

__Sediments __Biota __Other *(Specify):*

**C.** Was the Work Plan implemented as outlined in the Initial Assessment Report? __ Yes _X_ **No**

**D.** If "No", describe the changes made to the sampling and analysis plan in detail and provide justification for why they were made *(attach additional sheets, as needed):*

**NOTE: A Work Plan was not included in the February 8, 1995 Phase I Hydrogeologic Study Report prepared by Envirologic Technologies. However, Fluor Daniel GTI reviewed the Phase I Hydrogeologic Report to determine a plan to provide adequate delineation at the site.**

## 2.1 SITE AND AREA MAPS

*Area and site map(s), drawn to scale, may be used to effectively present a variety of information required to be included in this Final Assessment Report. It may not be possible to include all required information on one map. Multiple maps may be attached, with each highlighting a different type of information. However, use of multiple maps should be minimized. Placement of information on the site map(s) should be done in a clear and legible manner. The area map should show the location of the site boundaries in relation to the nearest major roads.*

*The base site map on which to display information required for the Final Assessment Report should include the following, as appropriate:*

- *Location of each underground storage tank and associated piping in the leaking underground storage tank system (prior to excavation if tanks have been removed)*
- *Location of the release and the component of the underground storage tank system from which the release occurred*
- *Location of any other existing and former underground storage tanks at the site*
- *Approximate location of fill ports, dispensers, and other pertinent system components*
- *Location of nearby buildings, roadways, paved areas, or other structures*
- *Location of nearby surface waters or wetlands*
- *Location and depth of nearby underground sewers and utility lines*
- *Location of all wells within 100 feet of the property boundary*

**Please refer to Attachment #6 & #16.**

## 2.2 SOIL CONDITIONS AND CHARACTERISTICS

**A.** Is soil contamination present? **X Yes** ___ No

**NOTE: If "Yes", complete questions "B" through "H". If "No", skip to Section 2.3.**

**B.** Total volume of soil remediated or disposed to date: **870 cubic yards**

**C.** Describe any soil remediation or disposal activities performed to date:

**Approximately 870 cubic yards of contaminated soil were excavated and disposed during UST replacement activities performed in November 1994.**

**D.** Attach Field Screening Results (Attachment No. 3) and Laboratory Results (Attachment No. 4) tables showing the results of all soil sampling performed to date for the listed parameters. *(NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

**A tabular summary of the soil sample laboratory analytical results is presented in Attachment #4. PID field screening results are depicted in Attachment #9 - Boring Logs.**

E. Provide in the Comparison Table for Soils (included as Attachment No. 5) the maximum contaminant concentrations detected to date in the remaining soils for each listed parameter. *(NOTE: Enter "ND" with the appropriate method detection limit when the parameter was not detected, and enter "NA" when the chemical was not analyzed. In areas where remediation has occurred, do not include sample results for areas where the soil has been subsequently removed or the characteristics of the soil left in place have been altered due to the remediation.)*

**Please refer to Attachment #5 for the Comparison Table for Soils.**

F. Show the maximum concentrations, sample depths, and horizontal extent of soil contamination in relation to the soil sampling locations on a site map. *(Include as Attachment No. 6.)*

**Please refer to Attachment #6 for an Adsorbed BTEX Concentration Map.**

G. Describe the vertical extent and distribution of the soil contaminants using depth-coded site maps (Attachment No. 7), cross sections (Attachment No. 8), and/or boring logs (Attachment No. 9):

**Please refer to Attachment #4 - Soil Laboratory Analytical Data, Attachment #6 - Adsorbed BTEX Concentration Map, Attachment #8 - Cross Sections, and Attachment #9 - Boring Logs.**

H. Was any on-site soil contamination not related to the release discovered during the site characterization activities performed subsequent to the submission of the Initial Assessment Report?
__ Yes **X No**

**If "Yes", answer question "I"; otherwise, skip to Section 2.3.**

## 2.3 GROUNDWATER CONDITIONS AND CHARACTERISTICS

A. Has groundwater been encountered at the site? **X Yes** __ No

B. If "No", provide the total depth investigated and the date of investigation: **Not Applicable**

**If "No", skip to Section 2.4; otherwise, continue with Section 2.3.**

C. Is the groundwater potable? __ Yes **X No**
D. Is the groundwater currently a source of drinking water? __ Yes **X No**
E. Is groundwater being used for a purpose other than potable drinking use? __ Yes **X No**
F. Is more than one groundwater unit present beneath the site? **X Yes** __ No __ Unknown

Hydrogeologic Characteristics (*if appropriate*):
G. Average depth to groundwater (as measured in site well(s)): **Approximately 3 to 7** ft BGS
H. Depth to bottom of water-bearing layer: **Approximately 18** ft BGS
I. Depth to a potable groundwater unit: ***Estimated >120** ft BGS
*Based on area water well logs

J. Attach copies of boring logs (Attachment No. 9) and well construction diagrams (Attachment No. 10) for all monitoring wells.

**Please refer to Attachment #9 for boring logs and well completion data.**

Groundwater Flow Rate and Direction:

K. Predominant soil type in water-bearing stratum (*e.g., sand, silt*):

**The shallow water bearing unit is comprised of interbedded clay and sand lenses. The sand lenses may not be continuous between existing monitoring wells.**

L. Effective porosity of water-bearing stratum: **Estimated at 35%**.

M. Hydraulic conductivity: **Estimated $10^{-5}$ cm/sec**

N. Lateral hydraulic flow gradient (*attach a site map with groundwater flow direction and elevation data as Attachment No. 11 - USGS datum preferred*):

**Flow direction appears to vary across the site. Mounding was observed in the southwest corner of the site, likely due to surface water recharge.**

O. Effective groundwater flow rate: **Not Determined**

P. Identify hydrogeologic conditions that could influence flow direction *(describe here or in Attachment No. 12):*

**The shallow water bearing unit is comprised of interbedded clay and sand lenses. The sand lenses may not be continuous between existing monitoring wells.**

Q. Is there any indication of a vertical flow gradient? __ Yes **_X_ No**

R. If "Yes", describe: **NA**

S. Has the groundwater been affected by the release? **_X_ Yes** __ No

T. Has there been more than one groundwater unit contaminated by the release? ___ Yes **_X_ No**

U. If "Yes", attach additional sheets answering questions "G" through "R" for each groundwater unit.
**NA**

V. Describe any groundwater remediation activities performed: **None to date**

W. Total volume of groundwater remediated to date: **None**

X. Does the known plume currently extend off-site? ___ Yes **_X_ No** ___ Unknown

**Y.** Attach Field Screening Results (Attachment No. 13) and Laboratory Results (Attachment No. 14) tables showing the results of all groundwater sampling performed to date for the listed parameters. *(NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)* **Please refer to Attachment #9- Soil Boring Logs.**

**Z.** Provide in the Comparison Table for Groundwater (Attachment No. 15) the maximum contaminant concentrations detected to date in the on-site or off-site groundwater for each listed parameter. *(NOTE: Enter "ND" with the appropriate method detection limit when the parameter was not detected, and enter "NA" when the chemical was not analyzed. In areas where remediation has occurred, do not include sample results for areas where the groundwater has been subsequently altered due to remediation.)* **Please refer to Attachment #15**.

**AA.** Show the maximum concentrations and the estimated aerial horizontal extent of the contaminated plume in relation to the groundwater sampling locations on the site map and include as Attachment No. 16. **Please refer to Attachment #16 - Dissolved BTEX Map.**

**BB.** Describe the vertical extent and distribution of the groundwater contaminants using depth-coded cross sections (Attachment No. 17) that show screened intervals of the monitoring wells. Cross sections locations should be included on the site:

**Please refer to Attachment #8 - Cross Sections**.

**CC.** Were multiple groundwater sampling events conducted at the site? **_X_ Yes** ___ No

**DD.** If "Yes", include a chronological summary of the results for each sampling location using the data tables provided in Attachment No. 14 and include as Attachment No. 18.

**Please refer to Attachment #14 - Dissolved BTEX Analytical Data**.

## 2.4 CONDITIONS AND CHARACTERISTICS IN OTHER ENVIRONMENTAL MEDIA

**A.** Is contamination present in any environmental media other than soil or groundwater?

___ Yes **_X_ No**

**NOTE: If "Yes", answer questions "B" through "I". If "No", skip to Section 3.0.**

## 3.0 SITE CLASSIFICATION

A. Indicate the current Site Classification Level *(See Attachment No. 10 of the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks"):*

Class 1: Immediate threat to human health, safety, or sensitive environmental receptors
Class 2: Short-term threat to human health, safety, or sensitive environmental receptors
Class 3: Long-term threat to human health, safety, or sensitive environmental receptors
**X Class 4:** No demonstrable long-term threat to human health, safety, or sensitive environmental receptors

**NOTE: Regardless of the classification level, all reports must be submitted within the legislative time frame unless an alternate schedule is approved in writing by the USTD.**

**B.** Date of most recent classification or reclassification: ***September 1, 1997***

**C.** Is this classification a reclassification performed subsequent to the submission of the Initial Assessment Report? _X_ Yes _X_ No

**Classification performed for the first time**

**D.** If "Yes", describe the conditions that have changed significantly since the prior classification to justify the reclassification:

## 4.0 RESULTS OF THE TIER II OR TIER III EVALUATION

### 4.1 CONFIRMATION OF EXPOSURE PATHWAYS AND SCENARIOS

**A.** Have any of the following site characteristics or conditions, transport mechanisms, exposure routes, or potential receptors at the site or the surrounding area been newly identified to be present or changed significantly in character since the submission of the Initial Assessment Report?

**Because the Phase I Hydrogeologic Report was submitted in February 1995, the following exposure evaluation is the initial RBCA classification.**

**B.** If "Yes", check all that are newly identified or significantly changed since the submission of the Initial Assessment Report:

**THIS IS THE INITIAL RBCA CLASSIFICATION. THESE ARE NOT CHANGES TO A PREVIOUS CLASSIFICATION.**

Site Characteristics or Conditions

Neighboring Land Use or Local Zoning Changes
New or Discontinued Uses of Groundwater At or Near the Site
Changes in On-Site Facility Operations
Construction of New Structures or Utilities At or Near the Site

Potential Sources

X Impacted Soils
X Dissolved Groundwater Plume
Free Phase Liquid Plume
Impacted Sediments or Surface Water

Potential Transport Mechanism(s)

Wind Erosion and Atmospheric Dispersion
X Volatilization and Atmospheric Dispersion
X Volatilization and Enclosed-Space Accumulation
X Leaching and Groundwater Transport
Mobile Free-Liquid Migration
X Stormwater/Surface Water Transport
X Utility Corridors
Other *(Specify)*:

Potential Exposure Route(s)

Soil Ingestion
X Direct Contact of Soil with Skin
Inhalation of Airborne Particulates
X Inhalation of Volatiles
X Potable Water Use
X Use of Non-Potable Water
Other *(Specify)*:

Potential Receptor(s)

X Resident
X Commercial Worker III*
X Commercial Worker IV*
Industrial Worker
X Construction Worker
Sensitive Habitat
X Structures
X Utilities
Surface Waters
Water Supply Wells
Other *(Specify)*:

* As defined in Attachment No. 11 to the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks"

**C.** For each item checked above, briefly describe the change and its potential impact on the selection of exposure route(s) and potential receptors for the Tier II or Tier III evaluation relative to the Tier I or Tier II evaluation included in the Initial Assessment Report *(use additional attached sheets, if necessary)*:

**Not Applicable.**

**D.** List the most plausible potential residential exposure pathway(s) for the site:

**Ingestion of impacted groundwater from downgradient receptors. However, no drinking water well exists within one mile from the site.**

E. List the most plausible potential commercial exposure pathway(s) for the site:

**1) Inhalation of vapors from soil and groundwater. 2) Direct contact with soil to repair/construction worker.**

F. List the most plausible potential industrial exposure pathway(s) for the site:

**None identified.**

G. List the most plausible potential sensitive habitat exposure pathway(s) for the site:

**None Identified**.

## 4.2 JUSTIFICATION FOR ALTERNATE ASSUMPTIONS OR MODELING PARAMETER SELECTIONS

A. Has a site-specific Tier II or Tier III evaluation been conducted for this Final Assessment Report?

___ Yes _X_ No

B. If "Yes", identify and justify where alternate assumptions or site-specific information was used in place of the default assumptions as defined in Attachment No. 11 of the "Guidance Document For Risk-Based Corrective Action At Leaking Underground Storage Tanks". *(If a Tier II evaluation was performed and described in the Initial Assessment Report, explicitly indicate where different assumptions or site-specific information were used in this Tier II or Tier III evaluation and why the change was justified.)*

| ASSUMPTION | DEFAULT TIER I OR PRIOR TIER II SELECTION | ALTERNATE SELECTION | JUSTIFICATION OR BASIS FOR SUBSTITUTION *(Attach sheets if needed)* |
|---|---|---|---|
| **Not Applicable** | | | |
| | | | |

C. Include the calculations supporting the development of the relevant Tier I RBSLs and Tier II or Tier III SSTLs as Attachment No. 23. **Not Applicable**

## 4.3 IDENTIFICATION OF TIER I RISK-BASED SCREENING LEVELS OR TIER II / TIER III SITE-SPECIFIC TARGET LEVELS AND COMPARISON TO SITE DATA

**A.** For each contaminated medium, complete a Tier I RBSL / Tier II or Tier III SSTL Comparison Table (Attachment No. 5 for soil, Attachment No. 15 for groundwater and Attachment No. 21 for other media, as appropriate) by:

1. Checking the box associated with the applicable land use scenario;

2. Checking the boxes associated with the contaminants currently present at the site;

3. Entering the current maximum detected on-site or off-site concentration for each selected contaminant, along with the corresponding sample identification number and date of sampling;

4. Entering the lowest applicable RBSL value from the Tier I Look-Up Tables (*refer to Attachment No. 11 of the "Guidance Document For Risk-Based Corrective Action At Leaking Underground Storage Tanks"*) for the specific exposure routes present and environmental medium being considered or a corresponding optional Tier II SSTL. *[NOTE: Include the exposure route code that identifies the basis for each applicable criterion noted. For example, 12 ug/kg (A) for a cleanup goal based on the direct contact with soil exposure route, and 12 ug/kg (B) for a cleanup goal based on the soil leaching to groundwater exposure route*];

5. Comparing the contaminant-specific maximum concentration to the corresponding RBSL or SSTL criterion; and

6. Identifying and recording whether or not there is an exceedence of the RBSL or the SSTL.

**Please refer to Attachment #5 & #15.**

**B.** Tier I RBSL / Tier II or Tier III SSTL Comparison Tables are attached for the following *(Check all that apply):*

| | ENVIRONMENTAL MEDIUM | | |
|---|---|---|---|
| **LAND USE** | **SOIL** | **GROUNDWATER** | **OTHER** *(Specify)* |
| Residential | X | X | |
| Commercial III | | | |
| Commercial IV | | | |
| Industrial | | | |

## 4.4 PROPOSED FOLLOW-UP ACTIVITIES

A. Based on the results of the Tier II or III evaluation, indicate the follow-up activities proposed for the site:

| | |
|---|---|
| ___ Site conditions do not exceed the relevant Tier I RBSLs or the calculated Tier II/ Tier III SSTLs do not rely on institutional controls | Proceed with site closure. No further sections of Final Assessment Report need to be completed. |
| _X_ Site conditions exceed some or all of the relevant Tier I RBSLs or Tier II/Tier III SSTLs | Propose final corrective action to achieve Tier I RBSLs or Tier II/Tier III SSTLs. **Continue with Section 5.0.** |

## 5.0 FEASIBILITY ANALYSIS

A. As appropriate, given the site conditions, complete the following comparison table of the potentially applicable corrective actions that were considered for the facility to reduce the volume, toxicity and/or mobility of the released regulated substances (*both on-site and off-site, as applicable*), noting the principal advantages and disadvantages of each listed alternative. *(Indicate explicitly, where appropriate, the relative estimated net present value cost of each alternative corrective action, its indicated effectiveness and feasibility, and the time needed to implement and complete the alternative. Attach additional sheets, if necessary.)*

| CORRECTIVE ACTION ALTERNATIVES | PRINCIPAL ADVANTAGES | PRINCIPAL DISADVANTAGES |
|---|---|---|
| **1) Restrictive Covenant** | **- No further site work required.** | **- Restricts future property development.** |
| **2) Biodegradation & Resampling** | **- Minimal disturbance to site.** | **- Relies on natural processes.** |

B. Identify and briefly describe the preferred alternative. *(Attach additional sheets, if needed. Document the rationale for selecting this option by discussing how the selected remedial action will:*

- *Be protective of human health and the environment*
- *Comply with applicable or relevant and appropriate requirements*
- *Meet the requirements of the Risk-Based Corrective Action process*
- *Be a permanent solution (to the maximum extent possible)*
- *Be cost-effective)*

**The hydrocarbon source has been eliminated by removing the underground storage tanks from the site, therefore no future releases are anticipated. The current concentrations are below the chosen criteria.**

**Fluor Daniel GTI recommends that a restrictive covenant be pursued for the site. The covenant would restrict future development at the site and would prohibit the construction of enclosed buildings directly above areas of the site which currently exceed volatilization to indoor air criteria.**

**However, resampling activities may be conducted in future. If resampling activities indicate that natural biodegradation has reduced contaminant levels below the applicable criteria (or if the applicable MDEQ criteria becomes available), then a request may be made to revoke the restrictive covenant.**

**C.** Has a pilot study been conducted to demonstrate the performance of any component or subsystem associated with the corrective action? ___ Yes **_X_ No**

**D.** If "Yes", describe the pilot study or testing that was conducted and present the results *(attach additional sheets, if necessary)*: **Not Applicable**

**E.** If a pilot study or testing was not conducted, explain why they were not needed:

**A pilot test is not required to initiate institutional controls.**

## 6.0 CORRECTIVE ACTION PLAN

### 6.1 DESCRIPTION OF THE CORRECTIVE ACTION

**A.** Describe the overall program and the primary components of the selected corrective action to be implemented at the facility (*attach additional sheets, if necessary*):

**Fluor Daniel GTI recommends that a restrictive covenant be pursued for the site. The covenant would restrict future development at the site and would prohibit the construction of enclosed buildings directly above areas of the site which currently exceed volatilization to indoor air criteria.**

**However, resampling activities may be conducted in future. If resampling activities indicate that natural biodegradation has reduced the contaminant levels below the applicable criteria (or if the applicable MDEQ criteria becomes available), then a request may be made to revoke the restrictive covenant.**

**B.** Include a schematic drawing of the remedial system to be employed (Attachment No. 24).

**No mechanical drawings are required for the preferred alternative.**

**C.** Include maps depicting capture zones/zones of influence, system layout, and anticipated system rates (Attachment No. 25).

**Not Applicable**.

**D.** From Attachment No. 12 to the "Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks" (*entitled "Guidance for Parameters, Analytical Methods, Sample Handling, Quality Control, and Cleanup Limits for Petroleum Hydrocarbon Releases"*), specify and justify the indicator parameters to be used (*if applicable*) to evaluate the implementation of the Corrective Action Plan. (For each indicator parameter, identify the corresponding cleanup goal and the basis of the cleanup goal.)

**NOTE - The proposed restrictive covenant will eliminate the exposure pathways. However, the following cleanup goals are provided for reference:**

| INDICATOR PARAMETER / Rationale for Selection | IDENTIFIED CLEANUP GOAL | UNITS (ug/kg or ug/l) | BASIS OF THE CLEANUP GOAL |
|---|---|---|---|
| Benzene | 54 | ug/kg | Hydrocarbon volatilization to indoor air is the most conservative possible pathway for adsorbed concentrations to affect human health. These ASTM criteria may be modified as MDEQ volatilization criteria become available. |
| Toluene | 20,500 | ug/kg | Same as above. |
| Ethylbenzene | 427,000 | ug/kg | Same as above. |
| Xylenes | 280 | ug/kg | Same as above. |

## 6.2 AMBIENT AIR QUALITY MONITORING ACTIVITIES

**A.** Will ambient air quality be monitored during the implementation of the corrective action?

__Yes _X_ No

**B.** If "No", explain why air monitoring is not needed:

**The restrictive covenant will eliminate the potential exposure receptors.**

C. If "Yes", describe the air quality monitoring to be conducted during the corrective action:

| PARAMETERS TO BE MONITORED | ACTION LEVEL (Basis for Action Level) | MONITORING DEVICE TO BE USED | MONITORING FREQUENCY | PROCEDURE TO BE FOLLOWED IF ACTION LEVEL EXCEEDED |
|---|---|---|---|---|
| NA | | | | |

## 6.3 PLANS FOR OPERATION AND MAINTENANCE

A. Does any equipment or system associated with the corrective action need to be operated or maintained in order for the RBSLs or SSTLs to be met? ___ Yes _X_ No

*(NOTE: The USTD may request that operation and maintenance information and procedures for this equipment or systems be developed as identified in Section 21309(2)(b).)*

## 6.4 PLANS FOR PERFORMANCE MONITORING

A. Does meeting the cleanup goals depend on the performance of a treatment system or a system for controlling the further release or migration of contaminants? No

**If "No", skip to Section 6.5.**

## 6.5 SCHEDULE FOR IMPLEMENTATION OF THE CORRECTIVE ACTION

A. Attach the schedule for implementing the corrective action (*Include as Attachment No. 27. Reflect sufficient detail, a breakdown of the overall program into subcomponents, and the identification of key interim milestones (e.g., proposed submittal dates for Public Notice, Notice of Corrective Action, etc.) to demonstrate that the corrective action is implementable and has been adequately planned.)*

B. Date Confirmed Release Report Submitted: September 15, 1994
C. Date Initial Assessment Report Submitted: November 10, 1994
D. Date of Subsequent or Other Releases (*if appropriate*): NA

E. Proposed Corrective Action Start Date: September 1997

F. Dates of Key Interim Milestones (*Specify*): NA

G. Proposed Remedial Activity Completion Date: Not Determined

H. Expected Performance Monitoring Completion Date: Not Required

## 6.6 NOTICES AND RESTRICTIONS

**A.** Will the corrective action plan require the use of institutional controls to restrict land use or resources? **Yes**

**If "No", skip to Section 6.7; otherwise, answer questions "B" through "F" below.**

## 6.7 FINANCIAL ASSURANCE MECHANISM

**A.** Has a financial assurance agreement, as provided for in R29.2161 to R29.2169 of the Michigan Administrative Code, been included for approval by the USTD to assure the effectiveness and integrity of the corrective action? **Yes - Pipeline Oil Sales, Inc. is a self insured company. Further information regarding Pipeline's financial assurance mechanism may be obtained by contacting Pipeline directly.**

B. If "No", provide an explanation: **NA**

**If "Yes", provide the following:**

**C.** Date the financial assurance mechanism was submitted to USTD: _____/_____/_____

**D.** Amount of the financial assurance mechanism: $ _____

**E.** Coverage of the financial assurance mechanism *(check all that apply):*

Monitoring
Operation and Maintenance
Oversight
Other (*Specify*): **Pipeline Oil Sales, Inc. is a self insured company. Further information regarding Pipeline's financial assurance mechanism may be obtained by contacting Pipeline directly.**

## 6.8 PERMITTING AND APPROVAL REQUIREMENTS

**A.** Will the corrective action result in any discharge during its implementation?

___ Yes **X** No

**If "No", no more information is necessary; if "Yes", continue with questions "B" and "C".**

**ATTACHMENT - 4**

FINAL ASSESSMENT REPORT - ATTACHMENT #4

BUDDY'S PACKARD SUNOCO #28
3005 PACKARD & PLAT
ANN ARBOR, MICHIGAN

HISTORICAL BTEX/MTBE CONCENTRATIONS IN SOIL (ug/l)

| Sample Location | Sample Depth | Sample Date | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Lead | Total PNAs | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| SB-1 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 6400 | <330 | |
| SB-2 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 6300 | <330 | |
| SB-3 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 9200 | <330 | |
| SB-3 | 10-12' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5100 | <330 | |
| SB-4 | 4-6' | 11/04/94 | 25 | 620 | 700 | 2900 | <100 | 12100 | 390 | Naphthalene - 390 |
| SB-4 | 9-11' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 3500 | <330 | |
| SB-5 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 4500 | <330 | |
| SB-5 | 9-11' | 11/04/94 | 340 | <10 | <10 | <30 | <100 | 5300 | <330 | |
| SB-8 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5500 | <330 | |
| SB-9 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5700 | <330 | |
| | | | | | | | | | | |
| MW-1 | 4-6' | 01/09/95 | <10 | <10 | <10 | <30 | <100 | 8000 | <330 | |
| SB-10 | 4-6' | 01/09/95 | 160 | 45 | 210 | 231 | <100 | 8000 | 560 | Naphthalene - 560 |
| MW-3 | 4-6' | 01/09/95 | 430 | 110 | 1100 | 6100 | 180 | 12000 | 900 | Naphthalene - 900 |
| | | | | | | | | | | |
| Kerosene East Wall | 6.5' | 11/16/94 | 25 | <10 | 350 | 68 | <100 | 10000 | 660 | Naphthalene - 660 |
| Kerosene North Wall | 5' | 11/16/94 | 15 | 11 | <10 | 27 | <100 | 11000 | <330 | |
| Kerosene West Wall | 6' | 11/16/94 | 190 | 15 | 2400 | 4125 | <100 | 12000 | 710 | Naphthalene - 710 |
| Kerosene South Wall | 6' | 11/16/94 | 1600 | 280 | 5900 | 35600 | <2000 | 9000 | 1300 | Naphthalene - 1300 |
| Kerosene East Floor | 9' | 11/16/94 | 99 | 34 | 350 | 459 | <100 | 8000 | 390 | Naphthalene - 390 |
| Kerosene West Floor | 9' | 11/16/94 | 350 | 41 | 2900 | 2236 | <100 | 12000 | 400 | Naphthalene - 400 |
| | | | | | | | | | | |
| Gasoline South Wall | 8' | 11/18/94 | <10 | 19 | <10 | 75 | <100 | 9000 | <330 | |
| Gasoline North Wall | 6' | 11/18/94 | <10 | 28 | <10 | 39 | 160 | 8000 | <330 | |
| Gasoline East Wall (North) | 7' | 11/18/94 | 420 | 9000 | 1300 | 3190 | <100 | 8000 | 390 | Naphthalene - 390 |
| Gasoline East Wall (South) | 7' | 11/18/94 | <10 | 16 | <10 | 25 | <100 | 11000 | <330 | |
| Gasoline West Wall (North) | 7' | 11/18/94 | 780 | 200 | 2100 | 7000 | <100 | 8000 | 550 | Naphthalene - 550 |
| Gasoline West Wall (South) | 7' | 11/18/94 | 580 | <10 | 2700 | 18600 | <500 | 8000 | 430 | Naphthalene - 430 |
| | | | | | | | | | | |
| MW-4 | 10' - 12' | 05/07/97 | NA | NA | NA | NA | NA | NA | <330 | |
| MW-8 | 7' - 9' | 05/07/97 | 200 | 42 | 66 | 150 | 210 | NA | <330 | |
| | | | | | | | | | | |

NA - Not Analyzed

**ATTACHMENT - 5**

FINAL ASSESSMENT REPORT-ATTACHMENT NO. 5
TIER I RBLS/TIER II OR TIER III SSTL COMPARISON TABLE FOR SOILS
FACILITY NAME : Buddy's Packard Sunoco, 3005 Packard, Ann Arbor, MI
FACILITY ID NO. : 0-002107

X **Residential** Commercial Commercial IV Industrial

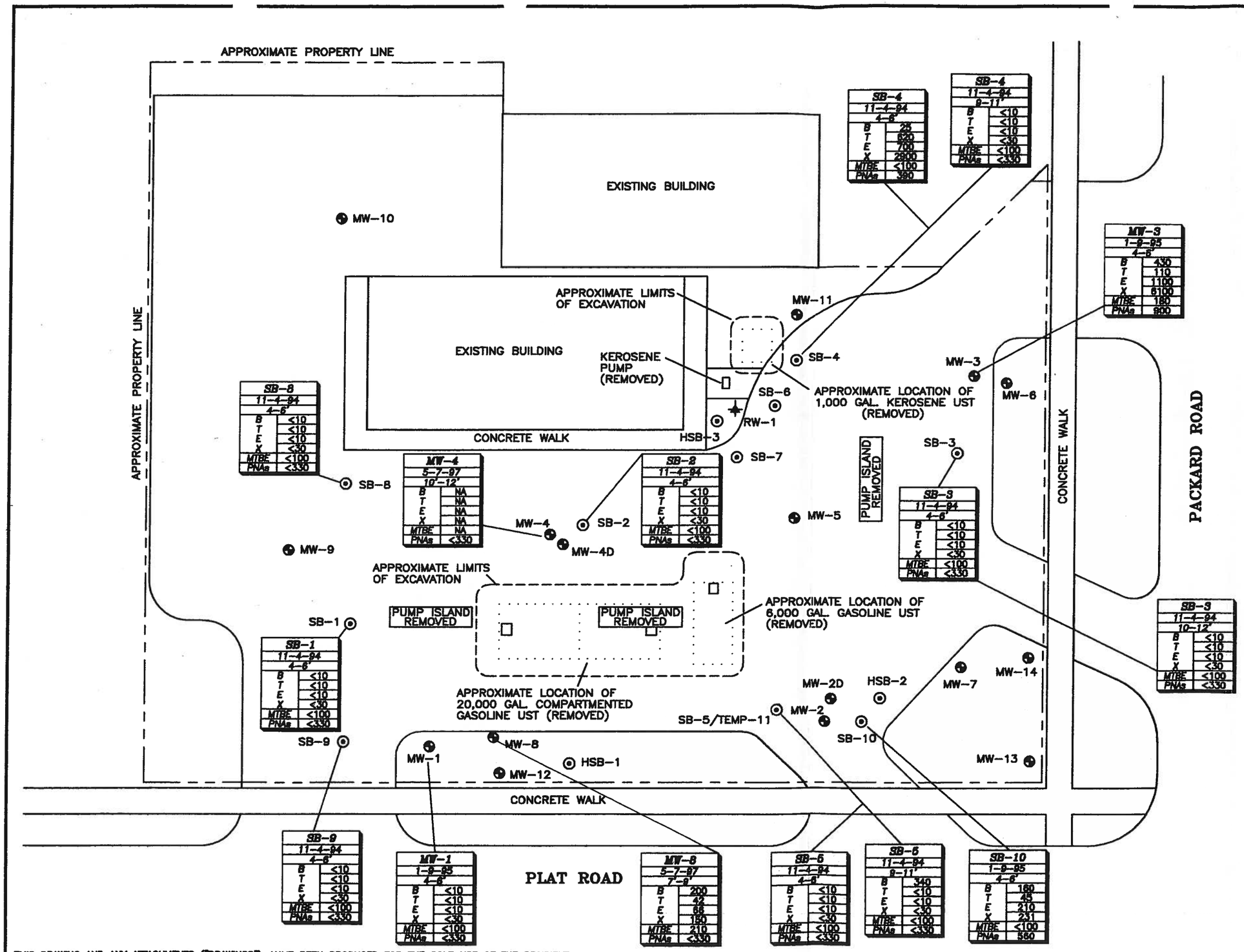
Exposure Codes

| A. Direct Contact | | | B. Soil Leaching to Potable Ground | | | C. Volatilization Into Indoor Air | |
|---|---|---|---|---|---|---|---|
| **Contaminant** | **Sample ID with Maximum Detected Concentration** | **Corresponding Sample Date** | **Maximum Detected Concentration (ug/kg)** | **Applicable Criterion with Exposure Codes (ug/kg)** | | **Criterion Exceeded? (Yes or No)** | |
| | | | | **Tier I RBSL** | **Tier II/III SSTL** | **Tier I RBSL** | **Tier II/III SSTL** |
| **VOLATILES** | | | | | | | |
| Benzene | Kerosene South Wall | 11/16/94 | 1,600 | 54 (C) | | YES | |
| Toluene | Gasoline East Wall (North) | 06/13/95 | 9,000 | 20,500 (C) | | NO | |
| Ethylbenzene | Kerosene South Wall | 11/16/94 | 5,900 | 380,000 (A) | | NO | |
| Total Xylenes | Kerosene South Wall | 11/16/94 | 35,600 | 400,000 (A) | | NO | |
| MTBE | MW-8 7 -9' | 05/07/97 | 210 | 3,600,000 (A) | | NO | |
| **POLYNUCLEAR AROMATICS (PNAs)** | | | | | | | |
| Acenaphthene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Acenaphthylene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Anthracene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Benzo(a)anthracene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Benzo(a)pyrene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Benzo(b)fluoranthene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Benzo(g,h,i)perylene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Benzo(k)fluoranthene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Chrysene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Dibenzo(a,h)anthracene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Fluoranthene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Fluorene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Indeno(1,2,3- cd)pyrene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Naphthalene | Kerosene South Wall | 11/16/94 | 1300 | 40,700 (C) | | NO | |
| Phenanthrene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| Pyrene | Kerosene South Wall | 11/16/94 | <330 | | | | |
| | | | | | | | |

FINAL ASSESSMENT REPORT-ATTACHMENT NO. 5
TIER I RBLS/TIER II OR TIER III SSTL COMPARISON TABLE FOR SOILS
FACILITY NAME : Buddy's Packard Sunoco, 3005 Packard, Ann Arbor, MI
FACILITY ID NO. : 0-002107

| Contaminant | Sample ID with Maximum Detected Concentration | Corresponding Sample Date | Maximum Detected Concentration (ug/kg) | Applicable Criterion with Exposure Codes (ug/kg) | | Criterion Exceeded? (Yes or No) | |
|---|---|---|---|---|---|---|---|
| | | | | Tier I RBSL | Tier II/III SSTL | Tier I RBSL | Tier II/III SSTL |
| **METALS** | | | | | | | |
| Cadmium | | | | | | | |
| Chromium III | | | | | | | |
| Chromium VI | | | | | | | |
| Total Lead | SB-4 4-6' | 11/04/94 | 12,100 | 400,000 (A) | | NO | |
| **PCBs** | | | | | | | |
| Aroclor 1016 | | | | | | | |
| Aroclor 1221 | | | | | | | |
| Aroclor 1232 | | | | | | | |
| Aroclor 1242 | | | | | | | |
| Aroclor 1248 | | | | | | | |
| Aroclor 1254 | | | | | | | |
| Aroclor 1280 | | | | | | | |
| **HALOGENATED HYDROCARBONS** | | | | | | | |
| Carbon Tetrachloride | | | | | | | |
| 1,1-Dichloroethane | | | | | | | |
| 1,2-Dichloroethane | | | | | | | |
| 1,1-Dichloroethylene | | | | | | | |
| cis-1,2-Dichloroethylene | | | | | | | |
| trans-1,2-Dichloroethylene | | | | | | | |
| Tetrachloroethylene | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | |
| **OTHER*** | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**ATTACHMENT - 6**




## LEGEND

- MONITORING WELL
- SOIL BORING
- FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

| SB-1 | |
|---|---|
| 11-04-94 | Well Identification |
| 4-6' | Sample Date |
| | Sample Depth |
| B <10 | Benzene |
| T <10 | Toluene |
| E <10 | Ethylbenzene |
| X <30 | Xylenes |
| MTBE <100 | Methyl Tert-Butyl Ether |
| PNAs <330 | Methyl Tert-Butyl Ether |

All Concentrations in ug/L (ppb)

SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(810) 473-0720

| REV. NO.: | DRAWING DATE: 5/16/97 | ACAD FILE: BUD-ABMP |
|---|---|---|

# ABSORBED BTEX/MTBE/PNA'S MAP

| CLIENT: BUDDY'S PACKARD SUNOCO | PM: JMA |
|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | PE: |

| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: |
|---|---|---|---|

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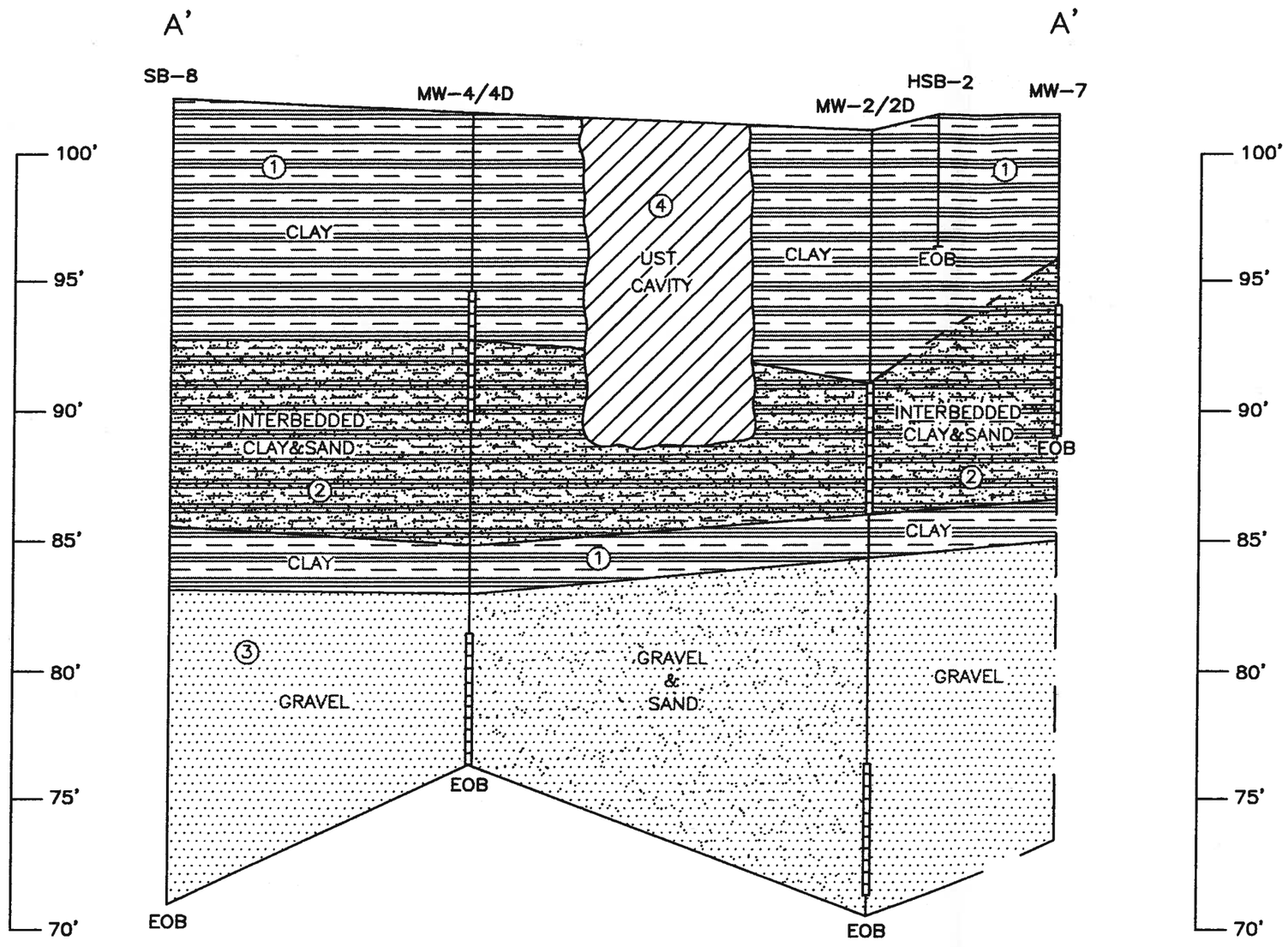
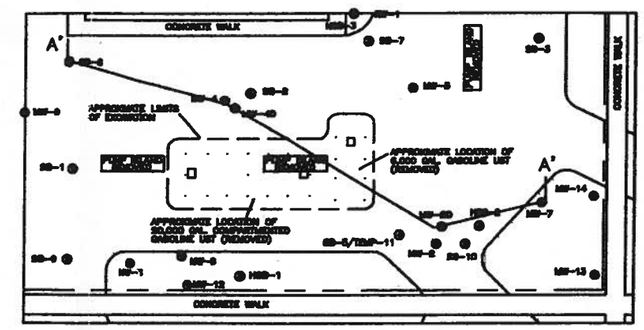



## LEGEND

- WELL SCREEN
- ① – CLAY
- ② – INTERBEDDED CLAY & SAND
- ③ – GRAVEL & SAND
- ④ – UST CAVITY, BACKFILL

NOTE: HORIZONTAL SCALE 1"= 20'
VERTICAL SCALE 1"= 5'




0 20 40
SCALE FEET

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 8/12/97 | ACAD FILE: BUDA-A |
|---|---|---|

# CROSS SECTION A-A'

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 Packard Ann Arbor, Michigan | | | PE: |
| DESIGNED: | DETAILED: TK | PROJECT NO.: 01001-1247 | FIGURE: |

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2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-1



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 11:50 AM

GEOLOGIST: SWB

COMPLETION DATE: 1/9/94 2:15 PM

| OVA READINGS | ELEVATION IN FEET ASSUMED | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | DESCRIPTION |
|---|---|---|---|---|---|
| | 100.61 GROUND | 0 | | | Grass and Topsoil |
| | 100.00 | | | | FILL |
| | 96.6 | | | | CLAY<br>Brown, organic matter, hard, dry. |
| 2.0 | 95.00 | 5 | 6<br>10<br>11<br>14 | | CLAY<br>Brown, fractured, hard, dry. |
| | 93.18 | | | | |
| | 92.6 | | | | |
| 3.0 | 90.6 | 10 | 7<br>10<br>14<br>12 | | CLAY<br>Brown, fractured, hard, dry.<br>SAND<br>Brown, fine to medium, moist.<br>CLAY<br>Gray, plastic, trace gravel, damp. |
| 10 | 90.00 | | 4<br>3<br>6<br>7 | | SAND<br>Gray, fine to medium, wet.<br>CLAY<br>Gray, plastic, trace gravel, damp. |
| | 85.6 | 15 | | | Total depth = 15.5 feet |
| | 85.00 | | | | |
| | 80.00 | 20 | | | |

EXPANDABLE LOCKING CAP

Bentonite

2" PVC

SAND PACK

2" PVC SCREEN #10 SLOT

GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING

SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL

N.D. NOT DETECTED BY Hnu OR OVA

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KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

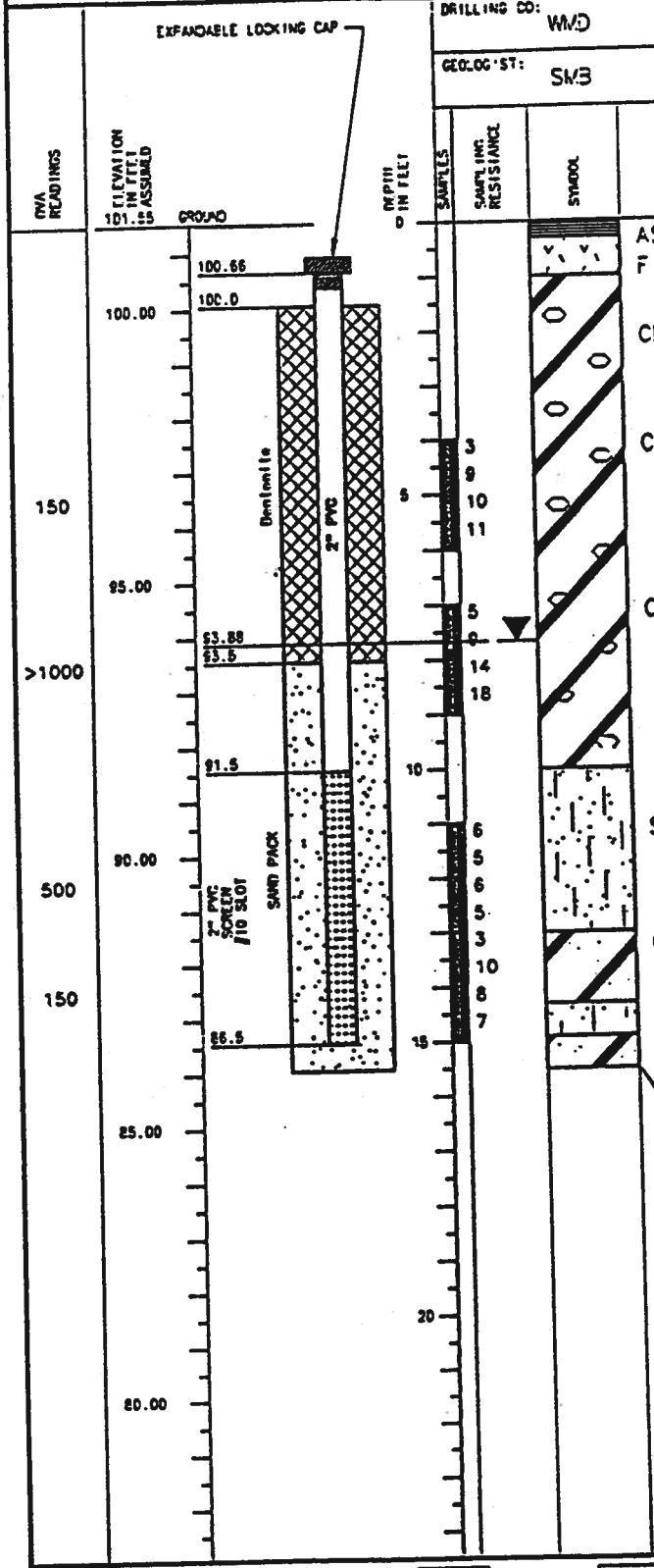
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 2:25 PM

GEOLOGIST: SMB

COMPLETION DATE: 1/9/95 5:30 PM




GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING

SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL

N.D. NOT DETECTED BY Hnu OR OVA

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2D

SHEET 1 of 1

CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/10/95 11:00 AM

GEOLOGIST: SMB

COMPLETION DATE: 1/10/95 2:15 PM

| OVA READINGS | ELEVATION IN FEET ASSUMED | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | DESCRIPTION |
|---|---|---|---|---|---|
| | 101.61 GROUND | 0 | | | ASPHALT |
| | 100.81 | | | | FILL |
| | 100.1 | | | | |
| | 100.00 | | | | |
| 150 | | 5 | 3 9 10 11 | | CLAY Brown, blue mottled, organic matter, dry. |
| | 95.00 | | | | |
| 150 | | | 5 9 14 18 | | CLAY Brown, trace gravel, dry. |
| | | 10 | | | |
| 500 | 90.00 | | 6 5 6 5 | | SAND Grey, fine, with silt, wet. |
| 150 | | | 3 10 8 7 | | CLAY Grey, plastic, some sand, moist. |
| | | 15 | | | SAND Grey, fine, with silt, wet. |
| | | | | | CLAY Grey, plastic, some sand, moist. |
| | 85.00 | | | | |
| | 84.18 | | | | ▼ |
| 45 | | 20 | 4 6 6 6 | | GRAVEL Grey, fine, with medium to coarse grained sand, trace silt, wet. |
| | 80.00 | | | | |
| | 78.6 | | | | |
| 10 | 76.6 | 25 | 4 7 8 4 | | |
| | 75.00 | | | | GRAVEL Grey, fine, with medium to coarse grained sand, trace silt, wet. |
| 30 | 71.6 | 30 | 9 10 12 13 | | Total depth = 31.0 feet |
| | 70.00 | | | | |

EXPANDABLE LOCKING CAP

BENTONITE SLURRY

2" PVC

2" PVC SCREEN #10 SLOT

SAND PACK

GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SAND | CLAY | TILL | ROCK | TOPSOIL

▽ SATURATION LEVEL AT TIME OF DRILLING

▼ STATIC WATER LEVEL

N.D. NOT DETECTED BY Hnu OR OVA

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-3



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

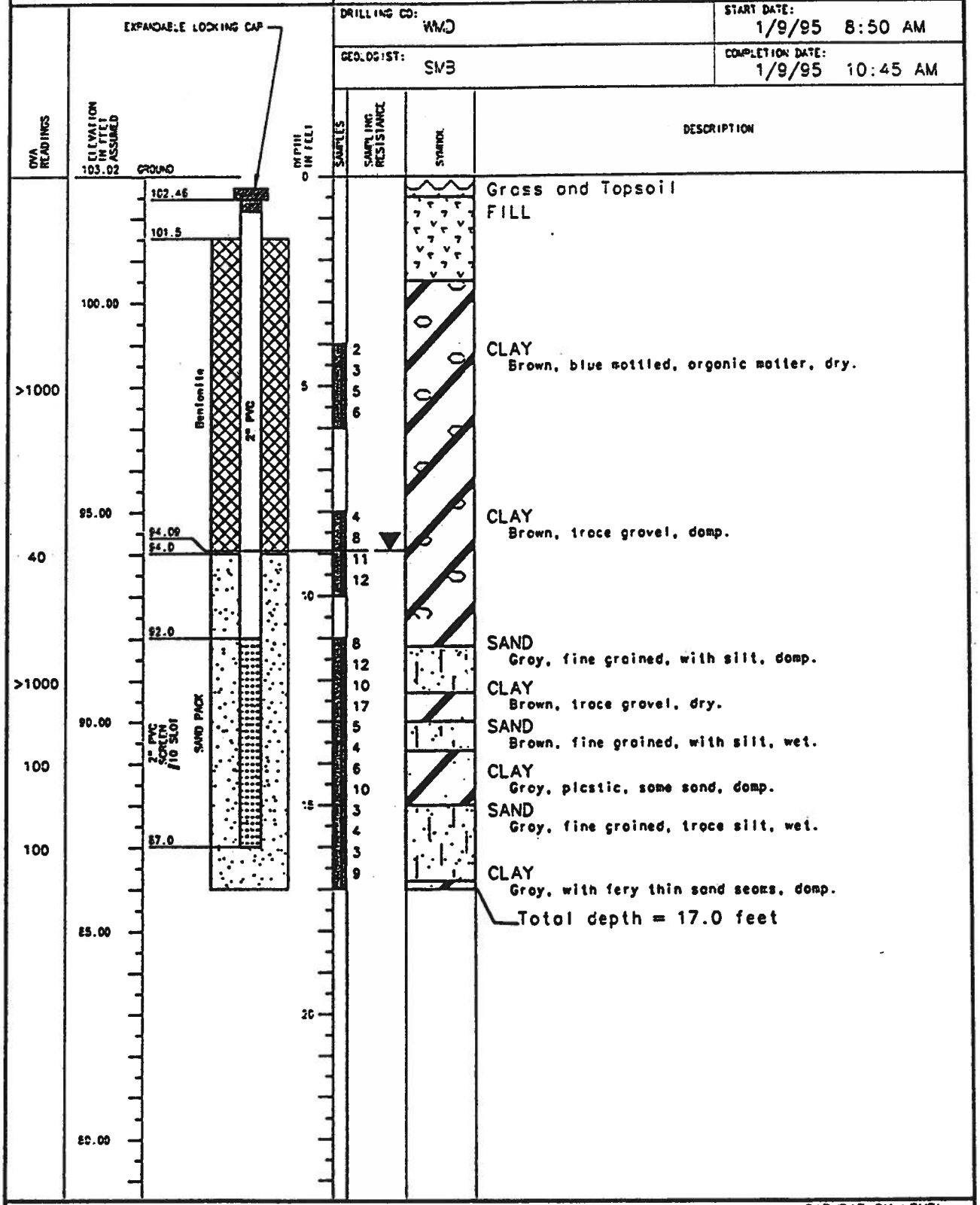
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 8:50 AM

GEOLOGIST: SMB

COMPLETION DATE: 1/9/95 10:45 AM




GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING

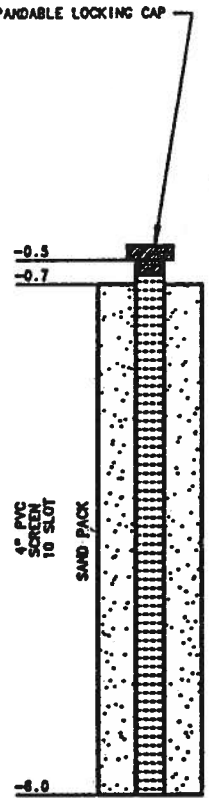
SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL

N.D. NOT DETECTED BY Hnu OR OVA

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF RW-1

| | |
|---|---|
| CLIENT: | PIPELINE - BUDDY'S PACKARD SUNOCO 940150 |
| LOCATION: | ANN ARBOR, MICHIGAN |
| DRILLING CO: | Keith Fransted Constr. |
| START DATE: | 11/18/94 |
| GEOLOGIST: | DHN |
| COMPLETION DATE: | 11/18/94 |




| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT 3" |
| | | | | | FILL<br>Sand and gravel, damp. |
| | | | ▽ | | |
| | | | | | CLAY<br>Brown, mottled, low plasticity, some sand and gravel, organic matter, wet at 3'. Product observed. |
| | 5 | | | | CLAY<br>Dark brown, medium plasticity, some sand, moist |
| | | | | | Total depth = 6.0 feet |
| | 10 | | | | |

NOTE:
Recovery well RW-1 was installed by placing the casing in an open excavation. Soil was then backfilled around the casing.

GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING
SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL
N.D. NOT DETECTED BY Hnu OR OVA

# Drilling Log

FLUOR DANIEL GTI

## Monitoring Well MW-4 & MW-4D

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packard, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 26 ft. Diameter 6.25 in.
Top of Casing _____ Water Level Initial 9.3 ft. Static _____
Screen: Dia 2 in. Length 5/5 ft. Type/Size slotted/0.020 in.
Casing: Dia 2 in. Length 12/25 ft. Type SC40PVC
Fill Material #5 Filter Sand Rig/Core Split Spoon
Drill Co. ESR DRILLING Method Mobile B-59
Driller Dan Meihls Log By Chris Salvador Date 5/8/97 Permit # _____
Checked By Jim Alfonsi License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*Black Column = Lithology determined from hand auger and soil cuttings. X = Sample sent to laboratory for analytical analysis.*

| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Blow Count/ % Recovery | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|---|
| -2 | | | | | | | |
| 0 | | | | | | Asp | Asphalt surface. |
| | | | | | | Tps | Brown, organic top soil. |
| 2 | | | | | | SC | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 4 | | | | | | | |
| | | 1.7 | SS1 | 7 15 22 31 | | CL | Brown with gray mottling, damp, stiff, slightly plastic, CLAY, SOME SILT. |
| 6 | | | | | | | |
| | | 2.2 | SS2 | 11 14 21 24 | | | |
| 8 | | | | | | | |
| | | 2.4 | SS3 | 4 8 12 16 | | SW | Brown, saturated, loose, MEDIUM AND FINE SAND. |
| 10 | | | | | | CL | Brown, damp, stiff, slightly plastic, CLAY, SOME SILT. |
| | | | | | | SW | Brown, saturated, loose, MEDIUM AND FINE SAND. |
| | | | | | | CL | Gray, damp, moderately stiff, CLAY, SOME SILT. |
| 12 | | 1.7 | SS4 | 8 7 11 12 | | SW | Gray, saturated, loose, FINE AND MEDIUM SAND. |
| 14 | | | | | | | |
| 16 | | | | | | | |
| | | 1.7 | SS5 | 8 21 14 9 | | SW | Gray, very moist, moderately stiff, plastic, CLAY, TRACE SILT. |
| 18 | | | | | | CL | |
| | | | | | | SP | Gray, saturated, loose, MEDIUM AND COARSE SAND, SOME FINE GRAVEL. |
| 20 | | | | | | | |
| | | 2.0 | SS6 | 3 5 7 10 | | SW | As above, no gravel. |
| 22 | | | | | | | |
| 24 | | | | | | | |
| 26 | | | | | | | End of Boring = 26 feet |

# Drilling Log

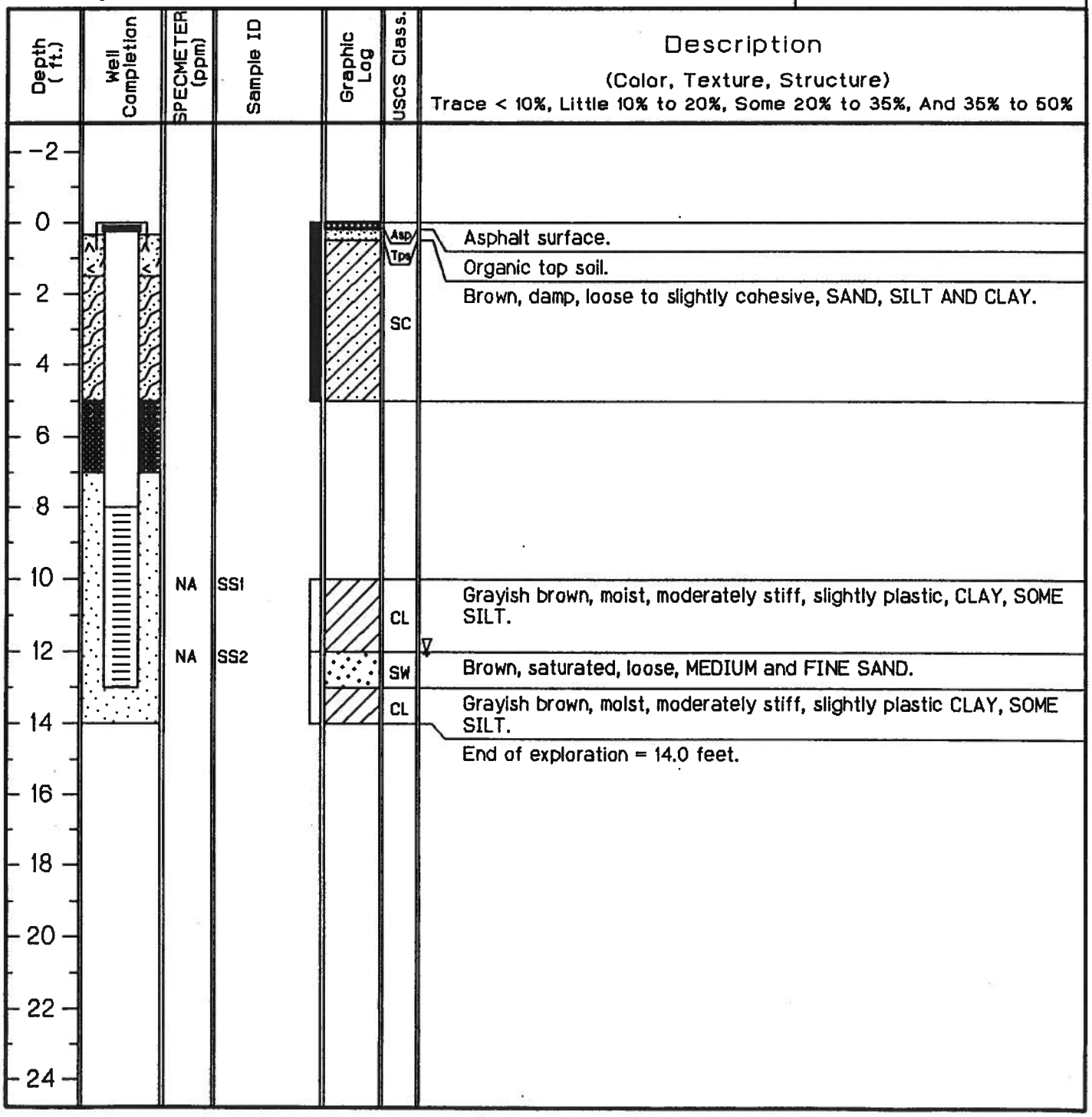
## Monitoring Well **MW-5**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *14.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *12.0 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *8.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

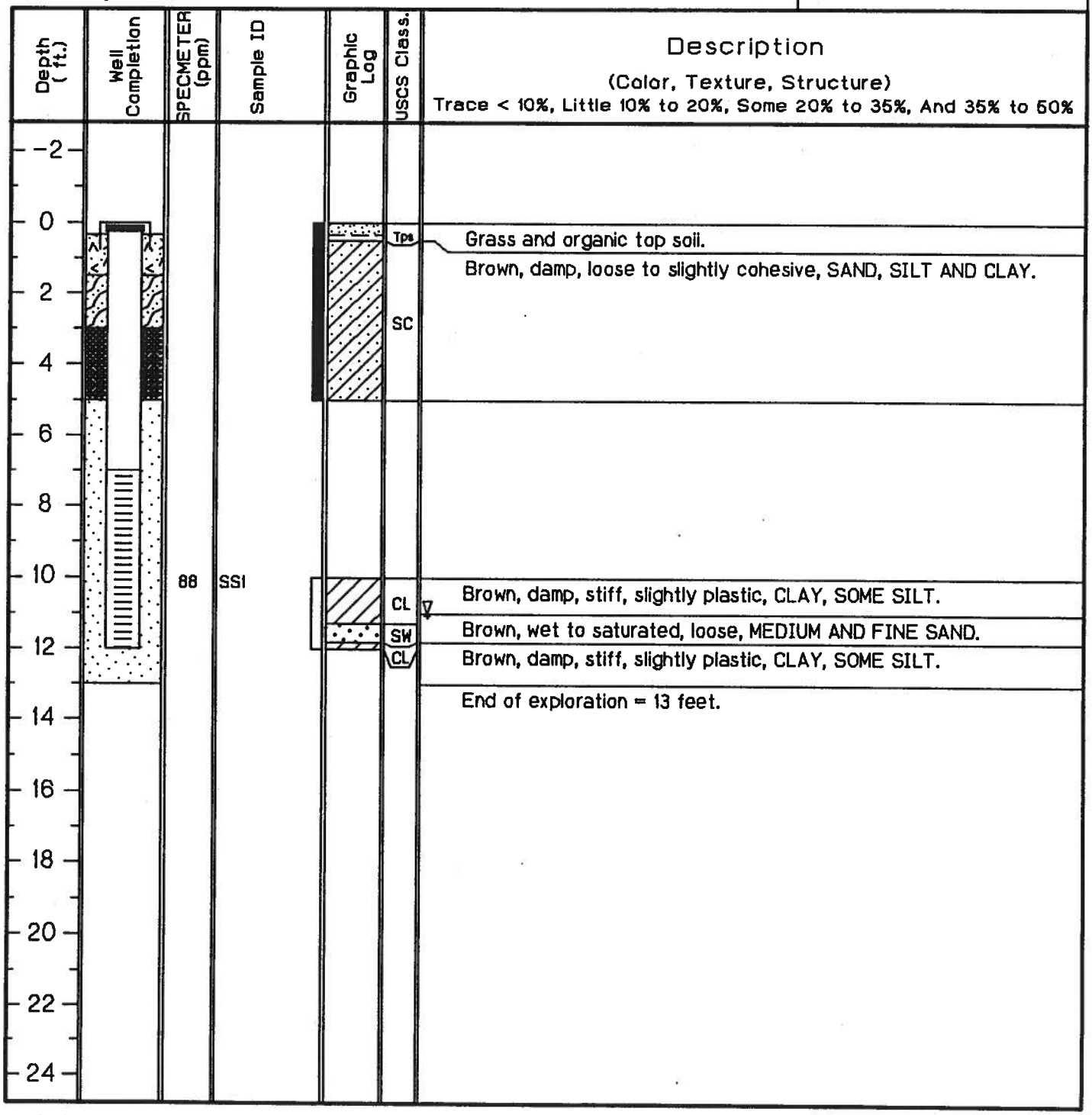
## Monitoring Well **MW-6**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packerd, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *11.0 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *7.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

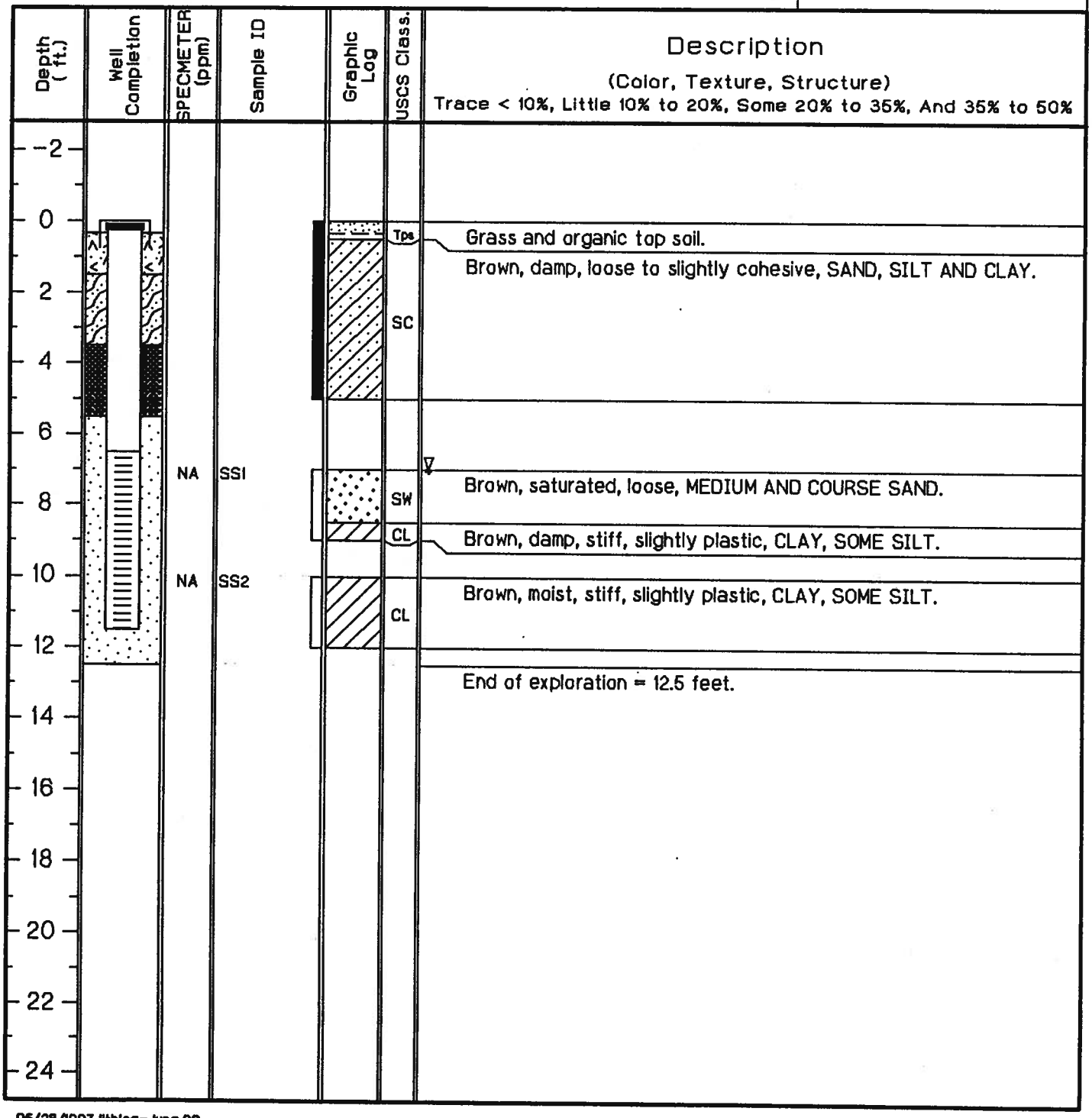
## Monitoring Well **MW-7**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *12.5 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *7.0 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *6.5 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

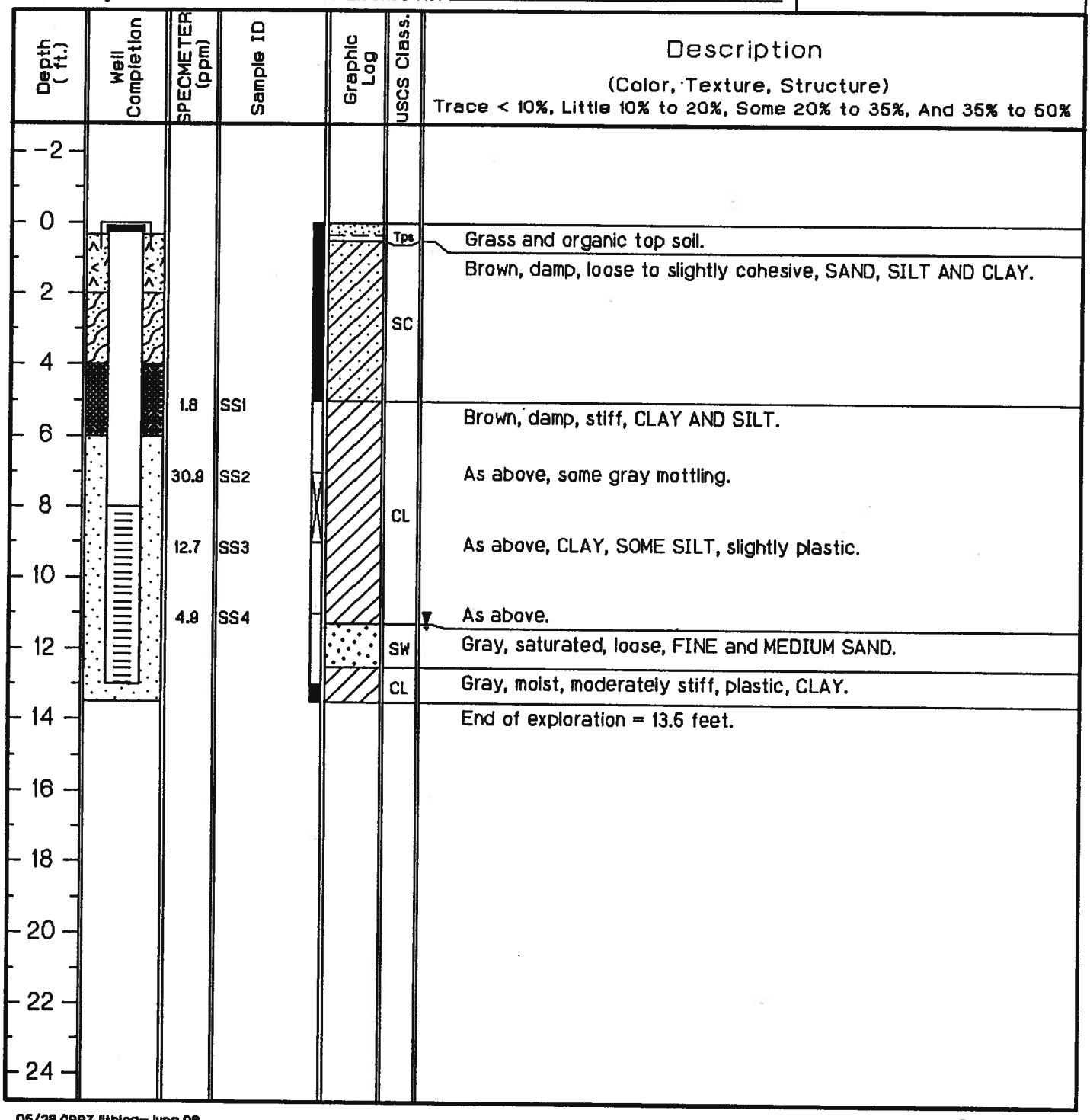
## Monitoring Well **MW-8**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.5 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial _____ Static *11.3 ft.*
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *8.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/7/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

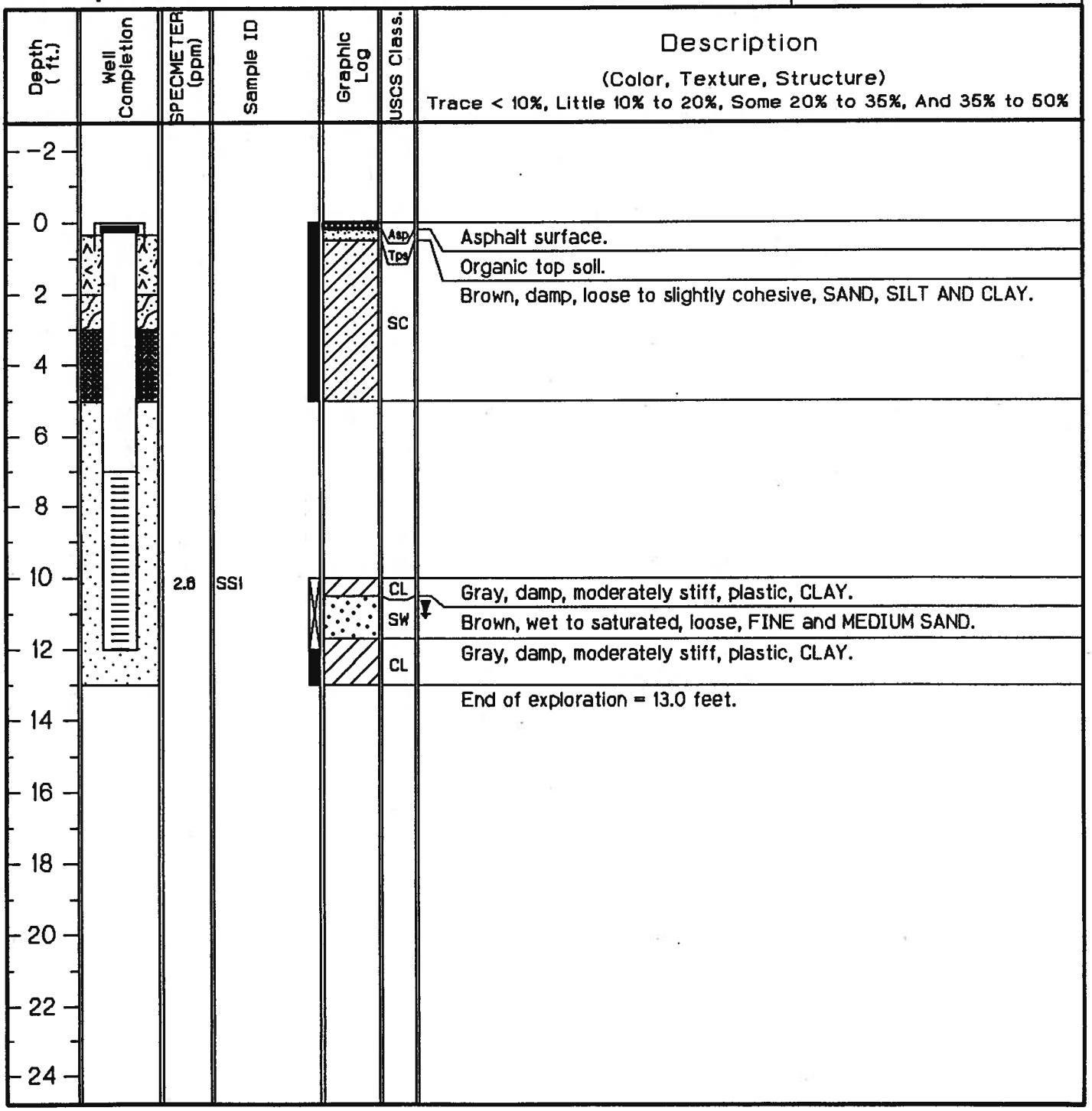
Monitoring Well **MW-9**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial _____ Static *11.0 ft.*
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *7.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/7/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

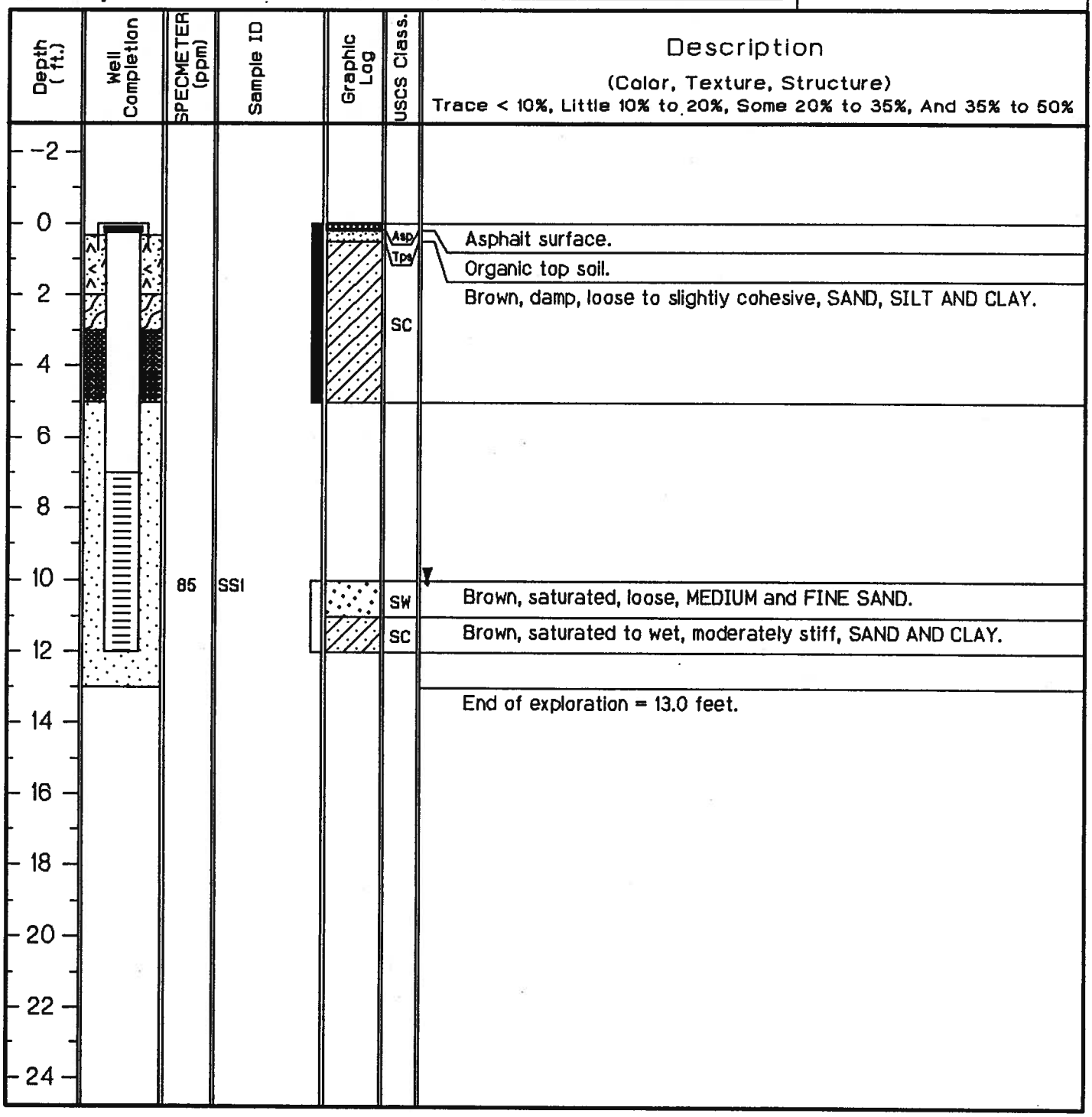
## Monitoring Well **MW-10**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial _____ Static *10.0 ft.*
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *7.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/7/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

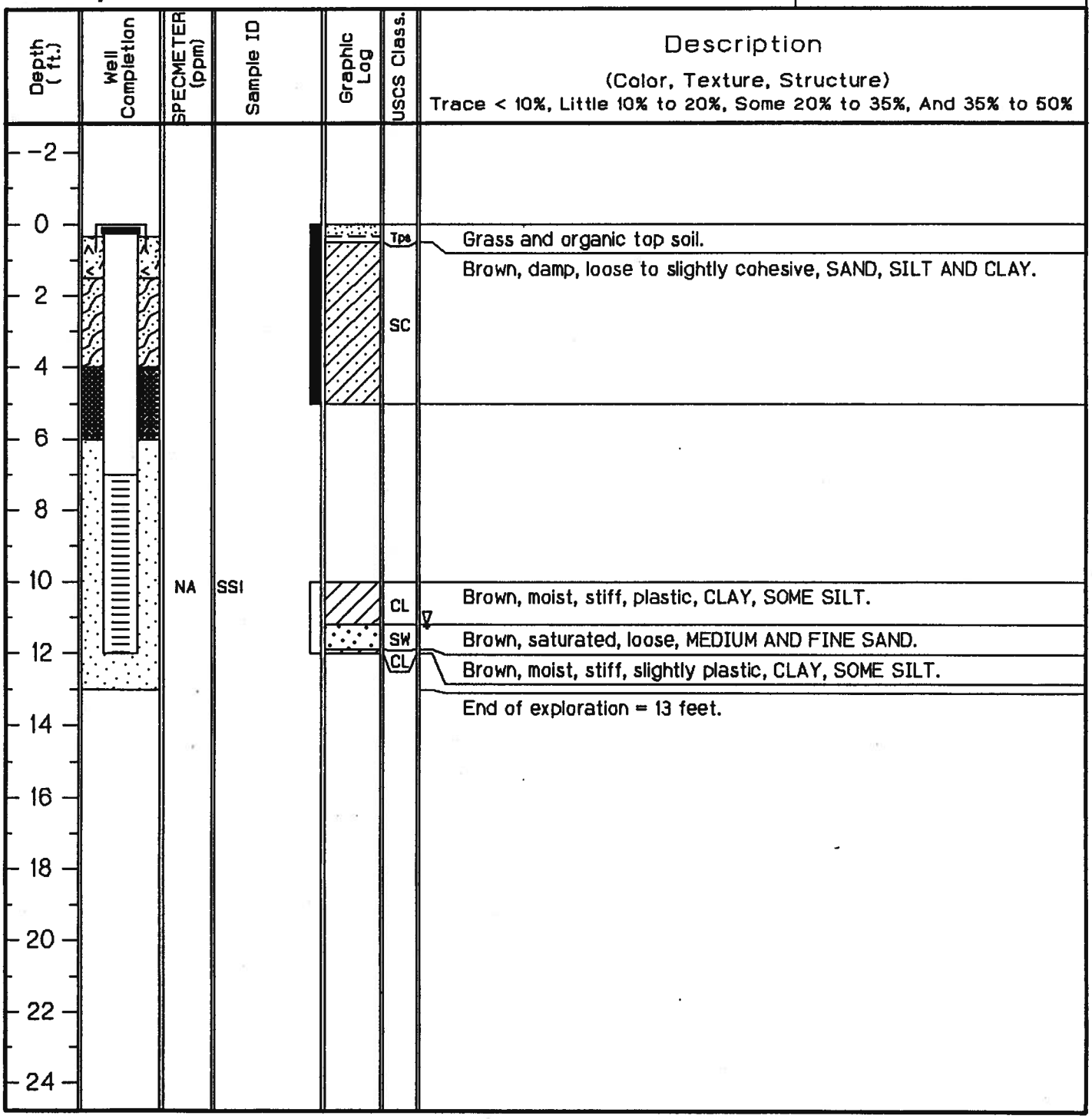
Monitoring Well **MW-11**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *11.2 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *7.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

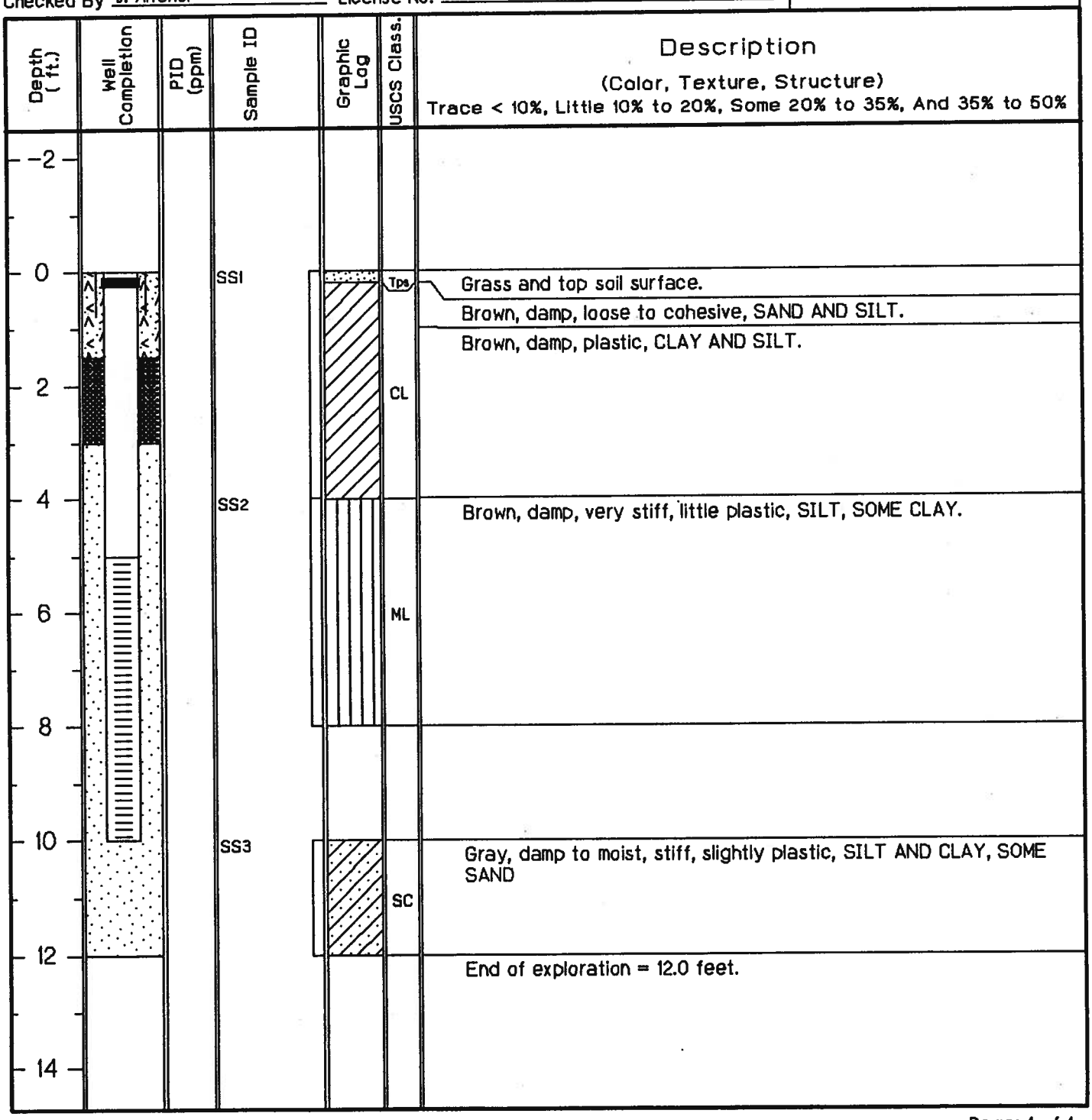
## Monitoring Well **MW-12**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *1969 Michigan Ave. Clinton, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *12.0 ft.* Diameter *2.25 in.*
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia *1.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *1.0 in.* Length *5.0 ft.* Type *Sch 40 PVC*
Fill Material *#10 Filter Sand* Rig/Core *Geoprobe*
Drill Co. *Fibertec Environmental* Method *Geoprobe*
Driller *John Zimmer* Log By *Chris Salvador* Date *7/18/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*Box Column = Samples collected for lithology descriptions.*



# Drilling Log

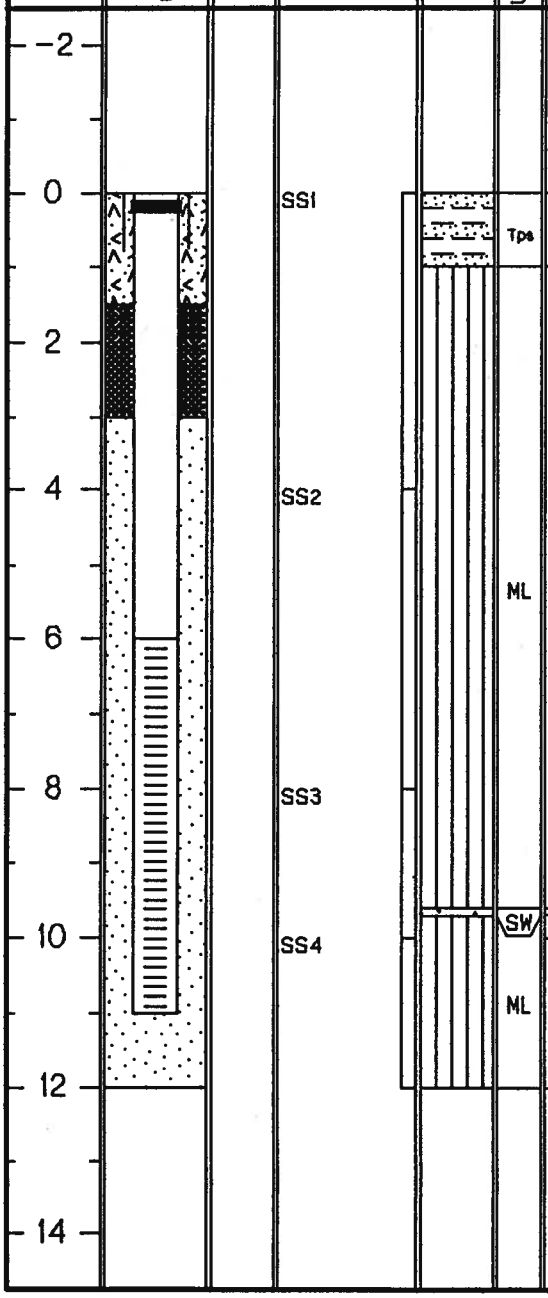
## Monitoring Well **MW-13**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *12.0 ft.* Diameter *2.25 in.*
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia *1.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *1.0 in.* Length *6.0 ft.* Type *Sch 40 PVC*
Fill Material *#10 Filter Sand* Rig/Core *Geoprobe*
Drill Co. *Fibertec Environmental* Method *Geoprobe*
Driller *John Zimmer* Log By *Chris Salvador* Date *7/18/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*Box Column = Samples collected for lithology descriptions.*




| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| 0 | | | SS1 | | Tps | Grass and top soil surface. |
| 1.5 | | | | | ML | Brown with some gray mottling, damp, stiff, not plastic, SILT, SOME CLAY. |
| 4 | | | SS2 | | | As above, (little plastic). |
| 8 | | | SS3 | | | As above. |
| 9.5 | | | | | SW | Brown, wet, loose, fine and medium SAND. |
| 10 | | | SS4 | | ML | Brown with some gray mottling, moist, moderately stiff, little plastic, SILT, SOME CLAY. |
| 10.5 | | | | | | As above, (wet, SOME SAND). |
| 12 | | | | | | End of exploration = 12.0 feet. |

# Drilling Log

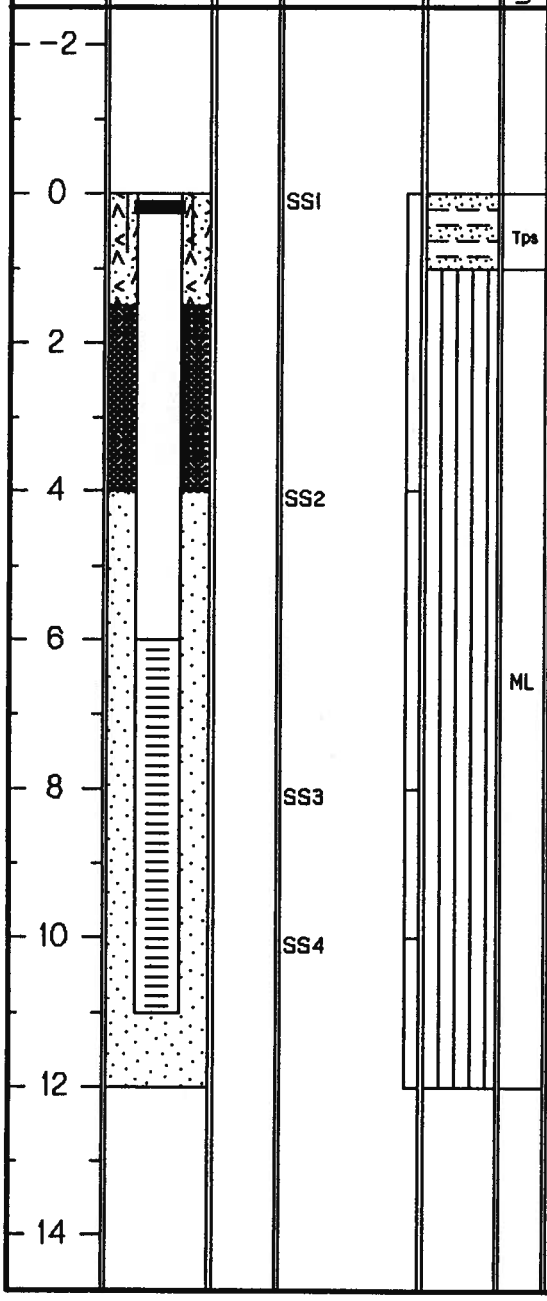
## Monitoring Well **MW-14**

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *12.0 ft.* Diameter *2.25 in.*
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia *10 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.010 in.*
Casing: Dia *10 in.* Length *6.0 ft.* Type *Sch 40 PVC*
Fill Material *#10 Filter Sand* Rig/Core *Geoprobe*
Drill Co. *Fibertec Environmental* Method *Geoprobe*
Driller *John Zimmer* Log By *Chris Salvador* Date *7/18/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

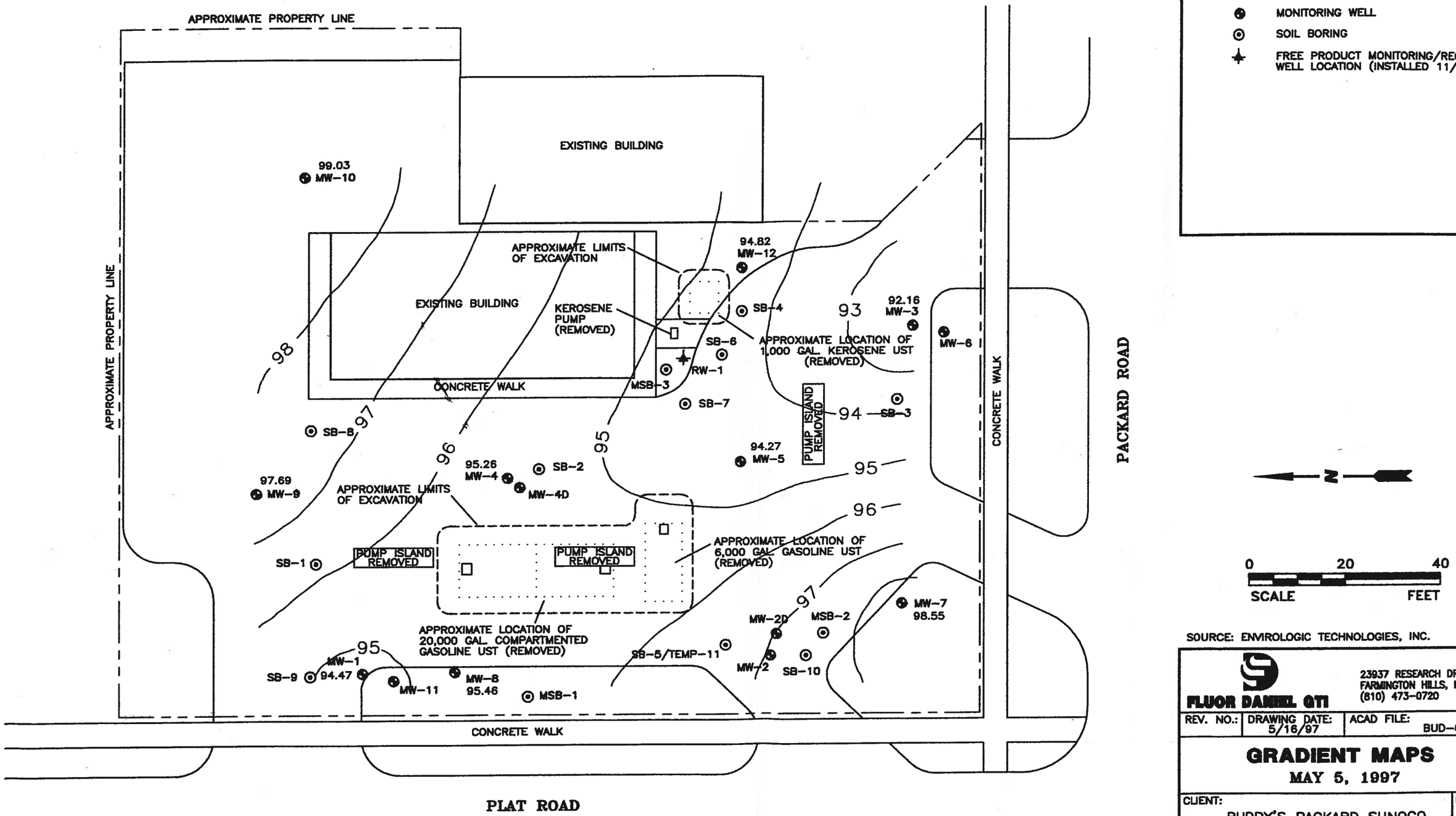
*COMMENTS:*

*Box Column = Samples collected for lithology descriptions.*




| Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|
| Grass and top soil surface. |
| Brown, damp, cohesive, moderately stiff, slightly plastic, SILT, SOME CLAY. |
| As above. |
| As above. |
| As above. |
| End of exploration = 12.0 feet. |

**ATTACHMENT - 11**




## LEGEND

- MONITORING WELL
- SOIL BORING
- FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.


FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(810) 473-0720

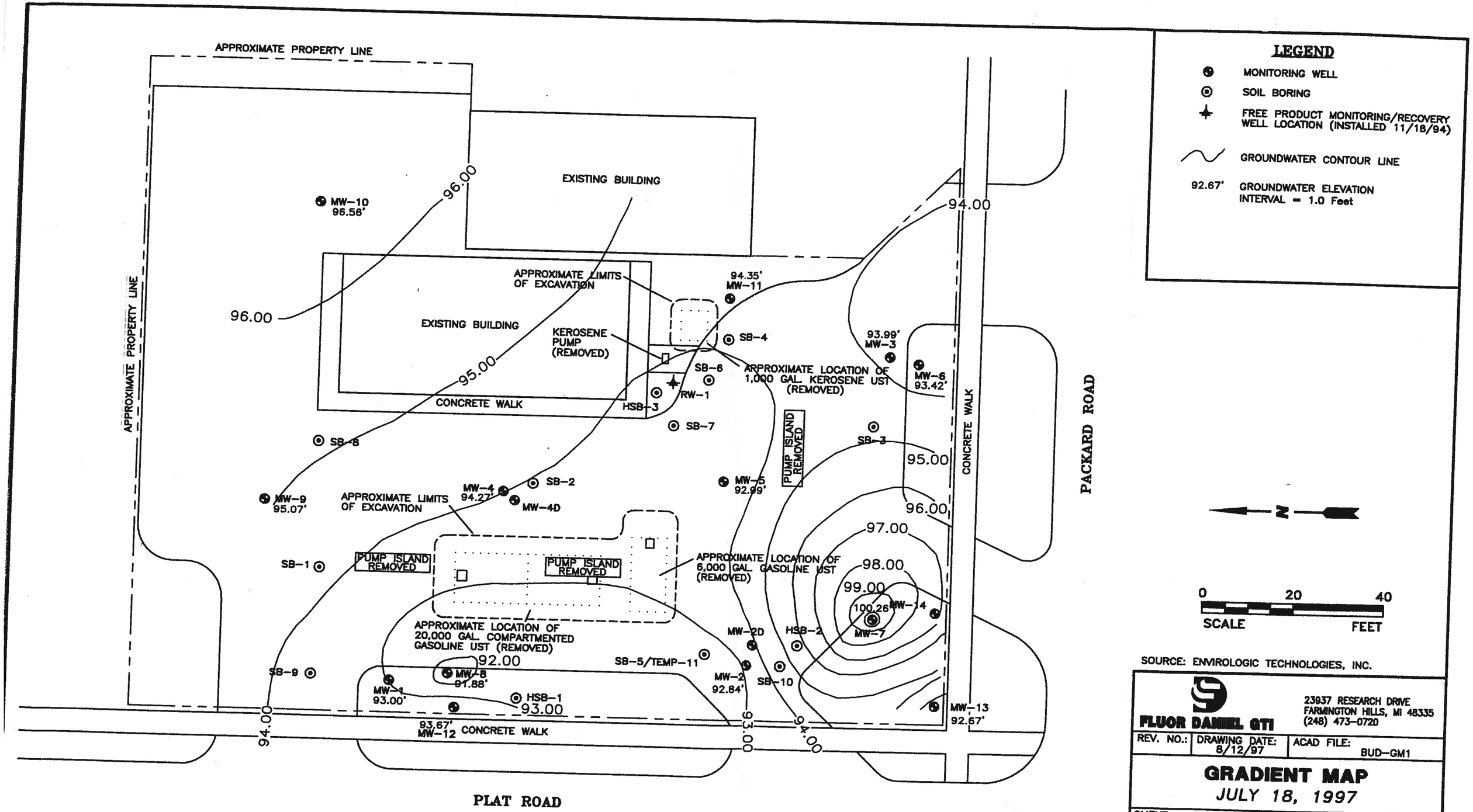

| REV. NO.: | DRAWING DATE: 5/16/97 | ACAD FILE: BUD-GM |
|---|---|---|

# GRADIENT MAPS

MAY 5, 1997

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | | | PE: |
| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: |


THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF FLUOR DANIEL GTI, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF FLUOR DANIEL GTI, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.




SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 8/12/97 | ACAD FILE: BUD-GM1 |
|---|---|---|

# GRADIENT MAP

*JULY 18, 1997*

| CLIENT: BUDDY'S PACKARD SUNOCO | PM: JMA |
|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | PE: |
| DESIGNED: / DETAILED: JKK/TK / PROJECT NO.: 01001-1247 | FIGURE: |

THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF FLUOR DANIEL GTI, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF FLUOR DANIEL GTI, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.

**ATTACHMENT - 14**

## FINAL ASSESSMENT REPORT - ATTACHMENT #14

### BUDDY'S PACKARD SUNOCO #28
### 3005 PACKARD & PLAT
### ANN ARBOR, MICHIGAN

### BTEX/MTBE CONCENTRATIONS IN GROUNDWATER (ugl)

| Well I.D. | Sample Date | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Lead | PNAs | Comments |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| SB-5 TMW-1 | 11/04/94 | 26000 | 910 | 600 | 2200 | 9300 | NA | 20.8 | Naphthalene - 15, Acenaphthylene - 5.8 |
| | | | | | | | | | |
| MW-1 | 01/17/95 | <1 | <1 | <1 | <1 | <50 | <3 | <5 | |
| MW-2 | 01/17/95 | 440 | <1 | <1 | <1 | 2800 | <3 | <5 | |
| MW-2D | 01/17/95 | <1 | <1 | <1 | <1 | <50 | <3 | <5 | |
| MW-3 | 01/17/95 | 3.1 | <1 | 5.9 | 4.7 | 21000 | <3 | <5 | |
| | | | | | | | | | |
| MW-4 | 05/12/97 | <5 | <1 | <1 | <3 | 180 | NA | <5 | |
| MW-4D | 05/12/97 | <5 | <1 | <1 | <3 | 180 | NA | <5 | |
| MW-5 | 05/12/97 | 2700 | 6700 | 1000 | 7500 | 720 | NA | 115 | Naphthalene - 83, 2-Methylnaphthalene - 32 |
| MW-7 | 05/12/97 | 3700 | 66 | 800 | 3300 | 730 | NA | 1290 | Naphthalene - 670, 2-Methylnaphthalene - 620 |
| MW-8 | 05/09/97 | 490 | 740 | 2100 | 9600 | 790 | NA | 307 | Naphthalene - 250, 2-Methylnaphthalene - 57 |
| MW-9 | 05/09/97 | <5 | <1 | <1 | <3 | <50 | NA | <5 | |
| MW-10 | 05/09/97 | <5 | <1 | <1 | <3 | <50 | NA | <5 | |
| MW-11 | 05/12/97 | 330 | 13 | 39 | 290 | <50 | NA | <5 | |
| MW-12 | 07/18/97 | 1400 | 14 | 200 | 430 | 2200 | NA | NA | |
| MW-13 | 07/22/97 | 42 | 2 | 7 | 4 | <50 | NA | NA | |
| MW-14 | 07/22/97 | 310 | 120 | 280 | 560 | <50 | NA | NA | |
| | | | | | | | | | |

NA - Not Analyzed

**ATTACHMENT - 15**

FINAL ASSESSMENT REPORT-ATTACHMENT NO. 15
TIER I RBLS/TIER II OR TIER III SSTL COMPARISON TABLE FOR GROUNDWATER
FACILITY NAME: Buddy's Packard #28, 3005 Packard, Ann Arbor, MI
FACILITY ID NO. 0-002107

X **Residential** Commercial II Commercial IV Industrial

Exposure Codes
**A. Potable** B. Groundwater/Surface Water Interface C. Volatilization to indoor D. Direct Contact

| Contaminant | Sample ID with Maximum Detected Concentration | Corresponding Sample Date | Maximum Detected Concentration (ug/l) | Applicable Criterion with Exposure Codes (ug/l) | | Criterion Exceeded? (Yes or No) | |
|---|---|---|---|---|---|---|---|
| | | | | Tier I RBSL | Tier II/III SSTL | Tier I RBSL | Tier II/III SSTL |
| **VOLATILES** | | | | | | | |
| Benzene | MW-7 | 05/12/97 | 3,700 | 238 (C) | | YES | |
| Toluene | MW-5 | 05/12/97 | 6,700 | 77,500 (C) | | NO | |
| Ethylbenzene | MW-8 | 05/09/97 | 2,100 | 32,800 (C) | | NO | |
| Total Xylenes | MW-8 | 05/09/97 | 9,600 | 200000 (D) | | NO | |
| MTBE | MW-3 | 01/17/95 | 21000 | 3,500,000 (D) | | NO | |
| **POLYNUCLEAR AROMATICS (PNAs)** | | | | | | | |
| Acenaphthene | MW-7 | 05/12/97 | <5 | | | | |
| Acenaphthylene | TMW-1 | 11/04/94 | 5.8 | *** | | *** | |
| Anthracene | MW-7 | 05/12/97 | <5 | | | | |
| Benzo(a)anthracene | MW-7 | 05/12/97 | <5 | | | | |
| Benzo(a)pyrene | MW-7 | 05/12/97 | <5 | | | | |
| Benzo(b)fluoranthene | MW-7 | 05/12/97 | <5 | | | | |
| Benzo(g,h,i)perylene | MW-7 | 05/12/97 | <5 | | | | |
| Benzo(k)fluoranthene | MW-7 | 05/12/97 | <5 | | | | |
| Chrysene | MW-7 | 05/12/97 | <5 | | | | |
| Dibenzo(a,h)anthracen | MW-7 | 05/12/97 | <5 | | | | |
| Fluoranthene | MW-7 | 05/12/97 | <5 | | | | |
| Fluorene | MW-7 | 05/12/97 | <5 | | | | |
| Indeno(1,2,3- cd)pyren | MW-7 | 05/12/97 | <5 | | | | |
| Naphthalene | MW-7 | 05/12/97 | 670 | 31,000 (D) | | YES | |
| Phenanthrene | MW-7 | 05/12/97 | <5 | | | | |
| | | | | | | | |

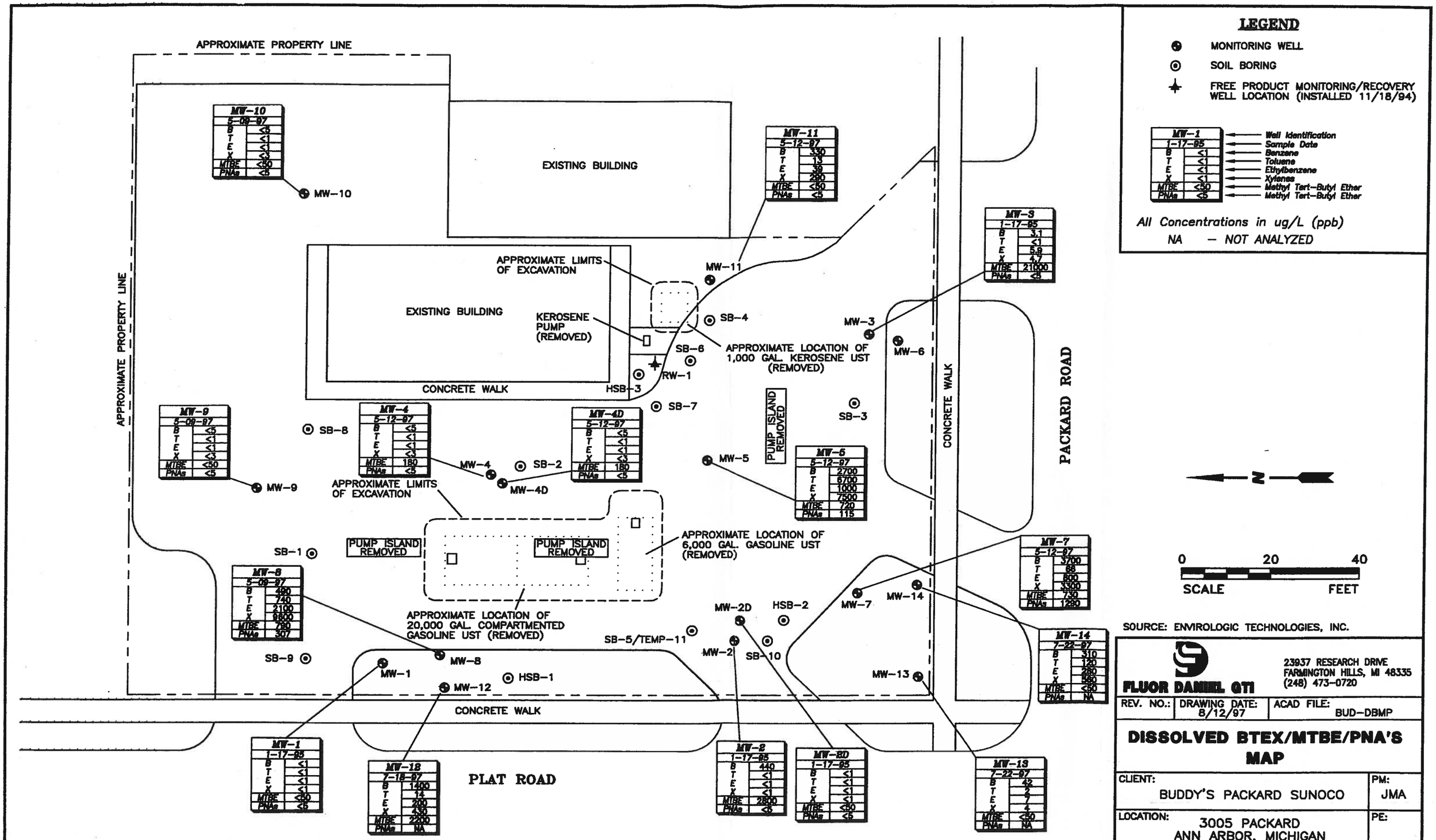
* - Risk is not exceeded for all dissolved levels. *** - Insufficent data available to date

FINAL ASSESSMENT REPORT-ATTACHMENT NO. 15
TIER I RBLS/TIER II OR TIER III SSTL COMPARISON TABLE FOR SOILS
FACILITY NAME: Buddy's Packard #28, 3005 Packard, Ann Arbor, MI
FACILITY ID NO. 0-002107

| Contaminant | Sample ID with Maximum Detected Concentration | Corresponding Sample Date | Maximum Detected Concentration (ug/l) | Applicable Criterion with Exposure Codes (ug/l) | | Criterion Exceeded? (Yes or No) | |
|---|---|---|---|---|---|---|---|
| | | | | Tier I RBSL | Tier II/III SSTL | Tier I RBSL | Tier II/III SSTL |
| **METALS** | | | | | | | |
| Cadmium | | | | | | | |
| Chromium III | | | | | | | |
| Chromium VI | | | | | | | |
| Total Lead | MW-2 | 01/17/95 | <3 | 4 | | NO | |
| **PCBs** | | | | | | | |
| Aroclor 1016 | | | | | | | |
| Aroclor 1221 | | | | | | | |
| Aroclor 1232 | | | | | | | |
| Aroclor 1242 | | | | | | | |
| Aroclor 1248 | | | | | | | |
| Aroclor 1254 | | | | | | | |
| Aroclor 1280 | | | | | | | |
| **HALOGENATED HYDROCARBONS** | | | | | | | |
| Carbon Tetrachloride | | | | | | | |
| 1,1-Dichloroethane | | | | | | | |
| 1,2-Dichloroethane | | | | | | | |
| 1,1-Dichloroethylene | | | | | | | |
| cis-1,2-Dichloroethylene | | | | | | | |
| trans-1,2-Dichloroethylene | | | | | | | |
| Tetrachloroethylene | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | |
| **OTHER*** | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*- *List additional contaminants as appropriate*

**ATTACHMENT - 16**




SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 8/12/97 | ACAD FILE: BUD-DBMP |
|---|---|---|

# DISSOLVED BTEX/MTBE/PNA'S MAP

| CLIENT: BUDDY'S PACKARD SUNOCO | PM: JMA |
|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | PE: |

| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: |
|---|---|---|---|

THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF FLUOR DANIEL GTI, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF FLUOR DANIEL GTI, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION

# LEAKING UNDERGROUND STORAGE TANK CLOSURE REPORT

NOV 1997 RECEIVED DEQ-JACKSON

**INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY.** The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit this report within the stated time period may result in Administrative Penalties as provided for in Part 213, Section 21313a of Act 451, P.A. 1994 as amended.

FACILITY NAME: Buddy's Sunoco #28

FACILITY ID NUMBER: 0-002107

ADDRESS: 3005 Packard

CONFIRMED RELEASE NUMBER(S): Not Known

CITY: Ann Arbor ZIP: 48108 COUNTY: Washtenaw

O/O NAME: Pipeline Oil Sales, Inc.

DATE(S) RELEASE DISCOVERED: 9/19/94

O/O ADDRESS: 744 E. South Street, Jackson

STATE: MI ZIP: 49203

CONTACT PERSON: Jeffery Hanson

PHONE NUMBER: (517) 782-0467

## ANSWER ALL QUESTIONS, (DO NOT LEAVE BLANKS):

1. a. Has the UST been emptied? X Yes ____ No (If no, explain why):
   b. Has the UST system been properly closed? X Yes ____ No (If no, explain why):
2. Free product present: a. Currently? ____ YES X NO If YES, total gallons recovered since last report:
   b. Previously? X YES ____ NO If YES, total gallons recovered to date: 5.25
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)? ____ YES X NO
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: None
5. Estimated distance and direction from point of release to nearest:
   a. Private well: 1 mile to NE b. Municipal well: >1 Mile a. Surface water/wetland: Swift Drain located 1100 feet to southeast
6. Since last report: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: 0
7. Totals to date: a. cubic yards of soil remediated: 870 b. gallons of groundwater remediated: 0
8. Michigan RBCA Site Classification (1-4): 4 Previous RBCA Site Classification (1-4): 4
9. Has contamination migrated off-site above Tier 1 Residential RBSLs ____ YES X NO
   If YES, have off-site impacted parties been notified ____ YES X NO (per Section 21309a(3) of Part 213)
10. Is an institutional control required for contamination that has migrated or will migrate off-site? ____ Yes X No

## CERTIFICATION OF REPORT COMPLETION

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate and complete. I certify that it was submitted to the USTD on November 14, 1997.
date submitted (REQUIRED)

lwsasty 11/14/97
CP Original Signature - (REQUIRED) Date

James M. Alfonsi
PRINT QC Project Manager's Name

L.N. Sastry, CPG
PRINT CP's Name

Fluor Daniel GTI, Inc.
CONSULTANT

23937 Research Drive, Farmington Hills, Michigan 48335
ADDRESS

(248) 473-0720 (248) 473-0892
TELEPHONE NO. FAX NO.

## CERTIFICATION OF CLOSURE

1. Type of RBCA Evaluation: X Tier 1 ____ Tier 2 ____ Tier 3
2. Closure report based on which type of land use?: X Residential ____ Commercial III ____ Commercial IV ____ Industrial
3. Institutional Controls: ____ None ____ Notice of Corrective Action ____ Restrictive Covenant ____ Other

I certify under penalty of law that corrective actions associated with the above referenced release at this facility were completed in accordance with Part 213, Act 451, P.A. 1994 as amended, and current departmental guidance and procedures available at the time the work was completed.

I further certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

lwsasty 11/14/97
CP Signature - (REQUIRED) Date

PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE USTD DISTRICT OFFICE, LISTED ON THE BACK OF THIS PAGE.

C-960-94 1 MUSTA 6190 L143035

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## UNDERGROUND STORAGE TANK DIVISION OFFICES AND LOCATIONS

**Detemine in which county/city the UST is located. Return all completed forms and associated reports to the USTD office listed next to that county/city in the following table. Addresses for the USTD offices are listed below.**

| COUNTY | USTD OFFICE | COUNTY | USTD OFFICE | COUNTY | USTD OFFICE | COUNTY | USTD OFFICE |
|---|---|---|---|---|---|---|---|
| Alcona | Gaylord | Dickinson | Marquette | Lake | Cadillac | Oceana | Grand Rapids |
| Alger | Marquette | Eaton | Shiawassee | Lapeer | Shiawassee | Ogemaw | Gaylord |
| Allegan | Plainwell | Emmet | Gaylord | Leelanau | Cadillac | Ontonagon | Marquette |
| Alpena | Gaylord | Genesee | Shiawassee | Lenawee | Jackson | Osceola | Cadillac |
| Antrim | Gaylord | Gladwin | Gaylord | Livingston | Shiawassee | Oscoda | Gaylord |
| Arenac | Gaylord | Gogebic | Marquette | Luce | Marquette | Otsego | Gaylord |
| Baraga | Marquette | Grand Traverse | Cadillac | Mackinac | Marquette | Ottawa | Grand Rapids |
| Barry | Plainwell | Gratiot | Shiawassee | Macomb | SE Michigan | Presque Isle | Gaylord |
| Bay | Saginaw-Bay | Hillsdale | Jackson | Manistee | Cadillac | Roscommon | Gaylord |
| Benzie | Cadillac | Houghton | Marquette | Marquette | Marquette | Saginaw | Saginaw-Bay |
| Berrien | Plainwell | Huron | Saginaw-Bay | Mason | Cadillac | Sanilac | Saginaw-Bay |
| Branch | Jackson | Ingham | Shiawassee | Mecosta | Grand Rapids | Schoolcraft | Marquette |
| Calhoun | Jackson | Ionia | Grand Rapids | Menominee | Marquette | Shiawassee | Shiawassee |
| Cass | Plainwell | Iosco | Gaylord | Midland | Saginaw-Bay | St Clair | SE Michigan |
| Charlevoix | Gaylord | Iron | Marquette | Missaukee | Cadillac | St Joseph | Plainwell |
| Cheboygan | Gaylord | Isabella | Saginaw-Bay | Monroe | SE Michigan | Tuscola | Saginaw-Bay |
| Chippewa | Marquette | Jackson | Jackson | Montcalm | Grand Rapids | Van Buren | Plainwell |
| Clare | Gaylord | Kalamazoo | Plainwell | Montmorency | Gaylord | Washtenaw | Jackson |
| Clinton | Shiawassee | Kalkaska | Cadillac | Muskegon | Grand Rapids | Wayne | SE Michigan |
| Crawford | Gaylord | Kent | Grand Rapids | Newaygo | Grand Rapids | Wexford | Cadillac |
| Delta | Marquette | Keweenaw | Marquette | Oakland | SE Michigan | | |
| CITY | USTD OFFICE | CITY | USTD OFFICE | CITY | USTD OFFICE | | |
| Detroit | Detroit | Highland Park | Detroit | Hamtramck | Detroit | | |

| CADILLAC OFFICE | DETROIT OFFICE | PLAINWELL OFFICE |
|---|---|---|
| 120 W CHAPIN ST<br>CADILLAC MI 49601-2158<br><br>616-775-3960 (PHONE)<br>616-775-1511 (FAX) | 300 RIVERPLACE, SUITE 3600<br>DETROIT MI 48207<br><br>313-392-6480 (PHONE)<br>313-392-6488 (FAX) | 1342 SR-89 WEST, SUITE B<br>PLAINWELL MI 49080-1915<br><br>616-692-2120 (PHONE)<br>616-692-3050 (FAX) |
| **GAYLORD OFFICE** | **JACKSON OFFICE** | **SAGINAW-BAY OFFICE** |
| 1732 W M-32, PO BOX 667<br>GAYLORD MI 49735-0667<br><br>517-731-4920 (PHONE)<br>517-731-6181 (FAX) | 301 E LOUIS GLICK HIGHWAY<br>JACKSON MI 49201-1556<br><br>517-780-7690 (PHONE)<br>517-780-7855 (FAX) | 503 N EUCLID AVE SUITE 1<br>BAY CITY MI 48706-2965<br><br>517-686-8025 (PHONE)<br>517-684-9799 (FAX) |
| **GRAND RAPIDS OFFICE** | **MARQUETTE OFFICE** | **SHIAWASSEE OFFICE** |
| 350 OTTAWA ST NW 6TH FLOOR<br>GRAND RAPIDS MI 49503-2341<br><br>616-456-5071 (PHONE)<br>616-456-1239 (FAX) | 1990 US 41 SOUTH<br>MARQUETTE MI 49855-9198<br><br>906-228-6561 (PHONE)<br>906-228-5245 (FAX) | 10650 BENNETT DR<br>MORRICE MI 48857-9792<br><br>517-625-5515 (PHONE)<br>517-625-5000 (FAX) |

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| SE MICHIGAN OFFICE | HEADQUARTERS |
|---|---|
| 38980 SEVEN MILE RD<br>LIVONIA MI 48152-1006 | 333 S CAPITOL AVE PO BOX 30157<br>LANSING MI 48909-7657 |
| 313-953-8905 (PHONE)<br>313-432-1295 (FAX) | 517-373-8168 (PHONE)<br>517-335-2245 (FAX) |



**Instructions** - Utilize the following checklist to ensure that all required information is provided in the Closure Report. Include this checklist as the table of contents. The order in which the information is provided is at your discretion. Each page of the report (including the cover sheet, table of contents, appendices, figures, etc.) should be consecutively numbered. The location column should be completed with the appropriate page number for each item. You may reference previously submitted materials by specifying the location within that document. Maps, tables, figures, etc. should be combined as appropriate.

All information required by Part 213 to be included in the Closure Report **must** be provided, and all sections of the report must be completed. If any items are not applicable to the site, provide a justification regarding the absence of this information in the appropriate section of the report.

**If an Initial Assessment Report (IAR) and/or a Final Assessment Report (FAR) have not been submitted for this release, provide all required information from the IAR and/or FAR not included below.**

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**1.0 PROJECT CHRONOLOGY**

A. Provide the date and time the confirmed release(s) was/were discovered and reported. 1

B. Provide the IAR submittal date. 1

C. Provide the FAR submittal date. 2

D. Provide dates for any other submittals. 1, 2

**2.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED**

**2.1 IMMEDIATE RESPONSE ACTION IMPLEMENTATION**

If an IAR has not been previously submitted, provide all information requested in Section 1.0 of the IAR 1, 2, 3

**2.2 FREE PRODUCT DISCOVERY AND REMOVAL**

**If free product has not been discovered, then proceed to Section 2.3.**

A. Describe initial response actions performed at this site to address the presence of free product as specified in Sections 21307(2)(c) and (f), and (3)(b) and (c), 21308a(1)(b)(*xviii*). Refer to the USTD Operational Memorandum No. 7, *Identification, Reporting, and Recovery of Free Product at LUST Sites.* 3

B. Attach a final USTD Free Product Recovery Status Report (EQP 3850) if not 3

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| | | |
|---|---|---|
| | previously submitted. | 3 |
| **2.3** | **SITE ASSESSMENT ACTIVITIES** | |
| **A.** | If an IAR has not been previously submitted, provide all information requested in Section 3.0 of the IAR. | 3, 4 |
| **B.** | If a FAR has not been previously submitted, provide all information requested in Section 2.0 of the FAR. | 3, 4 |
| **2.4** | **SITE CLASSIFICATION** | |
| **A.** | Indicate the current Site Classification Level, in accordance with USTD Operational Memorandum No. 5, *Leaking Underground Storage Tank (LUST) Site Classification System*, (Attachment 10 of the RBCA Guidance Document). | 4 |
| **B.** | Provide a justification for this classification. Identify the current conditions that are the basis of the classification. | 4 |
| **C.** | Indicate whether the site classification has changed since the submission of the last report. | 4 |
| **2.5** | **TIERED EVALUATIONS AND CLEANUP GOALS** | |
| **A.** | Indicate whether a site-specific Tier II or Tier III evaluation has been conducted for this site. | 5 |
| **B.** | If applicable, identify and justify where alternate assumptions or site-specific information were used in place of the default assumptions as defined in the USTD Operational Memorandum No. 4, *Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank (LUST) Sites*, (Attachment No. 11 of the RBCA Guidance Document). | 5 |
| | **NOTE: If a Tier II evaluation was performed and described in the IAR or the FAR, explicitly indicate where different assumptions or site-specific information were used in this Tier II or Tier III evaluation and why the change was justified.** | |
| **C.** | Provide the calculations and reference citations supporting the development of the relevant Tier II or Tier III SSTLs. | 5 |
| **D.** | Provide a table which compares the maximum remaining contaminant concentrations for each required parameter for all media to the appropriate RBSLs (as provided in the USTD Operational Memorandum No. 4), and/or the calculated SSTLs. Identify all applicable land use scenario(s). | 5 |
| **2.6** | **MODELING** | |

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Provide all modeling documentation. Refer to the USTD Operational Memorandum No. 10 *Presentation of Tier 2 and 3 Groundwater Modeling Evaluations.* 5

## 2.7 NOTICES AND RESTRICTIONS

**If the closure does not require the use of institutional controls to restrict land or resource use, then proceed to Section 2.8.**

**NOTE: Draft copies of all Restrictive Covenants and Notices of Corrective Action for off-site institutional controls must be submitted to the USTD for approval prior to filing.** Refer to Operational Memorandum No. 12, *Institutional Controls and Public Notice Requirements and Procedures*, (Attachment 20 of the RBCA Guidance Document).

A. Submit copies of all notices or restrictions which have been filed, and provide proof of filing these notices or restrictions. If the person filing is not the property owner, attach a copy of the written permission for the filing from the property owner. 5

B. Identify the individuals or segments of the public which have been provided with notice of the proposed land use restrictions or limitations to be placed on resource use. Include the names and addresses of the affected parties (unless large segments of the public will be provided notice, e.g., users of a municipal water supply system). Include proof that notice was provided to the affected parties. 5

C. Provide a map depicting the location(s) of the individuals or segments of the noticed public. 5

D. Describe any alternate mechanism utilized to restrict exposure to regulated substances as defined in Section 324.21310a(3), and justify how this mechanism reliably restricts exposure to the regulated substances. 5

## 2.8 PERMITS

List all discharge permits and/or permit exemptions that were required for the corrective action, and include the type of permit, permit number, application date, approval date and termination date. 5

## 2.9 CORRECTIVE ACTION PLAN

A. Summarize the corrective action activities that resulted in release closure. Include the operating history of any active treatment systems. 5

B. Summarize the types of monitoring activities performed, including the media and parameters monitored. 5

C. Attach performance monitoring data. 5

D. Describe and justify changes to the previously submitted Corrective Action Plan. 5

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E. Provide the total volume of soil remediated, and include disposal location and proof of disposal (e.g., invoices, not load tickets) for all soils excavated subsequent to submittal of the last report, if appropriate. 5

F. Provide the total volume of groundwater actively remediated to date, and include disposal documentation, if appropriate. 5

## 3.0 CLOSURE VERIFICATION SAMPLING

### 3.1 SOIL CLOSURE VERIFICATION

**NOTE: Verification sampling must be conducted whenever contaminated soils are identified but not remediated, including when contaminated soil is returned to an excavation after the removal of a UST.**

A. Describe the soil verification sampling strategy applied at the site by providing the following:
   1. A scaled site map which identifies the former extent of the soil contamination, and the soil verification sampling locations relative to existing site features. *(Multiple chemical contaminants and multiple sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility)* 5
   2. For a corrective action involving excavation, a scaled drawing(s) showing the floor and walls of the excavation and the associated sampling locations. The drawing should also depict the subsurface stratigraphy, soil types, fractures, discolored soil locations, adjoining conduits or potential migration pathways, and locations of former and existing UST system components, as appropriate 5
   3. A description of how the number and location of samples collected for soil verification purposes was established. If your sampling strategy differs from the MDEQ guidance document *Verification of Soil Remediation Guidance Document* (Attachment No. 25 of the RBCA Guidance Document) and USTD Operational Memorandum No. 9, *Groundwater and Soil Closure Verification Guidance* (Attachment No. 26 of the RBCA Guidance Document) provide justification 5
   4. A list of the analytical parameters used to verify the soil remediation 5
   5. A justification if all soil verification samples were not analyzed, preserved, and handled in accordance with the USTD guidance document entitled *Guidance for Parameters, Analytical Methods, Sample Handling, Quality Control, and Cleanup Limits for Petroleum Hydrocarbon Releases* (Attachment No. 12 of the RBCA Guidance Document) 5

B. Provide a table with laboratory data showing the results of all verification soil sampling performed to date for the required parameters. Refer to Attachment 12 of the RBCA Guidance Document. The table should include the following: 5
   1. Sample ID
   2. Sample depth
   3. Date of collection
   4. Dates of extraction and analysis

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5. Method Detection Limits
6. Analytical method

*(NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

C. Provide copies of all soil boring logs not previously submitted. 5

## 3.2 GROUNDWATER CLOSURE VERIFICATION

A. Describe the groundwater verification sampling strategy applied at the site by providing the following:
1. A scaled site map which identifies the former extent of groundwater contamination, the groundwater verification sampling locations relative to existing site features, and the groundwater flow direction(s). *(Multiple chemical contaminants and multiple aquifer/sample depths should be addressed on the minimum number of site maps needed to convey the information with clarity and legibility)* 5, 6
2. A description of how the sampling frequency and duration of sampling for groundwater verification purposes was established. If your sampling strategy differs from the USTD Operational Memorandum No. 9, (Attachment No. 26 of the RBCA Guidance Document) provide a justification 6
3. A list of the analytical parameters used to verify groundwater closure 6
4. A justification if all groundwater verification samples were not analyzed, preserved, and handled in accordance with Attachment No. 12 of the RBCA Guidance Document 6

B. Provide a table with laboratory data showing the results of all verification groundwater sampling performed to date for the required parameters. Refer to Attachment 12 of the RBCA Guidance Document. The table should include the following: Tables
1. Sample ID
2. Sampling depth or screened interval
3. Date of collection
4. Dates of extraction and analysis
5. Method Detection Limits
6. Analytical method

*(NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

C. Attach copies of the following:
1. Boring logs not previously submitted Appendix
2. Well construction diagrams not previously submitted Appendix
3. Potentiometric surface maps for each groundwater verification sampling event Figures
4. Elevation data (USGS datum preferred), including top-of-casing and grade elevations, and depth to groundwater for each groundwater verification sampling event. Figures

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## 3.3 CLOSURE VERIFICATION FOR OTHER MEDIA

A. Describe the verification sampling strategy for other media applied at the site. 6

B. Provide a scaled site map which identifies the verification sampling locations relative to existing site features and boundaries, if appropriate. 6

C. Provide a table with the laboratory data showing the results of all verification sampling performed to date in the other specified environmental media. 6

*(NOTE: The USTD may request copies of the laboratory data sheets, chain-of-custody forms, and all available QA/QC information.)*

FLUOR DANIEL GTI

November 7, 1997

Mr. Terry Hiske
Environmental Quality Analyst
Underground Storage Tank Division
Michigan Department of Environmental Quality
Jackson District Office
301 E. Louis Glick Hwy.
Jackson, MI 49201-1556

**RE: Closure Report for Buddy's Packard Sunoco**
**3005 Packard, Ann Arbor, Michigan**

Dear Mr. Hiske:

Fluor Daniel GTI, Inc. (Fluor Daniel GTI) prepared this report on behalf of Pipeline Oil Sales, Inc. (Pipeline). This report provides closure documentation as required by Part 213 of Michigan Public Act 451, as amended. The closure report was prepared following the Michigan Department of Environmental Quality (MDEQ) October 1995 "Guidance Document for Risk Based Corrective Action at LUST Sites" and as outlined by the MDEQ checklist. The following attachments have been included in this report:

**Figures**

| | |
|---|---|
| Figure 1 | Adsorbed BTEX /MTBE/PNAs Concentration Map |
| Figure 2 | Dissolved BTEX Concentration Map |
| Figure 3 | Cross Section A-A' |
| Figure 4 | May 5, 1997 Gradient Map |
| Figure 5 | July 18, 1997 Gradient Map |

**Tables**

| | |
|---|---|
| Table 1 | Historical BTEX/MTBE/Lead/ PNAs in Soil |
| Table 2 | Historical BTEX/MTBE/Lead/ PNAs in Groundwater |

**Appendix**

| | |
|---|---|
| Appendix A | Boring Logs |

## 1.0 PROJECT CHRONOLOGY

***Initial Abatement Activities (September 29, 1994)***

As requested by Pipeline, Envirologic Technologies, Inc. (Envirologic) conducted a subsurface investigation to gather data for an underground storage tank (UST) removal and upgrade project and during the investigation discovered a release of hydrocarbons to the subsurface. The release was confirmed on September 19, 1994 based on laboratory reports of soil samples collected during the subsurface investigation indicating the presence of hydrocarbons.

As requested by Pipeline, Envirologic conducted initial abatement activities by conducting tank testing of four underground storage tanks (USTs). The 12,500, 7,500, 60,016 gallon unleaded gasoline USTs and the 1,020 gallon kerosene UST passed tank and line testing. The results of the testing was submitted to the MDEQ in the Initial Abatement Report on September 29, 1994.

***60 Day Initial Assessment Report (November 4, 1994)***

On November 10, 1994 a 60 Day Initial Assessment report was submitted to the MDEQ including the analytical results of soil and groundwater sampling conducted during the drilling of ten soil borings. The

23937 Research Drive / Farmington Hills, MI 48335 USA (810) 473-0720 FAX (810) 473-0892

investigation indicated that kerosene was discovered on the water table when soil borings SB-6 and SB-7 were advanced. On November 4, 1994 Envirologic submitted a free product fax transmittal sheet to the MDEQ while 60 Day Initial Assessment activities were occurring.

Between November 16-18, 1997 the existing four tank UST system was removed and a new UST system installed. A total of 870 cubic yards of hydrocarbon impacted soil was excavated and disposed prior to installation of the new UST system. During the new UST system installation activities a recovery well was installed between soil borings SB-6 and SB-7 and recovery of kerosene free product began using a bailer. A free product recovery report was filed with the MDEQ on November 21, 1997 indicating that 0.125 gallons of free product had been recovered.

***Phase I Hydrogeologic Study Report (February 8, 1995)***

On February 8, 1995 Envirologic, on behalf of Pipeline, submitted a Phase I Hydrogeologic Study Report to the MDEQ outlining investigation activities that occurred in January 1995. The investigation included the advancement of five soil borings, the installation of four monitoring wells, and the collection and laboratory analysis of soil and groundwater samples. Three monitoring wells were set at depth of 15 feet below grade and one monitoring well was set at 30 feet below grade.

Results of the investigation indicated that the geology of the property consisted of four distinct units consisting of an upper fill unit, a fractured gray clay unit, an inter bedded clay and fine sand unit, and a lower gravel unit. The depth to water at the property was between 6 and 8 feet below grade. The groundwater gradient at the site was toward the north-northeast. Results of the investigation indicated that selected benzene, toluene, ethyl benzene, and xylenes (BTEX) were above Michigan Environmental Response Act (MERA) Type B Cleanup Criteria. Polynuclear aromatic hydrocarbons (PNAs) and methyl tert butyl ether (MTBE) were detected in soil samples at concentrations below MERA Type B Cleanup Criteria. Total lead was detected in soil samples collected from all borings at concentrations below MERA Default Type A Cleanup Criteria. Laboratory results for groundwater samples indicated that BTEX and MTBE concentrations exceeded MERA Type B Cleanup Criteria. PNAs and dissolved lead were below method detection limits for the groundwater samples. The recommendation of the Phase I Hydrogeologic Study Report was to conduct additional investigation to define the extent of BTEX and MTBE in groundwater. The MDEQ conducted an audit of the Phase I Hydrogeologic Study Report on February 15, 1997 and found the report to be adequate.

***Phase II Hydrogeologic Study Work Plan (April 7, 1995)***

Envirologic, on behalf of Pipeline, submitted a Phase II Hydrogeologic Study Work Plan on April 7, 1995 proposing the advancement of 11 soil borings and the installation of eight monitoring wells for the purpose of completing the horizontal and vertical delineation of the kerosene release. The work plan also proposed the collection and laboratory analysis of soil and groundwater samples for BTEX, PNAs, and lead. The report cover sheet indicated that a total of 5.25 gallons of free product had been recovered as of April 7, 1995. The MDEQ conducted an audit of the Phase II Hydrogeologic Study Work Plan on April 14, 1997 and found the work plan to be acceptable.

***Final Assessment Report (August 28, 1997)***

Fluor Daniel GTI, Inc. (Fluor Daniel GTI), on behalf of Pipeline, submitted a Final Assessment Report (FAR) dated August 28, 1997 to the MDEQ. The FAR included the results of additional subsurface investigation which included the advancement of 13 soil borings, installation of 13 monitoring wells, and the collection and laboratory analysis of groundwater samples to complete the vertical and horizontal extent of BTEX and MTBE in groundwater.

Results of the investigation indicated that the subsurface soils consisted of the following:

- Clay from 6 inches below grade (BG) to 8 feet BG;
- Interbedded sand and clays from 8 feet to 15 feet BG;

- Clay from 15 feet to 18 feet below grade above; and,
- Sand and gravel from 18 feet to 30 feet BG.

Water was encountered 6-8 feet BG perched on top of the clay layer 15-18 feet below grade.

Laboratory results for groundwater samples indicated that BTEX, MTBE and PNA concentrations were below Michigan Tier I generic utility worker groundwater contact criteria (GCC). Free product was not detected in any of the site wells.

The lateral groundwater flow appeared to vary across the property; however, on May 5, 1997 groundwater appeared to flow toward the south west and on July 18, 1997 toward the west. Water mounding was evident in the southwest corner of the site due the possible effects of surface water recharge from an adjacent grass covered area. Based on the apparent groundwater flow to the west and south west, the UST Closure Report for a former Shell Service Station located directly across Platt Road, west of the subject site, at 2995 Packard was obtained from the MDEQ and was reviewed under the Freedom of Information Act . The closure report was reviewed to determine if BTEX and MTBE in groundwater migrated from the subject property to the former Shell Service Station Property. The closure report indicated that soil samples collected from borings adjacent to Platt Road were not impacted with BTEX and MTBE. The final assessment investigation activities resulted in completion of the vertical and horizontal delineation of BTEX and MTBE in groundwater.

## 2.0 SUMMARY OF CORRECTIVE ACTION ACTIVITIES PERFORMED

### *2.1 IMMEDIATE RESPONSE ACTION IMPLEMENTATION*

Immediate response actions were conducted by Envirologic and detailed in the *September 29, 1994 Initial Abatement Activities Report* and the *November 4, 1994 60 Day Initial Assessment Report.*

### *2.2 FREE PRODUCT DISCOVERY AND REMOVAL*

A total of 5.25. gallons of kerosene was recovered from a recovery well recovery well installed adjacent to the former kerosene UST. Free product was not detected during the final assessment or subsequent groundwater sampling event.

### *2.3 SITE ASSESSMENT ACTIVITIES*

Initial Assessment
On November 10, 1994 a *60 Day Initial Assessment Report* was submitted to the MDEQ including the analytical results of soil and groundwater sampling conducted during the drilling of ten soil borings.

Delineation of Contamination
Fluor Daniel GTI submitted a FAR dated August 28, 1997 to the MDEQ. The FAR included the results of additional subsurface investigation which included the advancement of 13 soil borings, installation of 13 monitoring wells, and the collection and laboratory analysis of soil and groundwater samples. The final assessment investigation activities resulted in completion of the vertical and horizontal delineation of BTEX and MTBE in groundwater.

Soil Conditions and Characteristics
Subsurface investigations indicated the following lithology:

- Clay from 6 inches below grade (BG) to 8 feet BG;
- Interbedded sand and clays from 8 feet to 15 feet BG;
- Clay from 15 feet to 18 feet below grade above; and,
- Sand and gravel from 18 feet to 30 feet BG.

Water was encountered 6-8 feet BG on top of the clay layer 15-18 feet below grade.

Approximately 870 cubic yards of soil generated from UST system removal has been disposed from the site to date. No other active soil remediation has been initiated at the site. None of the impacted soil remaining at the site exceeds Tier I direct contact cleanup criteria.

Please refer to Figure 1 - Adsorbed BTEX /MTBE/PNAs Concentration Map, Figure 3 - Cross Section A-A', Table 1 - Historical BTEX/MTBE/Lead/ PNAs in Soil, and Appendix A - Boring Logs.

Groundwater Conditions and Characteristics

A continuous water bearing zone was encountered across the site approximately 6-8 feet below grade perched on top of clay layer located 15 to 18 feet BG. Dissolved BTEX and MTBE concentrations are below Tier I GCC.

Groundwater encountered at the site is not part of an aquifer based on the subsurface soils indicating that the groundwater is perched on a clay layer. Private and municipal water wells are more than one mile from the site. Contact with the City of Ann Arbor Building Department indicates there are no known crock wells in the area of the site and water supply wells are not allowed to be installed within the city limits . Contact with the Michigan Department of Environmental Quality Drinking Water and radiological Protection Division indicates the area of the site is not within in a well head protection area. Larry Sander of the Ann Arbor Water Treatment Plant (313) 971-4542 indicated that Ann Arbor 's water supply is taken from the Huron River, one well south of the city airport and one well on Montgomery Street . All drinking water sources for the City of Ann Arbor are located more than one mile from the site.

The lateral groundwater flow appeared to vary across the property; however, on May 5, 1997 groundwater appeared to flow toward the south west and on July 18, 1997 toward the west. Water mounding was evident in the southwest corner of the site due the effects of surface water recharge from an adjacent grass covered area.

Please refer to Figure 2 - Dissolved BTEX Concentration Map, Figure 4 - May 5, 1997 Gradient Map, and Figure 5 - July 18, 1997 Gradient Map.

### *2.4 SITE CLASSIFICATION*

Based on the data collected to date, the current site classification has been determined to be ***Class 4 - No demonstrable long-term threat to human health, safety, or sensitive environmental receptors.*** This classification has not changed since the last report.

This classification is justified by the following current conditions:

- Health-based criteria are not applicable since the groundwater does not qualify as a relevant pathway.
- Adsorbed phase hydrocarbon concentrations are below Tier I Residential Direct Contact Criteria.
- Dissolved phase hydrocarbon concentrations are below groundwater contact criteria.

- Volatilization of hydrocarbons into indoor air is not a relevant pathway based on the depth to groundwater being 6-8 feet below grade.

### 2.5 *TIERED EVALUATIONS AND CLEANUPS*

Based on adsorbed phase hydrocarbon concentrations below Tier I Residential Direct Contact and dissolved phased hydrocarbons concentrations below GCC, Tier II or Tier III evaluation were not necessary for regulatory closure.

### *2.6 MODELING*

Based on Adsorbed phase hydrocarbon concentrations below Tier I Residential Direct Contact and dissolved phased hydrocarbons concentrations below GCC, modeling was not necessary for regulatory closure.

### *2.7 NOTICES AND RESTRICTIONS*

Site closure does not require the use of institutional controls to restrict land or resource use.

### *2.8 PERMITS*

Permits are not required for site closure.

### *2.9 CORRECTIVE ACTION PLAN*

Implementation of a corrective action plan is not required for site closure. Based on a Tier I Evaluation, all soil and groundwater concentrations are below appropriate cleanup criteria. However, approximately 870 cubic yards of hydrocarbon impacted soil was removed and disposed of at the BFI Arbor Hills Landfill during initial abatement activities.

## 3.0 CLOSURE VERIFICATION SAMPLING

### *3.1 SOIL CLOSURE VERIFICATION*

Twenty seven soil samples were analyzed from the site as part of the initial assessment and subsequent investigations. None of the laboratory analytical results of the samples exceed the Tier I Residential Direct Contact Criteria.

The initial sampling event performed during the intial assessment by Envirologic included BTEX & MTBE (8020), PNA (8310), and lead ( 7421). Flour Daniel GTI's follow-up investigation included BTEX & MTBE (8020) and PNAs (8310).

Please refer to the following attachments for details of the soil concentrations:

Figure 1- Adsorbed BTEX /MTBE/PNAs Concentration Map
Table 1 - Historical BTEX/MTBE/Lead/ PNAs in Soil

### *3.2 GROUNDWATER CLOSURE VERIFICATION*

The site's fourteen monitoring wells were sampled twice in 1997. None of the laboratory analytical results of the samples exceeded GCC.

Mr. Terry Hiske
Michigan Department of Environmental Quality

RE: Closure Report for Buddy's Packard Sunoco, 3005 Packard, Ann Arbor, Michigan

The initial sampling event performed during the real estate assessment by Envirologic included BTEX & MTBE (8020) and PNA (8310). Flour Daniel GTI's follow-up investigation included BTEX & MTBE (8020) and PNA (8310).

Please refer to the following attachments for details of the groundwater analytical data:

Figure 2 - Dissolved BTEX Concentration Map
Table 2 - Historical BTEX/MTBE/Lead/ PNAs in Groundwater

### *3.3 CLOSURE VERIFICATION FOR OTHER MEDIA*

There was no evidence of contamination to other media.

Based on information provided in this and previous reports, Fluor Daniel GTI certifies that regulatory closure has been achieved as required under Part 213 of Public Act 451, as amended. If you have any questions or required further information, please contact our office at (248)473-0720.

Sincerely,

FLUOR DANIEL GTI, INC.

James M. Alfonsi
Project Manager
Geologist

cc: Jeffery Hanson - Pipeline Oil Sales, Inc.
Lakshmi Sastry - Fluor Daniel GTI, Inc.

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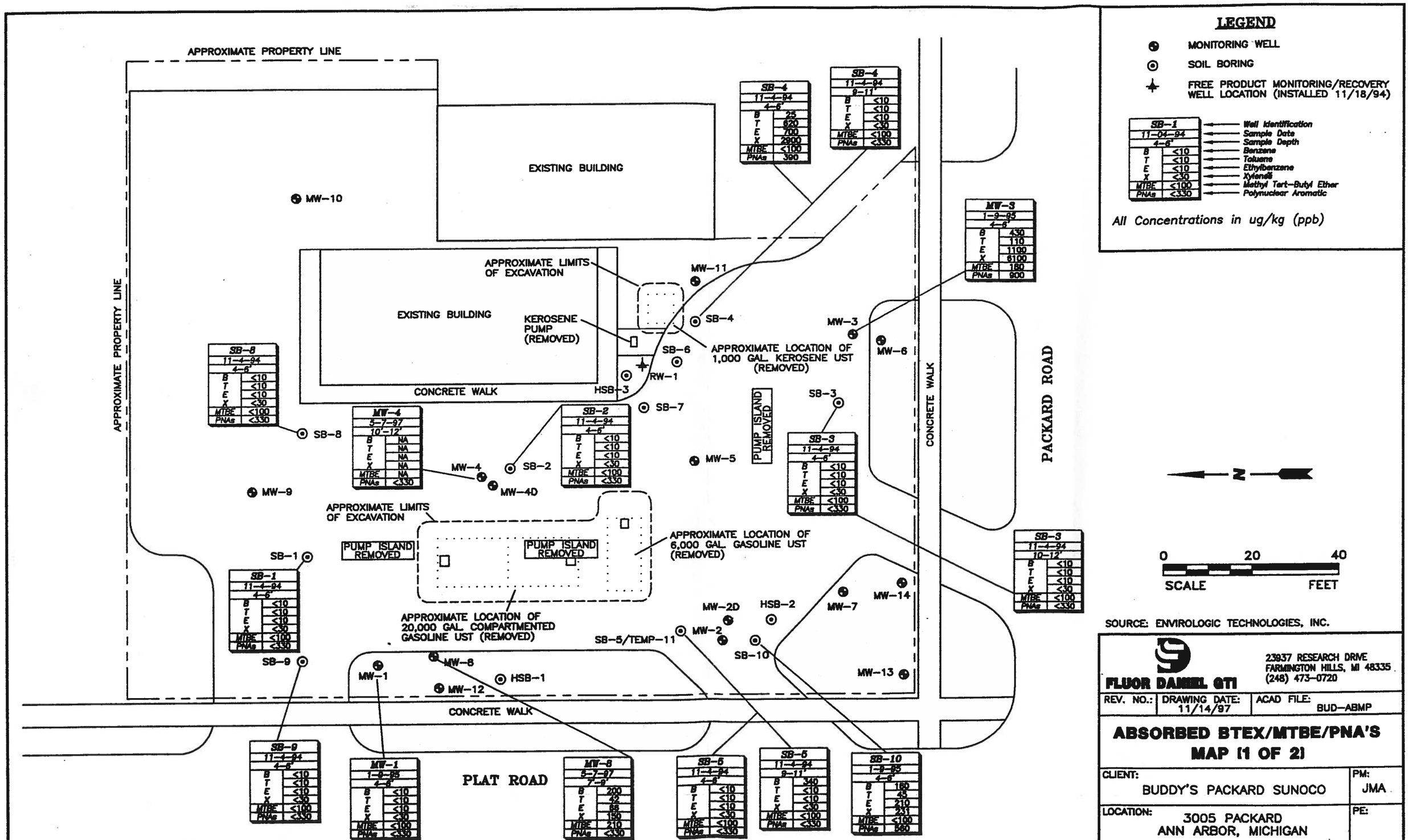


SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI

23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 11/14/97 | ACAD FILE: BUD-ABMP |
|---|---|---|

**ABSORBED BTEX/MTBE/PNA'S MAP (1 OF 2)**

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | | | PE: |
| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: 1 |

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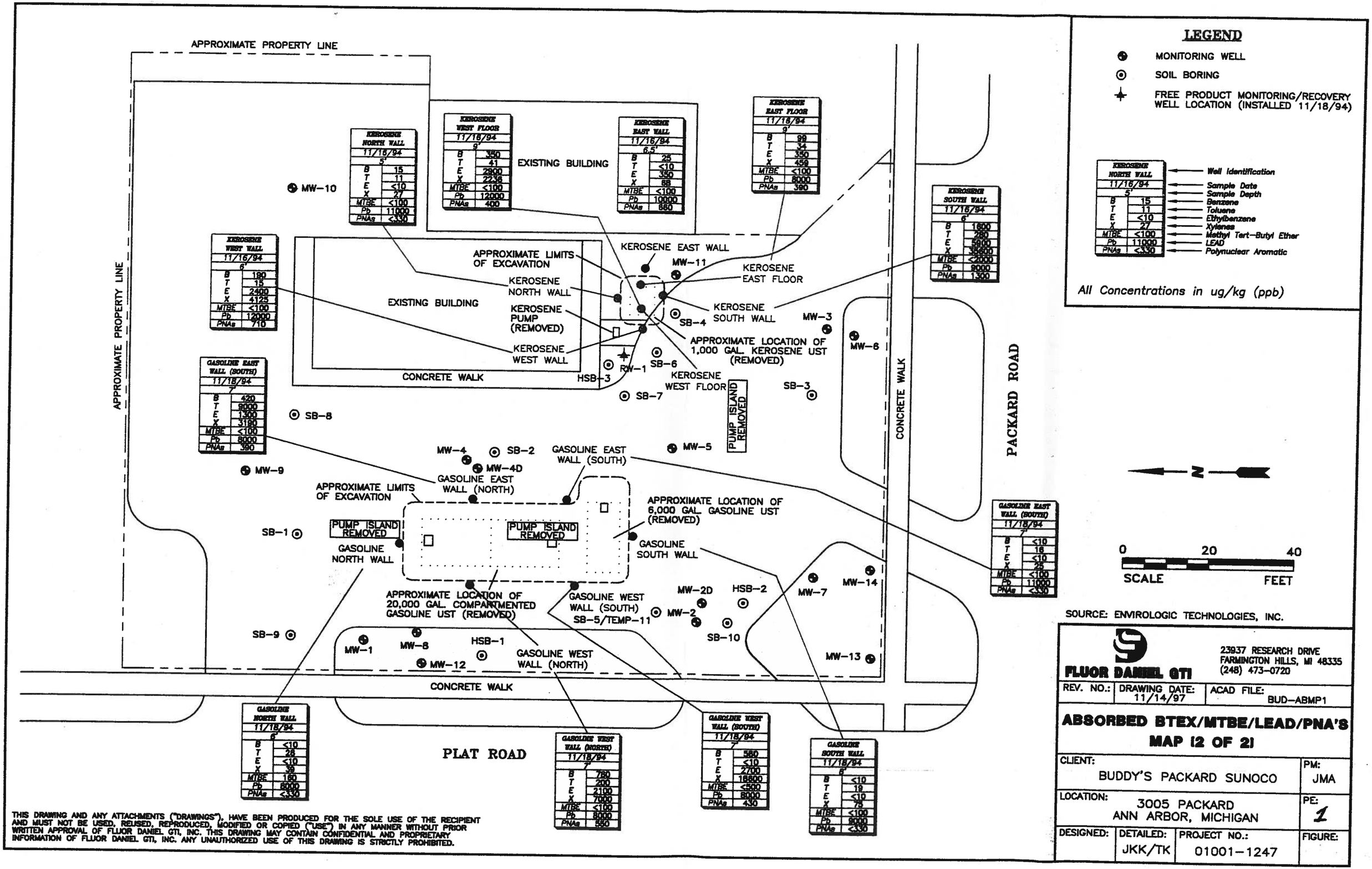


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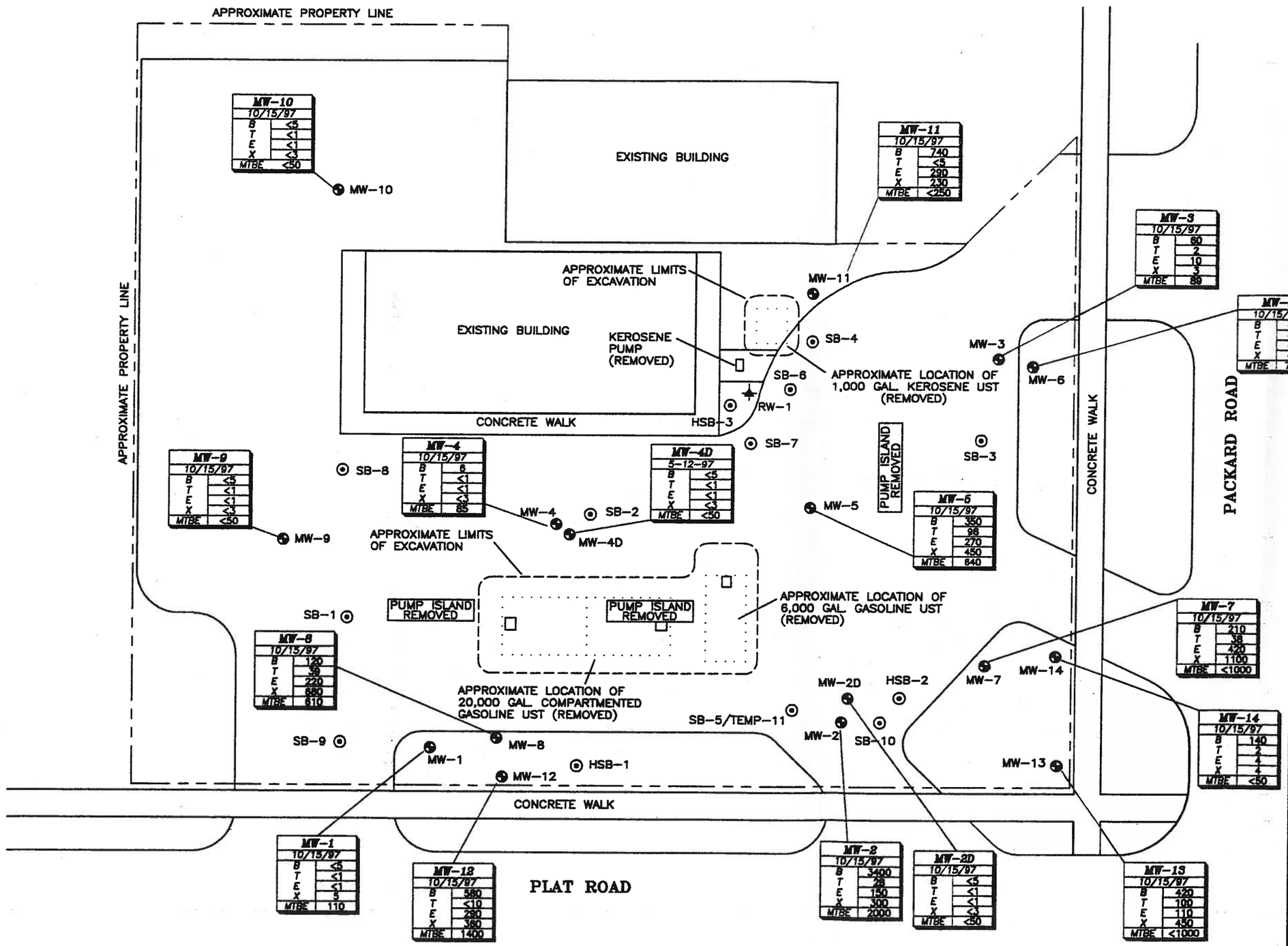
|---|---|---|

**ABSORBED BTEX/MTBE/LEAD/PNA'S**
**MAP (2 OF 2)**

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | | | PE: 1 |
| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: |




| MW-10 | |
|---|---|
| 10/15/97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | <3 |
| MTBE | <50 |

| MW-11 | |
|---|---|
| 10/15/97 | |
| B | 740 |
| T | <5 |
| E | 290 |
| X | 230 |
| MTBE | <250 |

| MW-3 | |
|---|---|
| 10/15/97 | |
| B | 60 |
| T | 2 |
| E | 10 |
| X | 3 |
| MTBE | 89 |

| MW-6 | |
|---|---|
| 10/15/97 | |
| B | <50 |
| T | <10 |
| E | <10 |
| X | <30 |
| MTBE | 7800 |

| MW-9 | |
|---|---|
| 10/15/97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | <3 |
| MTBE | <50 |

| MW-4 | |
|---|---|
| 10/15/97 | |
| B | 6 |
| T | <1 |
| E | <1 |
| X | <3 |
| MTBE | 85 |

| MW-4D | |
|---|---|
| 5-12-97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | <3 |
| MTBE | <50 |

| MW-5 | |
|---|---|
| 10/15/97 | |
| B | 350 |
| T | 98 |
| E | 270 |
| X | 450 |
| MTBE | 840 |

| MW-7 | |
|---|---|
| 10/15/97 | |
| B | 210 |
| T | 38 |
| E | 420 |
| X | 1100 |
| MTBE | <1000 |

| MW-8 | |
|---|---|
| 10/15/97 | |
| B | 120 |
| T | 39 |
| E | 220 |
| X | 680 |
| MTBE | 610 |

| MW-14 | |
|---|---|
| 10/15/97 | |
| B | 140 |
| T | 2 |
| E | 4 |
| X | 4 |
| MTBE | <50 |

| MW-1 | |
|---|---|
| 10/15/97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | 5 |
| MTBE | 110 |

| MW-12 | |
|---|---|
| 10/15/97 | |
| B | 580 |
| T | <10 |
| E | 290 |
| X | 380 |
| MTBE | 1400 |

| MW-2 | |
|---|---|
| 10/15/97 | |
| B | 3400 |
| T | 28 |
| E | 150 |
| X | 300 |
| MTBE | 2000 |

| MW-2D | |
|---|---|
| 10/15/97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | <3 |
| MTBE | <50 |

| MW-13 | |
|---|---|
| 10/15/97 | |
| B | 420 |
| T | 100 |
| E | 110 |
| X | 450 |
| MTBE | <1000 |

## LEGEND

- MONITORING WELL
- SOIL BORING
- FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)

| MW-1 | |
|---|---|
| 10/15/97 | |
| B | <5 |
| T | <1 |
| E | <1 |
| X | 5 |
| MTBE | 110 |

- Well Identification
- Sample Date
- Benzene
- Toluene
- Ethylbenzene
- Xylenes
- Methyl Tert-Butyl Ether

All Concentrations in ug/L (ppb)
NA – NOT ANALYZED

SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 11/11/97 | ACAD FILE: BUD-DHC |
|---|---|---|

# DISSOLVED HYDROCARBON BTEX/MTBE MAP

| CLIENT: BUDDY'S PACKARD SUNOCO | PM: JMA |
|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | PE: |

| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: 2 |
|---|---|---|---|

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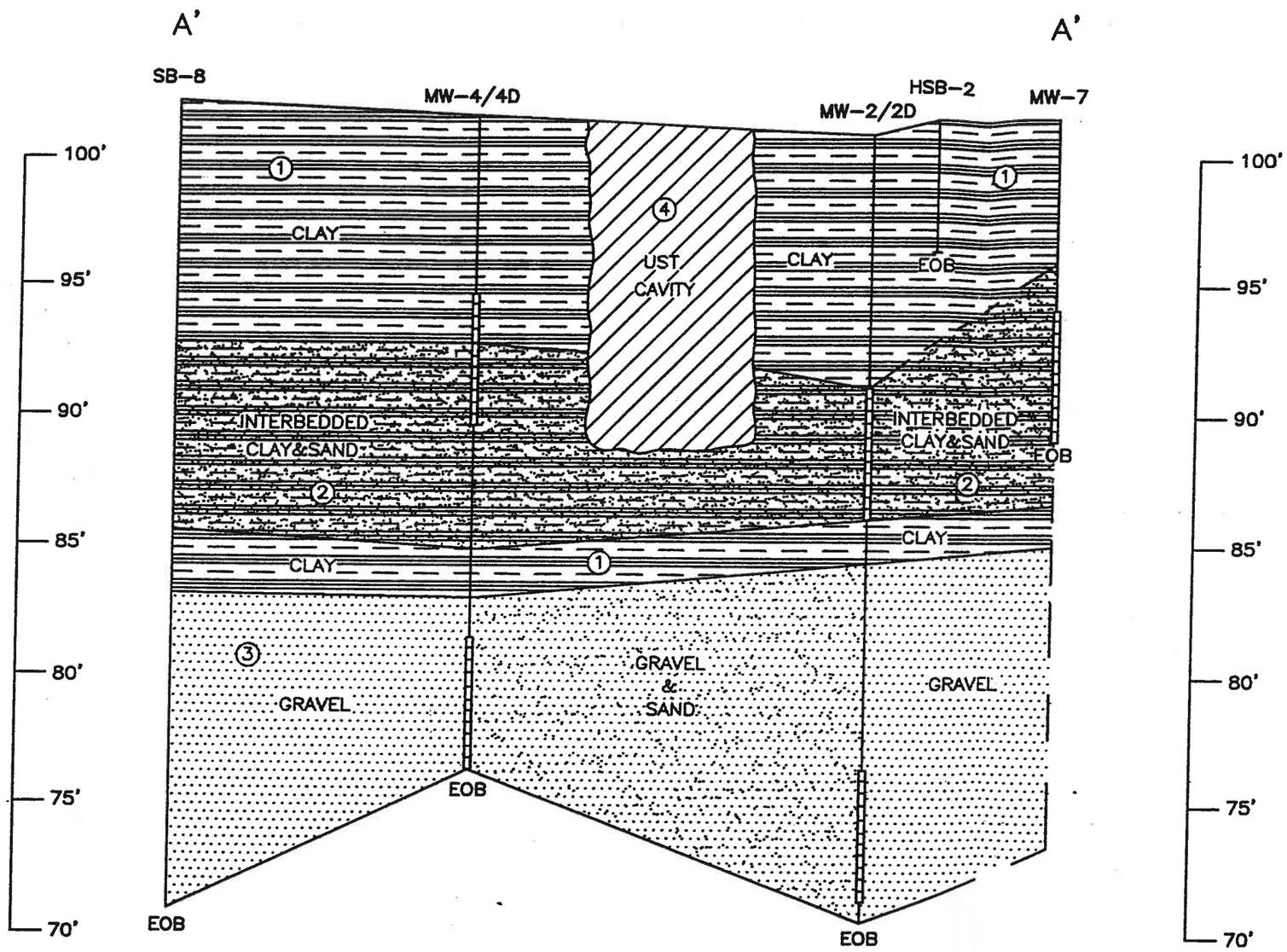
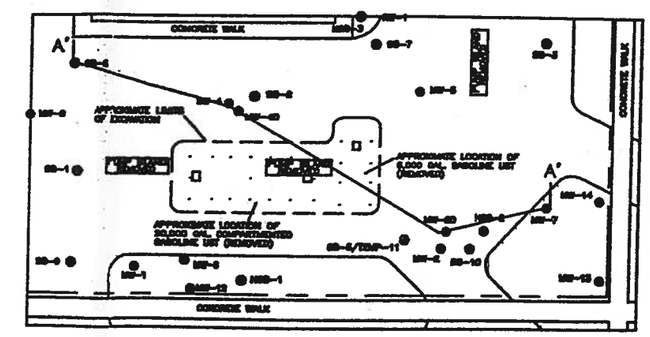



## LEGEND

- WELL SCREEN
- ① – CLAY
- ② – INTERBEDDED CLAY & SAND
- ③ – GRAVEL & SAND
- ④ – UST CAVITY, BACKFILL

NOTE: HORIZONTAL SCALE 1"= 20'
VERTICAL SCALE 1"= 5'




0 20 40
SCALE FEET

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(248) 473-0720

| REV. NO.: | DRAWING DATE: 8/12/97 | ACAD FILE: BUDA-A |
|---|---|---|

# CROSS SECTION A-A'

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 Packard Ann Arbor, Michigan | | | PE: |
| DESIGNED: | DETAILED: TK | PROJECT NO.: 01001-1247 | FIGURE: 3 |

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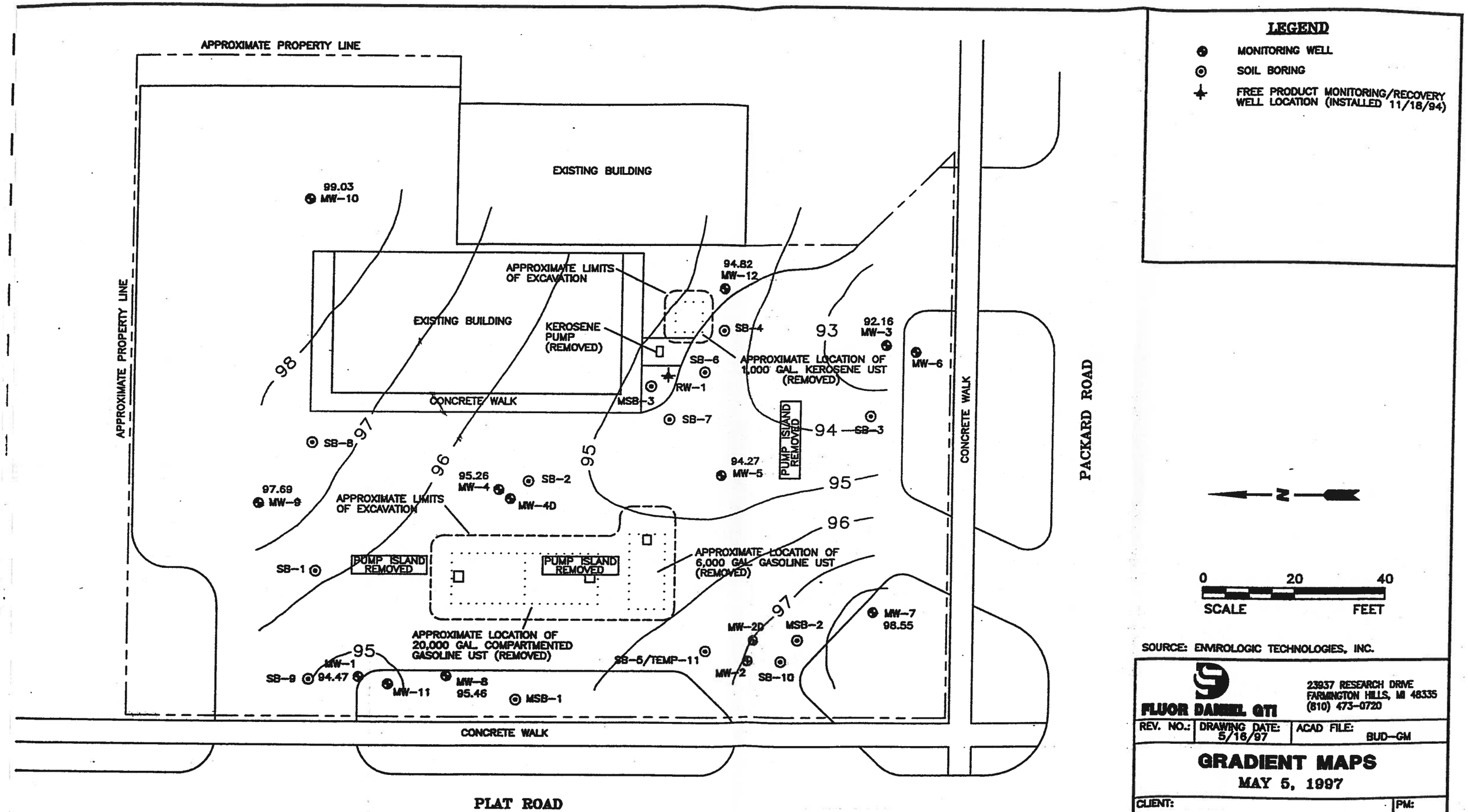


SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI

23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(810) 473-0720

| REV. NO.: | DRAWING DATE: 5/16/97 | ACAD FILE: BUD-GM |
|---|---|---|

# GRADIENT MAPS

MAY 5, 1997

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | | | PE: |
| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: 4 |

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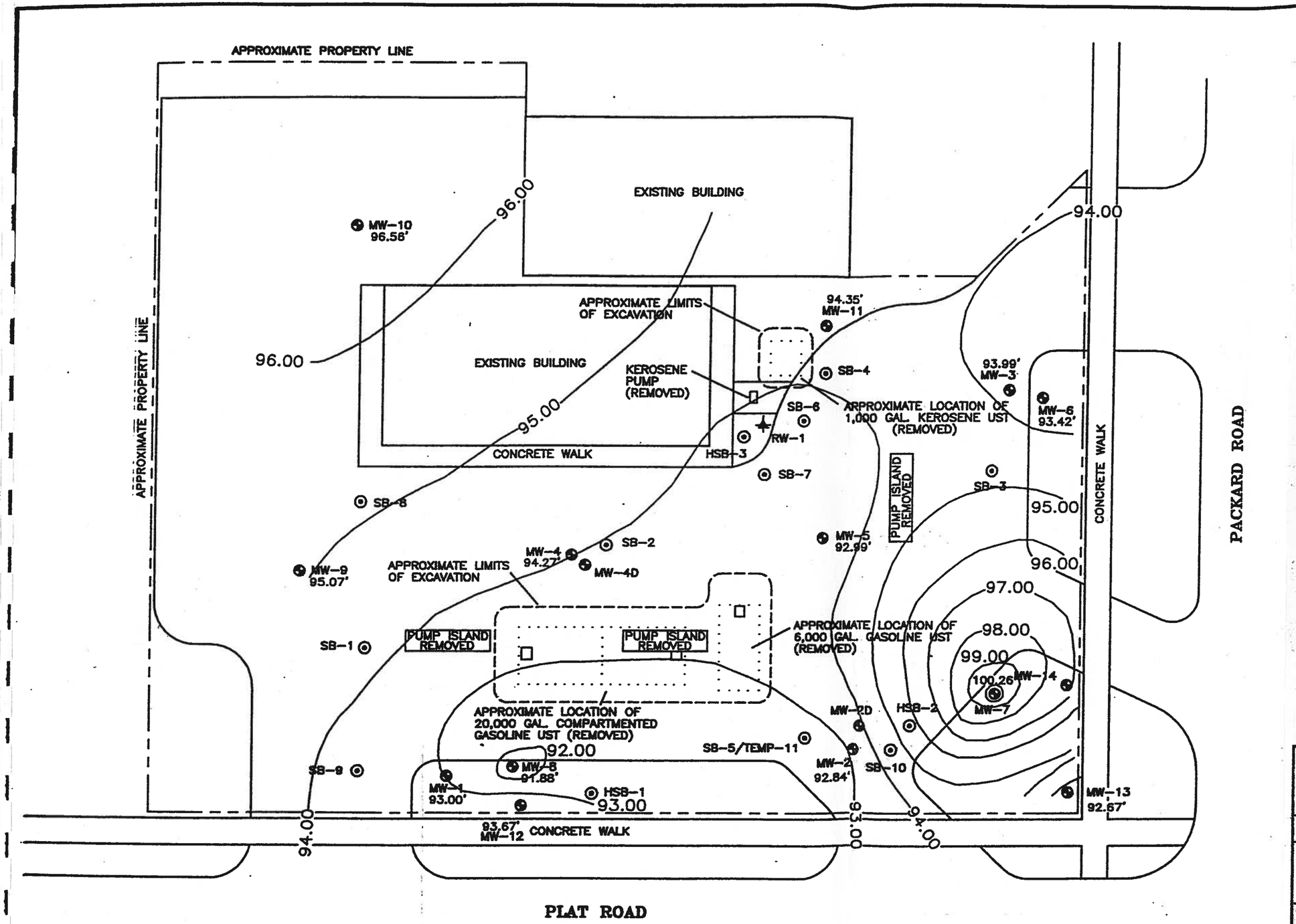


## LEGEND

- MONITORING WELL
- SOIL BORING
- FREE PRODUCT MONITORING/RECOVERY WELL LOCATION (INSTALLED 11/18/94)
- GROUNDWATER CONTOUR LINE
- 92.67' GROUNDWATER ELEVATION INTERVAL = 1.0 Feet

N

0 20 40
SCALE FEET

SOURCE: ENVIROLOGIC TECHNOLOGIES, INC.

FLUOR DANIEL GTI
23937 RESEARCH DRIVE
FARMINGTON HILLS, MI 48335
(248) 473-0720

| REV. NO.: | DRAWING DATE: 8/12/97 | ACAD FILE: BUD-GM1 |
|---|---|---|

# GRADIENT MAP
## JULY 18, 1997

| CLIENT: BUDDY'S PACKARD SUNOCO | | | PM: JMA |
|---|---|---|---|
| LOCATION: 3005 PACKARD ANN ARBOR, MICHIGAN | | | PE: |
| DESIGNED: | DETAILED: JKK/TK | PROJECT NO.: 01001-1247 | FIGURE: 5 |

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TABLE 1

HISTORICAL BTEX/MTBE/PNAs/LEAD CONCENTRATIONS IN SOIL (ug/kg)

BUDDY'S PACKARD SUNOCO #28
3005 PACKARD & PLAT
ANN ARBOR, MICHIGAN

| Sample Location | Sample Depth | Sample Date | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Lead | |
|---|---|---|---|---|---|---|---|---|---|
| Tier I Residential Direct Contact Criteria | | | 88,000 | 620,000 | 380,000 | 40,000 | 3,600,000 | 400,000 | 1 |
| SB-1 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 6400 | |
| SB-2 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 6300 | |
| SB-3 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 9200 | |
| SB-3 | 10-12' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5100 | |
| SB-4 | 4-6' | 11/04/94 | 25 | 620 | 700 | 2900 | <100 | 12100 | |
| SB-4 | 9-11' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 3500 | |
| SB-5 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 4500 | |
| SB-5 | 9-11' | 11/04/94 | 340 | <10 | <10 | <30 | <100 | 5300 | |
| SB-8 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5500 | |
| SB-9 | 4-6' | 11/04/94 | <10 | <10 | <10 | <30 | <100 | 5700 | |
| | | | | | | | | | |
| MW-1 | 4-6' | 01/09/95 | <10 | <10 | <10 | <30 | <100 | 8000 | |
| SB-10 | 4-6' | 01/09/95 | 160 | 45 | 210 | 231 | <100 | 8000 | |
| MW-3 | 4-6' | 01/09/95 | 430 | 110 | 1100 | 6100 | 180 | 12000 | |
| | | | | | | | | | |
| Kerosene East Wall | 6.5' | 11/16/94 | 25 | <10 | 350 | 68 | <100 | 10000 | |
| Kerosene North Wall | 5' | 11/16/94 | 15 | 11 | <10 | 27 | <100 | 11000 | |
| Kerosene West Wall | 6' | 11/16/94 | 190 | 15 | 2400 | 4125 | <100 | 12000 | |
| Kerosene South Wall | 6' | 11/16/94 | 1600 | 280 | 5900 | 35600 | <2000 | 9000 | |
| Kerosene East Floor | 9' | 11/16/94 | 99 | 34 | 350 | 459 | <100 | 8000 | |
| Kerosene West Floor | 9' | 11/16/94 | 350 | 41 | 2900 | 2236 | <100 | 12000 | |
| | | | | | | | | | |
| Gasoline South Wall | 8' | 11/18/94 | <10 | 19 | <10 | 75 | <100 | 9000 | |
| Gasoline North Wall | 6' | 11/18/94 | <10 | 28 | <10 | 39 | 160 | 8000 | |
| Gasoline East Wall (North) | 7' | 11/18/94 | 420 | 9000 | 1300 | 3190 | <100 | 8000 | |
| Gasoline East Wall (South) | 7' | 11/18/94 | <10 | 16 | <10 | 25 | <100 | 11000 | |
| Gasoline West Wall (North) | 7' | 11/18/94 | 780 | 200 | 2100 | 7000 | <100 | 8000 | |
| Gasoline West Wall (South) | 7' | 11/18/94 | 580 | <10 | 2700 | 18600 | <500 | 8000 | |
| | | | | | | | | | |
| MW-4 | 10' - 12' | 05/07/97 | NA | NA | NA | NA | NA | NA | |
| MW-8 | 7' - 9' | 05/07/97 | 200 | 42 | 66 | 150 | 210 | NA | |
| | | | | | | | | | |

NA - Not Analyzed

## TABLE 2

### BTEX/MTBE/PNAs/LEAD CONCENTRATIONS IN GROUNDWATER (ugl)

**BUDDY'S PACKARD SUNOCO #28**
**3005 PACKARD & PLAT**
**ANN ARBOR, MICHIGAN**

| Well I.D. | Sample Date | Benzene | Toluene | Ethyl-benzene | Xylenes | MTBE | Lead | PNAs | |
|---|---|---|---|---|---|---|---|---|---|
| Groundwater Utility Worker GCC | | 9,300 | 526,000 | 169,000 | 186,000 | 1,700,000 | ID | NC | Naphthalene 3 |
| SB-5 TMW-1 | 11/04/94 | 26,000 | 910 | 600 | 2,200 | 9,300 | NA | 21 | Naphthalene - |
| MW-1 | 01/17/95 | <1 | <1 | <1 | <1 | <50 | <3 | <5 | |
| MW-1 | 10/15/97 | <5 | <1 | <1 | 5 | 110 | NA | NA | |
| MW-2 | 01/17/95 | 440 | <1 | <1 | <1 | 2,800 | <3 | <5 | |
| MW-2 | 10/15/97 | 3,400 | 28 | 150 | 300 | 2,000 | NA | NA | |
| MW-2D | 01/17/95 | <1 | <1 | <1 | <1 | <50 | <3 | <5 | |
| MW-2D | 10/15/97 | <5 | <1 | <1 | <3 | <50 | NA | NA | |
| MW-3 | 01/17/95 | 3 | <1 | 6 | 5 | 21,000 | <3 | <5 | |
| MW-3 | 10/15/97 | 60 | 2 | 10 | 3 | 89 | NA | NA | |
| MW-4 | 05/12/97 | <5 | <1 | <1 | <3 | 180 | NA | <5 | |
| MW-4 | 10/15/97 | 6 | <1 | <1 | <3 | 85 | NA | NA | |
| MW-4D | 05/12/97 | <5 | <1 | <1 | <3 | 180 | NA | <5 | |
| MW-4D | 10/15/97 | <5 | <1 | <1 | <3 | <50 | | | |
| MW-5 | 05/12/97 | 2,700 | 6,700 | 1,000 | 7,500 | 720 | NA | 115 | Naphthalene - |
| MW-5 | 10/15/97 | 350 | 96 | 270 | 450 | 640 | NA | NA | |
| MW-6 | 10/15/97 | <50 | <10 | <10 | <30 | 7,600 | NA | NA | |
| MW-7 | 05/12/97 | 3,700 | 66 | 800 | 3,300 | 730 | NA | 1,290 | Naphthalene - |
| MW-7 | 10/15/97 | 210 | 38 | 420 | 1,100 | <50 | NA | NA | |
| MW-8 | 05/09/97 | 490 | 740 | 2,100 | 9,600 | 790 | NA | 307 | Naphthalene - |
| MW-8 | 10/15/97 | 120 | 39 | 220 | 680 | 610 | NA | NA | |
| MW-9 | 05/09/97 | <5 | <1 | <1 | <3 | <50 | NA | <5 | |
| MW-9 | 10/15/97 | <5 | <1 | <1 | <3 | <50 | NA | NA | |
| MW-10 | 05/09/97 | <5 | <1 | <1 | <3 | <50 | NA | <5 | |
| MW-10 | 10/15/97 | <5 | <1 | <1 | <3 | <50 | NA | NA | |
| MW-11 | 05/12/97 | 330 | 13 | 39 | 290 | <50 | NA | <5 | |
| MW-11 | 10/15/97 | 740 | <1 | 290 | 230 | <250 | NA | NA | |
| MW-12 | 07/18/97 | 1,400 | 14 | 200 | 430 | 2,200 | NA | NA | |
| MW-12 | 10/15/97 | 580 | <10 | 290 | 360 | 1,400 | NA | NA | |
| MW-13 | 07/22/97 | 42 | 2 | 7 | 4 | <50 | NA | NA | |
| MW-13 | 10/15/97 | 420 | 100 | 110 | 450 | <1000 | NA | NA | |
| MW-14 | 07/22/97 | 310 | 120 | 280 | 560 | <50 | NA | NA | |
| MW-14 | 10/15/97 | 140 | 2 | 4 | 4 | <50 | NA | NA | |

NA - Not Analyzed

NC-No Criteria

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-1



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

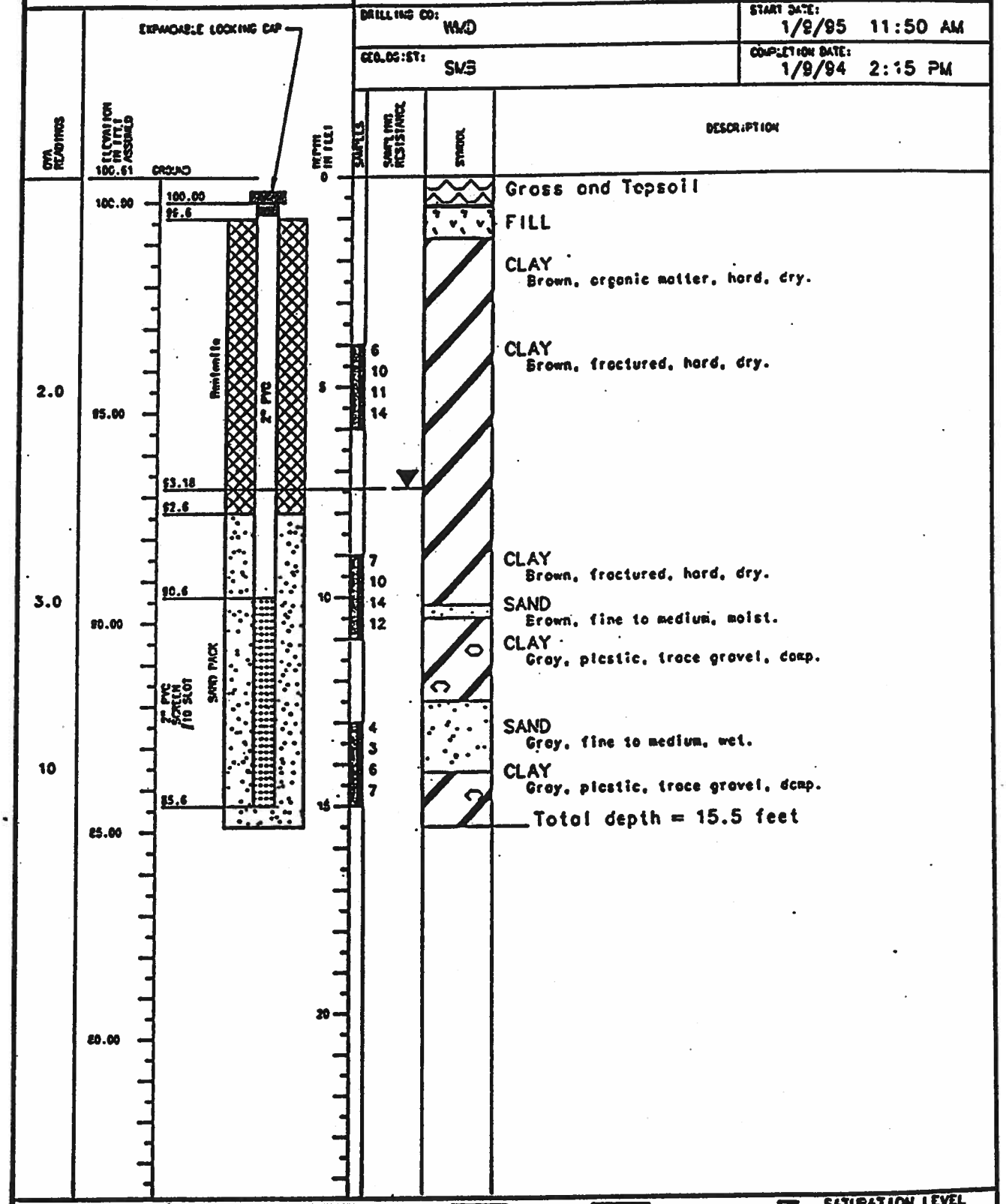
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/9/95 11:50 AM

GEOLOGIST: SWB

COMPLETION DATE: 1/9/94 2:15 PM




GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING

SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL

N.D. NOT DETECTED BY Hnu OR OVA

**ENVIROLOGIC TECHNOLOGIES, INC.**
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2

SHEET 1 of 1

CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 840150

LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WWD

START DATE: 1/9/95 2:25 PM

GEOLOGIST: SWB

COMPLETION DATE: 1/9/95 5:30 PM

| PID READINGS | ELEVATION IN FEET ASSUMED | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|---|
| | 101.25 GROUND | 0 | | | | ASPHALT |
| | 100.66 | | | | | FILL |
| | 100.0 | | | | | |
| | 100.00 | | | | | CLAY<br>Brown, blue mottled, organic matter, dry. |
| | | | | 3<br>9<br>10<br>11 | | CLAY<br>Brown, blue mottled, orginc matter, dry. |
| 150 | | 5 | | | | |
| | 95.00 | | | | | |
| | | | | 5<br>9 | | CLAY<br>Brown, trace gravel, dry. |
| >1000 | 93.88<br>93.5 | | | 14<br>18 | | |
| | 91.5 | 10 | | | | |
| | 90.00 | | | 6<br>5<br>6<br>5 | | SAND<br>Gray, fine, with silt, wet. |
| 500 | | | | | | |
| | | | | 3<br>10<br>8<br>7 | | CLAY<br>Gray, plastic, some sand, moist. |
| 150 | | | | | | SAND<br>Gray, fine, with silt, wet. |
| | 86.5 | 15 | | | | CLAY<br>Gray, plastic, some sand, moist. |
| | | | | | | Total depth = 15.5 feet |
| | 85.00 | | | | | |
| | | 20 | | | | |
| | 80.00 | | | | | |

EXPANDABLE LOCKING CAP

Bentonite

2" PVC

SAND PACK

2" PVC SCREEN #10 SLOT

GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING

SAND | CLAY | TILL | ROCK | TOPSOIL | N.D. NOT DETECTED BY HNu OR OVA | STATIC WATER LEVEL

ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-2D



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

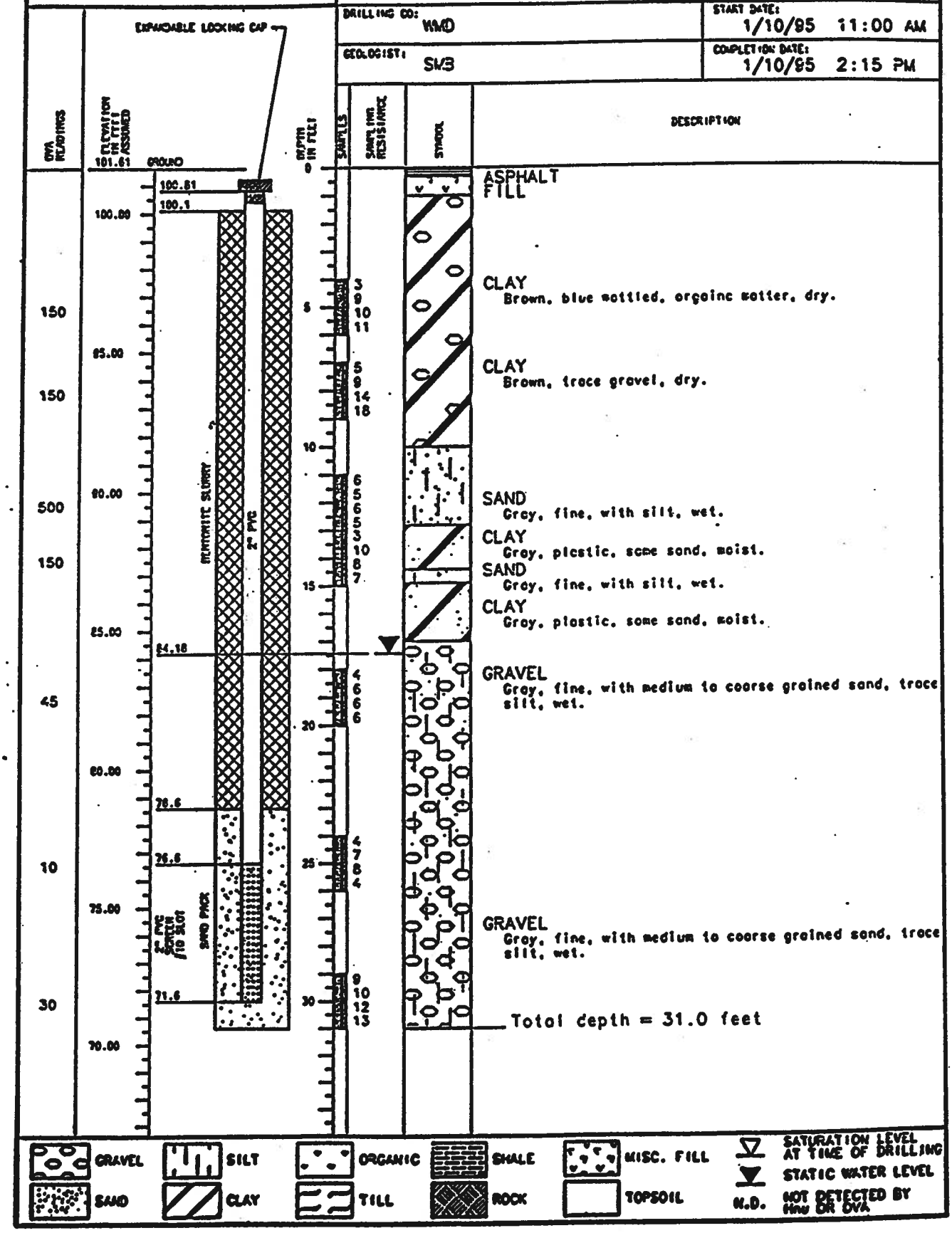
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WMD

START DATE: 1/10/95 11:00 AM

GEOLOGIST: SWB

COMPLETION DATE: 1/10/95 2:15 PM



ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF MW-3



CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

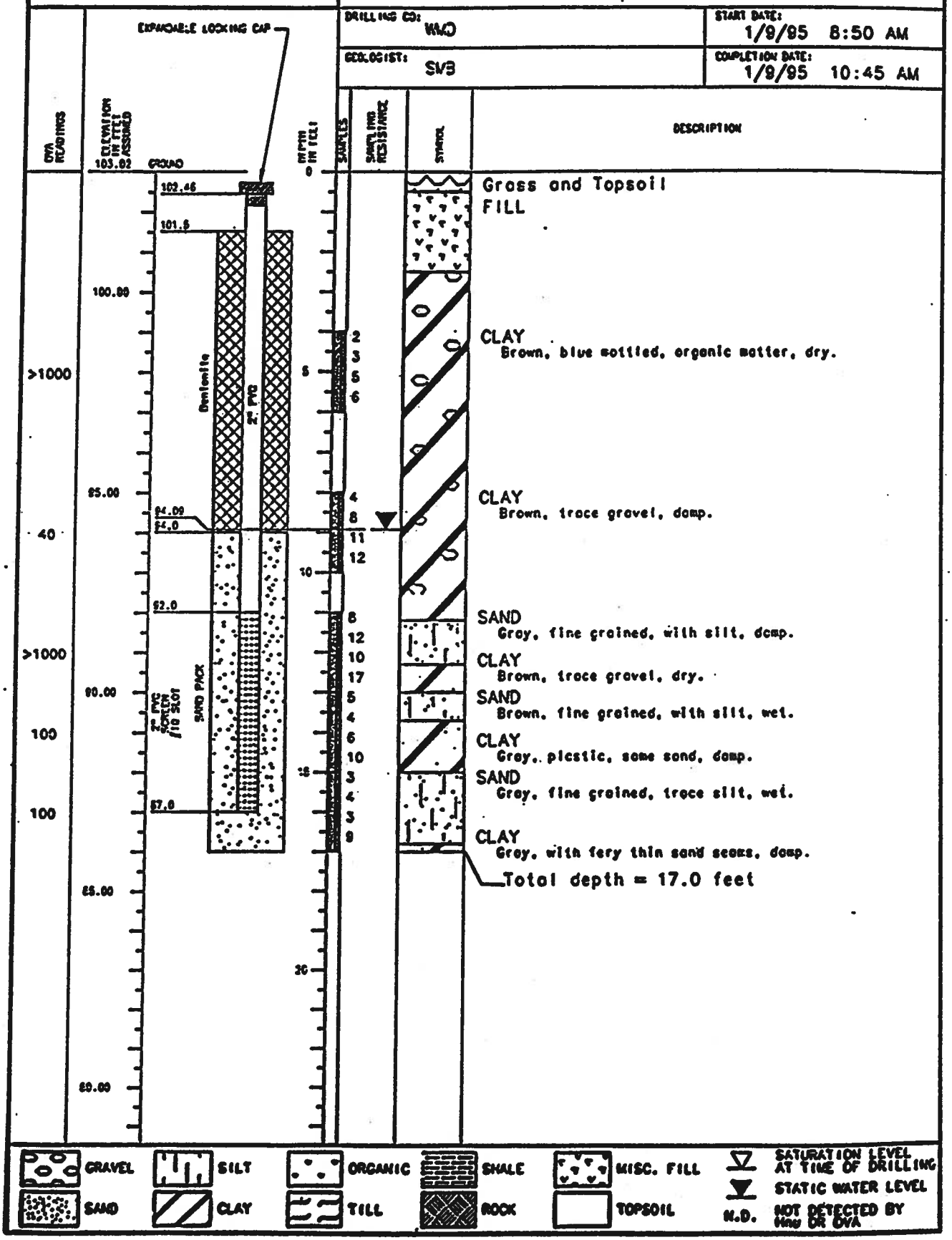
LOCATION: ANN ARBOR, MICHIGAN

DRILLING CO: WWO

START DATE: 1/9/95 8:50 AM

GEOLOGIST: SWB

COMPLETION DATE: 1/9/95 10:45 AM



ENVIROLOGIC TECHNOLOGIES, INC.
2960 INTERSTATE PARKWAY
KALAMAZOO, MI 49001
(616) 342-1100

# LOG OF RW-1

CLIENT: PIPELINE - BUDDY'S PACKARD SUNOCO 940150

LOCATION: ANN ARBOR, MICHIGAN

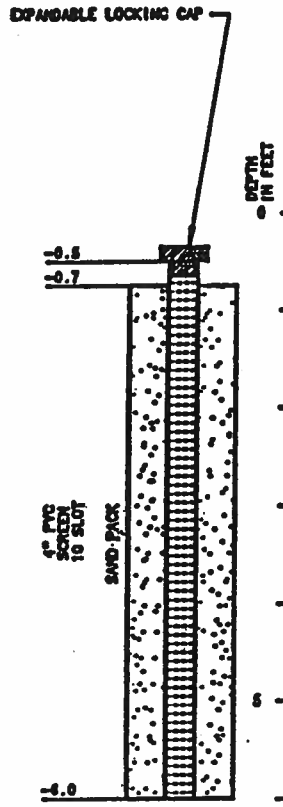
DRILLING CO: Keith Fransted Constr.

START DATE: 11/18/94

GEOLOGIST: DHN

COMPLETION DATE: 11/18/94

| OVA READINGS | DEPTH IN FEET | SAMPLES | SAMPLING RESISTANCE | SYMBOL | DESCRIPTION |
|---|---|---|---|---|---|
| | 0 | | | | ASPHALT 3"<br>FILL<br>Sand and gravel, damp. |
| | | | | | CLAY<br>Brown, mottled, low plasticity, some sand and gravel, organic matter, wet at 3'. Product observed. |
| | 5 | | | | CLAY<br>Dark brown, medium plasticity, some sand, moist |
| | | | | | Total depth = 6.0 feet |
| | 10 | | | | |




NOTE:
Recovery well RW-1 was installed by placing the casing in an open excavation. Soil was then backfilled around the casing.

GRAVEL | SILT | ORGANIC | SHALE | MISC. FILL | SATURATION LEVEL AT TIME OF DRILLING
SAND | CLAY | TILL | ROCK | TOPSOIL | STATIC WATER LEVEL
N.D. NOT DETECTED BY HNu OR OVA

# Drilling Log

FLUOR DANIEL GTI

## Monitoring Well MW-4 & MW-4D

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Peckerd, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. ____ Total Hole Depth 26 ft. Diameter 6.25 in.
Top of Casing ____ Water Level Initial 9.3 ft. Static ____
Screen: Dia 2 in. Length 5/5 ft. Type/Size slotted/0.020 in.
Casing: Dia 2 in. Length 12/25 ft. Type SC40PVC
Fill Material #5 Filter Sand Rig/Core Split Spoon
Drill Co. ESR DRILLING Method Mobile B-59
Driller Dan Melhis Log By Chris Salvador Date 5/8/97 Permit # ____
Checked By Jim Alfonsi License No. ____

See Site Map For Boring Location

COMMENTS:

Black Column = Lithology determined from hand auger and soil cuttings. X = Sample sent to laboratory for analytical analysis.

| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Blow Count/ % Recovery | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 60% |
|---|---|---|---|---|---|---|---|
| -2 | | | | | | | |
| 0 | | | | | | Asp | Asphalt surface. |
| | | | | | | Tps | Brown, organic top soil. |
| 2 | | | | | | SC | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 4 | | | | | | | |
| | | 1.7 | SS1 | 7 15 22 31 | | CL | Brown with gray mottling, damp, stiff, slightly plastic, CLAY, SOME SILT. |
| 6 | | 2.2 | SS2 | 11 14 21 24 | | | |
| 8 | | 2.4 | SS3 | 4 6 12 16 | | SW | Brown, saturated, loose, MEDIUM AND FINE SAND. |
| 10 | | | | | | CL | Brown, damp, stiff, slightly plastic, CLAY, SOME SILT. |
| | | | | | | SW | Brown, saturated, loose, MEDIUM AND FINE SAND. |
| 12 | | 1.7 | SS4 | 6 7 11 12 | | CL | Gray, damp, moderately stiff, CLAY, SOME SILT. |
| | | | | | | SW | Gray, saturated, loose, FINE AND MEDIUM SAND. |
| 14 | | | | | | | |
| 16 | | | | | | | |
| | | 1.7 | SS5 | 8 21 14 9 | | SW | Gray, very moist, moderately stiff, plastic, CLAY, TRACE SILT. |
| 18 | | | | | | CL | |
| | | | | | | SP | Gray, saturated, loose, MEDIUM AND COARSE SAND, SOME FINE GRAVEL. |
| 20 | | | | | | | |
| 22 | | 2.0 | SS6 | 3 5 7 10 | | SW | As above, no gravel. |
| 24 | | | | | | | |
| 26 | | | | | | | End of Boring = 26 feet |

# Drilling Log

## Monitoring Well MW-5

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *14.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *12.0 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *8.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Meihls* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*

| Depth (ft.) | Well Completion | SPECMETER (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | | | Asp | Asphalt surface. |
| | | | | | Tps | Organic top soil. |
| 2 | | | | | SC | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 4 | | | | | | |
| 6 | | | | | | |
| 8 | | | | | | |
| 10 | | NA | SS1 | | CL | Grayish brown, moist, moderately stiff, slightly plastic, CLAY, SOME SILT. |
| 12 | | NA | SS2 | | SW | Brown, saturated, loose, MEDIUM and FINE SAND. |
| 14 | | | | | CL | Grayish brown, moist, moderately stiff, slightly plastic CLAY, SOME SILT. |
| | | | | | | End of exploration = 14.0 feet. |
| 16 | | | | | | |
| 18 | | | | | | |
| 20 | | | | | | |
| 22 | | | | | | |
| 24 | | | | | | |

# Drilling Log

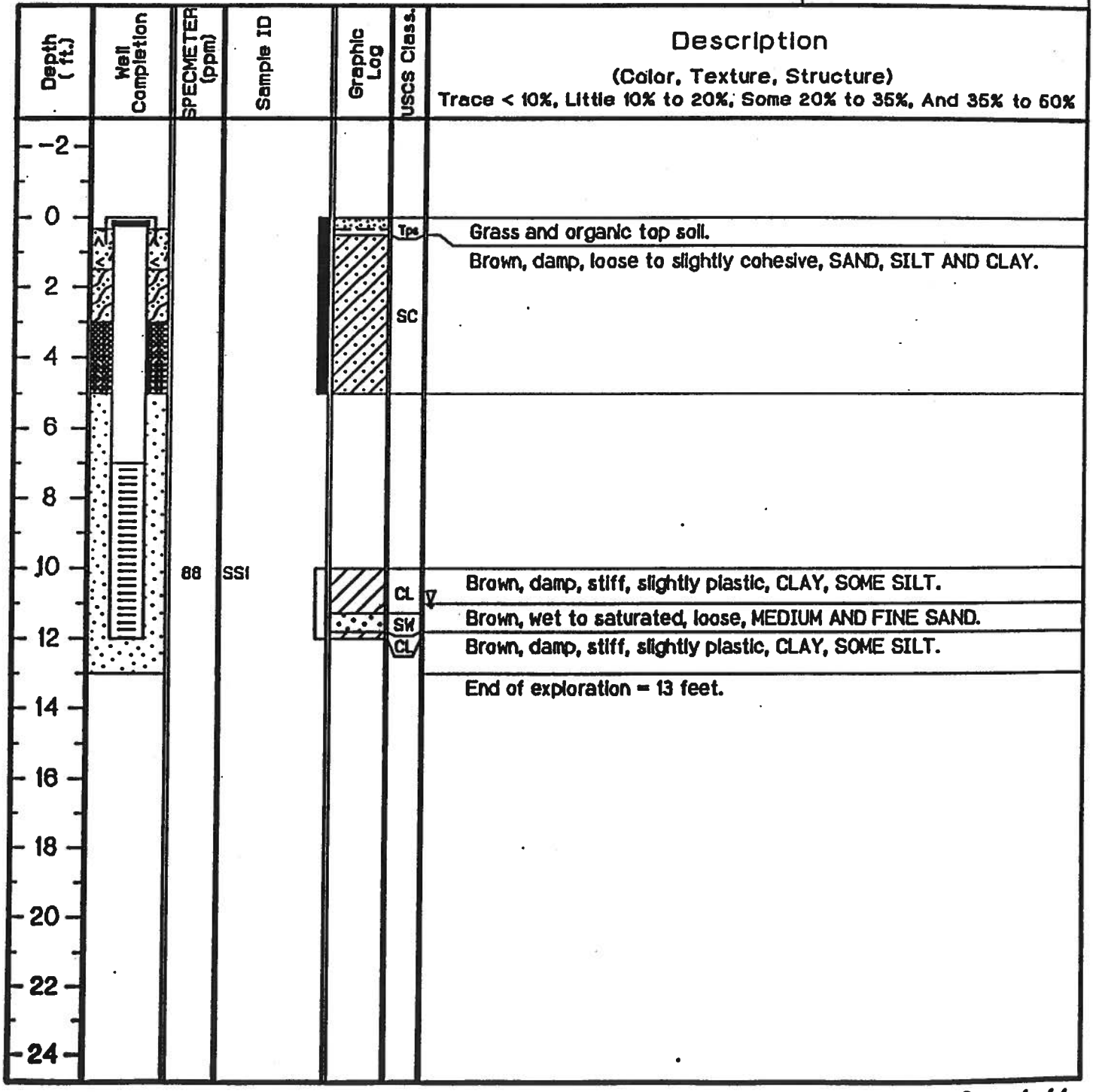
## Monitoring Well MW-6

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Peckerd, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 13.0 ft. Diameter 6.25 in.
Top of Casing _____ Water Level Initial 11.0 ft. Static _____
Screen: Dia 2.0 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.020 in.
Casing: Dia 2.0 in. Length 7.0 ft. Type Sch 40 PVC
Fill Material #5 Filter Sand Rig/Core Mobil B59
Drill Co. ESR DRILLING Method Hollow Stem Auger
Driller Dan Melhis Log By Chris Salvador Date 5/8/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map For Boring Location

COMMENTS:

X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.




| Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% | USCS Class. |
|---|---|
| Grass and organic top soil. | Tps |
| Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. | SC |
| Brown, damp, stiff, slightly plastic, CLAY, SOME SILT. | CL |
| Brown, wet to saturated, loose, MEDIUM AND FINE SAND. | SW |
| Brown, damp, stiff, slightly plastic, CLAY, SOME SILT. | CL |
| End of exploration = 13 feet. | |

# Drilling Log

## Monitoring Well MW-7

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packerd, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 12.5 ft. Diameter 6.25 in.
Top of Casing _____ Water Level Initial 7.0 ft. Static _____
Screen: Dia 2.0 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.020 in.
Casing: Dia 2.0 in. Length 6.5 ft. Type Sch 40 PVC
Fill Material #5 Filter Sand Rig/Core Mobil B59
Drill Co. ESR DRILLING Method Hollow Stem Auger
Driller Dan Meihls Log By Chris Salvador Date 5/8/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map For Boring Location

COMMENTS:

X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.

| Depth (ft.) | Well Completion | SPECMETER (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | | | Tps | Grass and organic top soil. |
| | | | | | | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 2 | | | | | SC | |
| 4 | | | | | | |
| 6 | | | | | | |
| | | NA | SS1 | | | |
| 8 | | | | | SW | Brown, saturated, loose, MEDIUM AND COURSE SAND. |
| | | | | | CL | Brown, damp, stiff, slightly plastic, CLAY, SOME SILT. |
| 10 | | NA | SS2 | | | Brown, moist, stiff, slightly plastic, CLAY, SOME SILT. |
| | | | | | CL | |
| 12 | | | | | | End of exploration = 12.5 feet. |
| 14 | | | | | | |
| 16 | | | | | | |
| 18 | | | | | | |
| 20 | | | | | | |
| 22 | | | | | | |
| 24 | | | | | | |

# Drilling Log

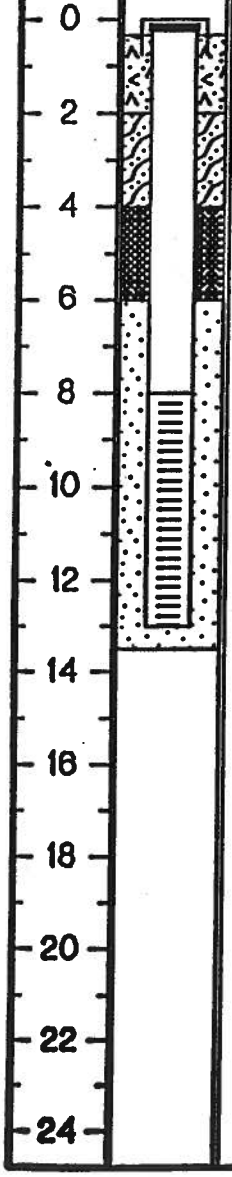
## Monitoring Well MW-8

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.5 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial _____ Static *11.3 ft.*
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *8.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Melhis* Log By *Chris Salvador* Date *5/7/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



| Depth (ft.) | SPECMETER (ppm) | Sample ID | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|
| 0 | | | Tps | Grass and organic top soil. |
| | | | SC | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 5 | 1.8 | SS1 | CL | Brown, damp, stiff, CLAY AND SILT. |
| 7 | 30.9 | SS2 | CL | As above, some gray mottling. |
| 9 | 12.7 | SS3 | CL | As above, CLAY, SOME SILT, slightly plastic. |
| 11 | 4.9 | SS4 | CL | As above. |
| 12 | | | SW | Gray, saturated, loose, FINE and MEDIUM SAND. |
| 13 | | | CL | Gray, moist, moderately stiff, plastic, CLAY. |
| 13.5 | | | | End of exploration = 13.5 feet. |

# Drilling Log

## Monitoring Well MW-9

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packerd, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 13.0 ft. Diameter 6.25 in.
Top of Casing _____ Water Level Initial _____ Static 11.0 ft.
Screen: Dia 2.0 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.020 in.
Casing: Dia 2.0 in. Length 7.0 ft. Type Sch 40 PVC
Fill Material #5 Filter Sand Rig/Core Mobil B59
Drill Co. ESR DRILLING Method Hollow Stem Auger
Driller Dan Melhis Log By Chris Salvador Date 5/7/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map For Boring Location

COMMENTS:

X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.

| Depth (ft.) | Well Completion | SPECMETER (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | | | Asp | Asphalt surface. |
| | | | | | Tps | Organic top soil. |
| 2 | | | | | SC | Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY. |
| 4 | | | | | | |
| 6 | | | | | | |
| 8 | | | | | | |
| 10 | | 2.6 | SS1 | | CL | Gray, damp, moderately stiff, plastic, CLAY. |
| | | | | | SW | Brown, wet to saturated, loose, FINE and MEDIUM SAND. |
| 12 | | | | | CL | Gray, damp, moderately stiff, plastic, CLAY. |
| | | | | | | End of exploration = 13.0 feet. |
| 14 | | | | | | |
| 16 | | | | | | |
| 18 | | | | | | |
| 20 | | | | | | |
| 22 | | | | | | |
| 24 | | | | | | |

# Drilling Log

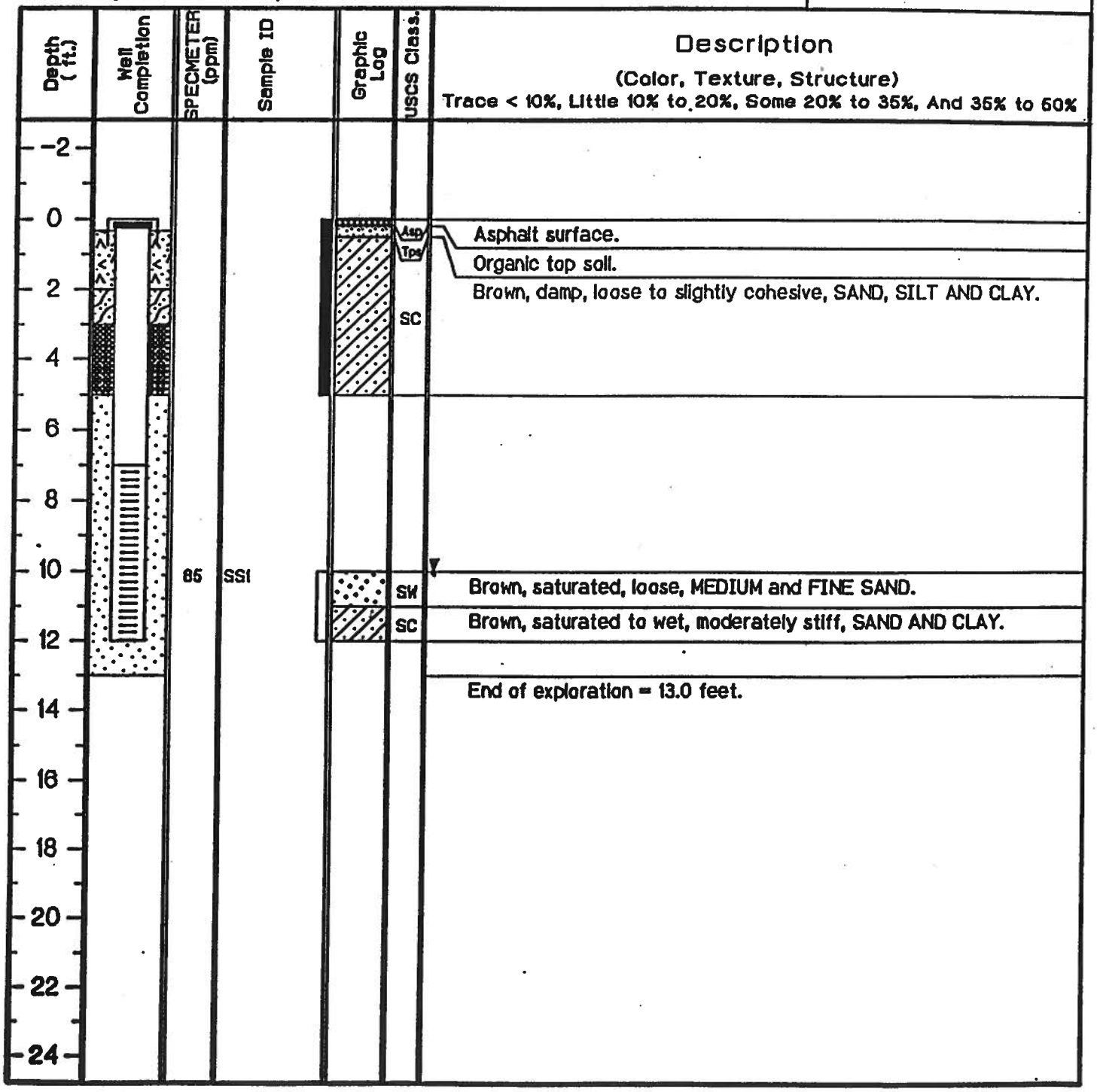
## Monitoring Well MW-10

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packard, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 13.0 ft. Diameter 6.25 in.
Top of Casing _____ Water Level Initial _____ Static 10.0 ft.
Screen: Dia 2.0 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.020 in.
Casing: Dia 2.0 in. Length 7.0 ft. Type Sch 40 PVC
Fill Material #5 Filter Sand Rig/Core Mobil B59
Drill Co. ESR DRILLING Method Hollow Stem Auger
Driller Dan Neihis Log By Chris Salvador Date 5/7/97 Permit # _____
Checked By J. Alfonsi License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*



# Drilling Log

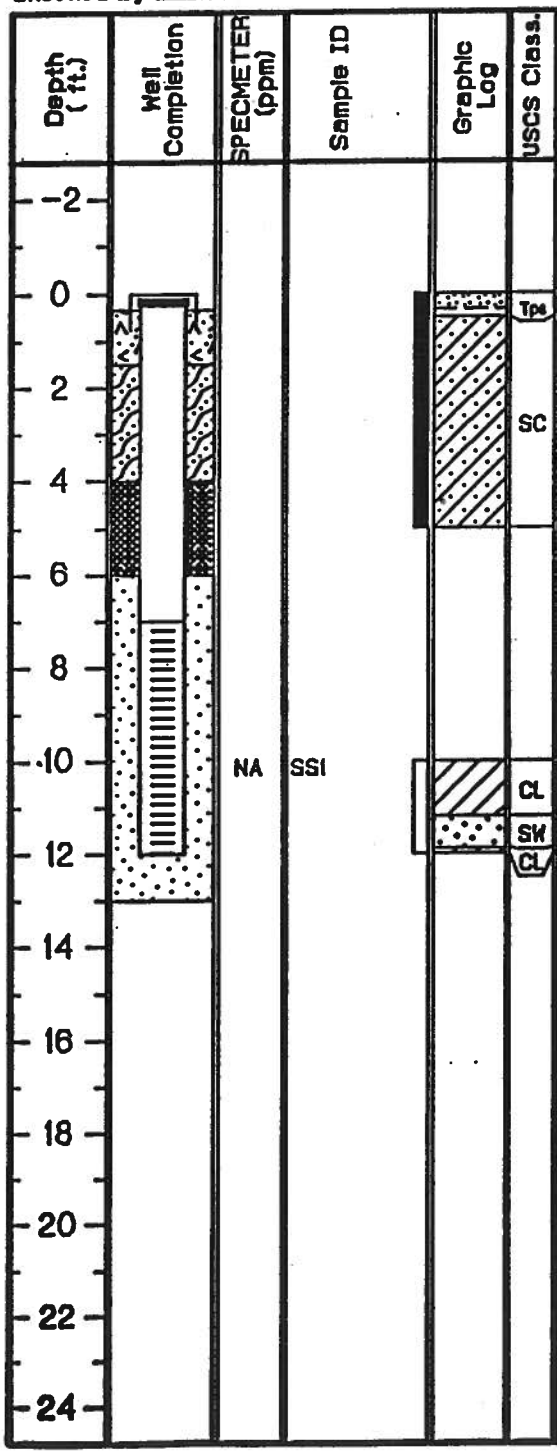
## Monitoring Well MW-11

Project *PIPELINE Buddy's #28* Owner *PIPELINE OIL SALES*
Location *3005 Packard, Ann Arbor, Michigan* Proj. No. *01001-1247*
Surface Elev. _____ Total Hole Depth *13.0 ft.* Diameter *6.25 in.*
Top of Casing _____ Water Level Initial *11.2 ft.* Static _____
Screen: Dia *2.0 in.* Length *5.0 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2.0 in.* Length *7.0 ft.* Type *Sch 40 PVC*
Fill Material *#5 Filter Sand* Rig/Core *Mobil B59*
Drill Co. *ESR DRILLING* Method *Hollow Stem Auger*
Driller *Dan Melhis* Log By *Chris Salvador* Date *5/8/97* Permit # _____
Checked By *J. Alfonsi* License No. _____

*See Site Map For Boring Location*

*COMMENTS:*

*X = Sample sent to laboratory for analysis. Black Boxes = Lithologies determined by hand auger and soil cutting observations.*




**Description**
(Color, Texture, Structure)
Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%

Grass and organic top soil.

Brown, damp, loose to slightly cohesive, SAND, SILT AND CLAY.

Brown, moist, stiff, plastic, CLAY, SOME SILT.

Brown, saturated, loose, MEDIUM AND FINE SAND.

Brown, moist, stiff, slightly plastic, CLAY, SOME SILT.

End of exploration = 13 feet.

# Drilling Log

## Monitoring Well MW-12

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 1989 Michigan Ave. Clinton, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 12.0 ft. Diameter 2.25 in.
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia 1.0 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.010 in.
Casing: Dia 1.0 in. Length 5.0 ft. Type Sch 40 PVC
Fill Material #10 Filter Sand Rig/Core Geoprobe
Drill Co. Fibertec Environmental Method Geoprobe
Driller John Zimmer Log By Chris Salvador Date 7/18/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map For Boring Location

COMMENTS:

Box Column = Samples collected for lithology descriptions.

| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | SS1 | | Tps | Grass and top soil surface. |
| | | | | | | Brown, damp, loose to cohesive, SAND AND SILT. |
| | | | | | | Brown, damp, plastic, CLAY AND SILT. |
| 2 | | | | | CL | |
| 4 | | | SS2 | | | Brown, damp, very stiff, little plastic, SILT, SOME CLAY. |
| 6 | | | | | ML | |
| 8 | | | | | | |
| 10 | | | SS3 | | | Gray, damp to moist, stiff, slightly plastic, SILT AND CLAY, SOME SAND |
| | | | | | SC | |
| 12 | | | | | | End of exploration = 12.0 feet. |
| 14 | | | | | | |

# Drilling Log

## Monitoring Well MW-13

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packard, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 12.0 ft. Diameter 2.25 in.
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia 10 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.010 in.
Casing: Dia 10 in. Length 6.0 ft. Type Sch 40 PVC
Fill Material #10 Filter Sand Rig/Core Geoprobe
Drill Co. Fibertec Environmental Method Geoprobe
Driller John Zimmer Log By Chris Salvador Date 7/18/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map For Boring Location

COMMENTS:

Box Column = Samples collected for lithology descriptions.

| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | SS1 | | Tps | Grass and top soil surface. |
| 2 | | | | | ML | Brown with some gray mottling, damp, stiff, not plastic, SILT, SOME CLAY. |
| 4 | | | SS2 | | | As above, (little plastic). |
| 6 | | | | | | |
| 8 | | | SS3 | | | As above. |
| 10 | | | SS4 | | SW | Brown, wet, loose, fine and medium SAND. |
| | | | | | ML | Brown with some gray mottling, moist, moderately stiff, little plastic, SILT, SOME CLAY. As above, (wet, SOME SAND). |
| 12 | | | | | | End of exploration = 12.0 feet. |
| 14 | | | | | | |

# Drilling Log

## Monitoring Well MW-14

Project PIPELINE Buddy's #28 Owner PIPELINE OIL SALES
Location 3005 Packerd, Ann Arbor, Michigan Proj. No. 01001-1247
Surface Elev. _____ Total Hole Depth 12.0 ft. Diameter 2.25 in.
Top of Casing _____ Water Level Initial _____ Static _____
Screen: Dia 10 in. Length 5.0 ft. Type/Size Sch 40 PVC/0.010 in.
Casing: Dia 10 in. Length 6.0 ft. Type Sch 40 PVC
Fill Material #10 Filter Sand Rig/Core Geoprobe
Drill Co. Fibertec Environmental Method Geoprobe
Driller John Zimmer Log By Chris Salvador Date 7/18/97 Permit # _____
Checked By J. Alfonsi License No. _____

See Site Map
For Boring Location

COMMENTS:

Box Column = Samples collected for lithology descriptions.

| Depth (ft.) | Well Completion | PID (ppm) | Sample ID | Graphic Log | USCS Class. | Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50% |
|---|---|---|---|---|---|---|
| -2 | | | | | | |
| 0 | | | SS1 | | Tps | Grass and top soil surface. |
| 2 | | | | | ML | Brown, damp, cohesive, moderately stiff, slightly plastic, SILT, SOME CLAY. |
| 4 | | | SS2 | | | As above. |
| 6 | | | | | | |
| 8 | | | SS3 | | | As above. |
| 10 | | | SS4 | | | As above. |
| 12 | | | | | | End of exploration = 12.0 feet. |
| 14 | | | | | | |

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

*"Better Service for a Better Environment"*

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

JACKSON DISTRICT OFFICE
STATE OFFICE BUILDING
301 E LOUIS GLICK HWY
JACKSON MI 49201-1556

January 27, 1998

Mr. Jeffrey Hanson
Pipeline Oil Sales
744 East. South Street
Jackson, Michigan 49203

Dear Mr. Hanson:

SUBJECT: Audit of Corrective Actions
Confirmed Release Date:
Location of Tank(s): Buddy's Sunoco #28,
3005 Packard, Ann Arbor, Washtenaw County, Michigan
Facility ID #: 0-002107
MERA Site ID #: 810449
MUSTFA Claim #: 6190

Under the authority of Section 21315 of Part 213 Leaking Underground Storage Tanks (LUST) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Department of Environmental Quality (DEQ), Underground Storage Tank Division (USTD), has conducted an audit of the corrective actions undertaken as the result of a release from an underground storage tank (UST) system at the above referenced site. The audit consisted of a review of district file documents.

Based on the audit of these documents and information provided by Mr. L.N. Sastry, Certified Professional (CP) with Fluor Daniel GTI, Inc., the Qualified Underground Storage Tank Consultant (QC), the USTD ***DOES NOT*** concur with the conclusion of the CP that corrective actions have been completed. The reasons for our decision are:

- The closure report does not address off site contamination or restrict the possible usage of impacted groundwater. Monitoring well #12 (MW-12) is located on or approximate to the site property line and contains 1400 parts per billion of dissolved benzene along with other gasoline constituents. The levels found in this monitoring well and its location indicates that contamination has migrated off site. Information found in the file for the former Shell station, located west of the Buddy's site, directly across Platt Road, does not indicate that this contamination has crossed the roadway. Utilities (natural gas, domestic water, sanitary sewer and storm sewer) are located beneath the roadways along this property's south and west frontages. The utilities may be intercepting dissolved phase contamination.

- Soils at this site consists of interbedded clays and sands to approximately 18 feet below ground level where sand of an undetermined depth occurs. This sand layer could be utilized as a source of drinking water. There may be communication between the interbedded layers and the sand layer (18 feet and greater). The levels of contaminants found at this site are above drinking water and soil leaching to groundwater criteria but are below soil direct contact and utility worker groundwater direct contact criteria.

- It may be possible to close this site if deed restrictions are placed on this property forbidding the installation of groundwater wells for any use other than monitoring groundwater quality and/or groundwater remediation and if an alternate mechanism to restrict exposure is placed into effect for the off site contamination.

The owner or operator of this facility is required, under the provisions of Section 21315(3) of Act 451, to do the following:

1. Provide additional information related to the requirements of Part 213, as specified above.

2. Retain a consultant to make additional corrective actions necessary to comply with Part 213 or to protect public health, safety, welfare or the environment.

Please provide your written commitment, together with a schedule, to provide the required information or to voluntarily undertake the necessary corrective actions at the facility within 30 days of receipt of this letter.

If you have any questions, please contact me at the telephone number below.

Sincerely,

Terry Hiske

Terry Hiske
Environmental Quality Analyst
Underground Storage Tank Division
517-780-7928

TH:lkg

cc: Mr. L.N. Sastry, Fluor Daniel GTI, Inc.
Sedgwick James of Michigan, Inc.
Mr. Lee Carter, MDEQ

STO

23937 Research Drive, Farmington Hills, Michigan 48335

INTERNATIONAL TECHNOLOGY CORPORATION

# Transmittal

| | | | |
|---|---|---|---|
| **To:** | Jeffery Hanson | **From:** | Suzanne Park |
| **Address:** | | | |
| | 744 E. South Street | | IT Corporation |
| | Jackson, MI 49203 | | 23937 Research Drive |
| | | | Farmington Hills, MI 48335 |
| **Fax:** | | **Pages:** | |
| **Phone:** | | **Date:** | 7/13/99 |
| **Re:** | Off Site Migration Forms | **CC:** | |

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

● **Comments:**

Mr. Hanson-

Enclosed are the two Pipeline sites that require an Off Site Migration Form for the MDEQ. Please sign the second page of both packets and mail the entire packet, in the envelope provided, to the MDEQ.

If you have any questions, please call me or Jim Alfonsi at (248) 473-0720.

Thank you,

Suzanne M Park

Suzanne Park

Environmental Scientist

JUL 1999

File: F:\gti\admin\BASEFORM\ITTRNS.DOC

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL RESPONSE DIVISION

| For DEQ Use Only |
|---|
| ITS # _____ |
| Site ID # _____ |

# NOTICE OF MIGRATION OF CONTAMINATION (FORM EQP4482)

*(Under the authority of Part 201, 1994 Act 451, as amended, and the Rules promulgated thereunder)*

2107

*An owner or operator of property that is a facility who has knowledge that a hazardous substance is emanating from, has emanated from, or is likely to be emanating from the property and migrating beyond the boundaries of the property that he or she owns or operates is required under R 299.51017(1) to notify the Michigan Department of Environmental Quality ("DEQ"), unless he or she is exempt from MCL 324.20107a (see MCL 324.20107a(4) for exemptions). With regard to conditions known to the owner or operator prior to March 11, 1999 (the effective date of R 299.51017), this notice must be provided to the DEQ by June 9, 1999 (90 days after the effective date). With regard to conditions that were not known to the owner or operator prior to March 11, 1999, the report must be submitted to the DEQ within 45 days after the owner or operator has knowledge that hazardous substances have migrated, or are likely to have migrated, to or beyond the boundary of his or her property in reportable concentrations. Use of this form is mandatory for the notice required by R 299.51017(1). Completing this notice in no way relieves a person who is subject to MCL 324.20114 from the responsibility to undertake required response activities.*

**This notice must be sent to the DEQ office that serves the county in which the property is located. A list of DEQ offices is attached. The DEQ will not prepare acknowledgement of receipt of these notices. The sender is responsible for sending the report using a method that provides proof of delivery if such proof is desired. Please label the outside of the envelope "Rule 1017 Notice."**

**Please answer the following questions as completely as possible.**

1. Name and address of owner or operator making the report.
   Pipeline Oil Sales, Inc.
   744 E. South Street
   Jackson, MI 49203

2. Status relative to the property.
   (Check one or both, as applicable.)
   Owner ☒
   Operator ☒

3. Name and telephone number of contact person for owner or operator.
   Jefferey Hanson
   (517) 782-0467

4. Address/location of the property that is the subject of this notice (i.e., owned or operated by the person identified in item #1).
   Buddy's Sunoco #28
   3005 Packard
   Ann Arbor, MI 48108

   County Washtenaw

5. Complete the Table on Page 3 of this Form for each hazardous substance which has migrated, or is likely to have migrated, up to or beyond the property boundary at a concentration that exceeds a Generic Residential Cleanup Criterion developed by the DEQ pursuant to MCL 324.10120a(1). Complete 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.

6. If a map, report, or other additional information is available which depicts or describes the conditions reported on this form, and the basis for your conclusion that this report is required, that information may be (but is not required to be) submitted with this form. You may also identify by title and date any reports previously submitted to the DEQ that contain relevant information. Include the name of the site or facility that the report addresses. This additional information may assist the DEQ in determining whether response activity is required to address conditions described in this notice.

*With my signature below, I certify 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 Jeff Hanson Date 7/16/99
(Person legally authorized to bind the person making this report)

Name (Typed or Printed) Jefferey Hanson

Title (Typed or Printed) VICE PRESIDENT OF FINANCE

JOHN ENGLER, Governor
**DEPARTMENT OF ENVIRONMENTAL QUALITY**
*"Better Service for a Better Environment"*
HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973
INTERNET: www.deq.state.mi.us
RUSSELL J. HARDING, Director

REPLY TO:
JACKSON DISTRICT OFFICE
STATE OFFICE BUILDING
301 E LOUIS GLICK HWY
JACKSON MI 49201-1556

July 9, 1998

Mr. Jeffrey Hanson
Pipeline Oil Sales, Inc.
744 East South Street
Jackson, Michigan 49203

Dear Mr. Hanson:

SUBJECT: Audit of Corrective Actions
Confirmed Release Date: September 19, 1994
Location of Tank(s): Buddy's Sunoco #28
3005 Packard, Ann Arbor, Washtenaw County, Michigan
Facility ID #: 0-002107
MUSTFA Claim #: 6190

Under the authority of Section 21315 of Part 213 Leaking Underground Storage Tanks (LUST) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the Department of Environmental Quality (DEQ), Storage Tank Division (STD), has conducted an audit of the corrective actions undertaken as the result of a release from an underground storage tank system at the subject site. The audit was conducted following receipt of a Closure Report submitted by Fluor Daniel GTI, Inc., Qualified Underground Storage Tank Consultant (QC), and certified by Mr. Patrick Conway, Certified Professional (CP).

The audit consisted of a review of district file documents. Based on this audit, the STD agrees with the conclusion by the QC that corrective actions at the site have been completed in accordance with Part 213. Corrective Action at the site has resulted in Restricted use of the site based on a Tier 2 evaluation, utilizing institutional controls. The following land use or resource use restriction mechanisms have been established:

- A notice of corrective action has been recorded with the register of deeds for Washtenaw County as outlined in Section 21310a(1) of Act 451. The notice states that a commercial III use is the basis of the corrective action selected by your QC. Any future change in the land use may necessitate further evaluation of potential risks to the public health, safety, and welfare and to the environment. The STD must be contacted regarding any proposed change in the land use.

- A restrictive covenant has been recorded with the register of deeds for Washtenaw County as outlined in Section 21310a(2) of Act 451. The following land use or resource use restriction mechanisms are included in the restrictive covenant:

  - Land use of the property referenced above shall be consistent with the Commercial III category of land use as defined by the MDEQ-STD. If there is a proposed change in the land use at any time in the future, that change may necessitate further evaluation of potential risks to the public health, safety, and welfare and to the environment. The Department of Environmental Quality shall be contacted regarding any proposed change in the land use, and the change may necessitate further evaluation of potential risks to the public health, safety, and welfare and the environment.

  - Soil shall not be removed from the property unless it is characterized to determine it can be relocated without posing a threat to the public health, safety, welfare, or the environment in the new location.

  - All workers who may come in contact with the groundwater must wear OSHA approved personal protective equipment which protects against chemicals of concern as determined by the most recent groundwater analytical results, as necessary to protect workers' health and safety.

  - All concrete floors in the existing buildings located on the site must be adequately maintained to minimize the potential for vapor intrusion into the building from subsurface soils or groundwater.

  - Construction of any buildings within the restricted area delineated on the site map (exhibit A) shall include the installation and maintenance of concrete floors or other vapor intrusion; removal of soil and groundwater impacted above the appropriate volatilization to indoor air risk based cleanup criteria; or other measures that prevent exposure of building occupants to contaminant vapors above applicable OSHA criteria.

  - Groundwater at the property cannot be used for potable or nonpotable purposes.

  - Installation of groundwater wells for any use other than monitoring quality is prohibited.

The above list is abbreviated and does not necessarily represent a complete list of property or resource uses which are prohibited at the site. Any activities which would interfere with corrective action, operation and maintenance, monitoring, or other measures necessary to assure the effectiveness and integrity of the corrective action, or which would result in exposure to regulated substances above levels established in the corrective action plan are similarly prohibited.

Any conveyance of title, easement, or other interest in the property must include adequate and complete provision for compliance with the corrective action plan and prevention of exposure to regulated substances.

Please note that when contaminated soil and/or groundwater as a result of a release of a regulated substance remains on site consistent with site closure requirements, the owner/operator shall not remove or allow this soil and/or groundwater to be removed from the site to an off-site location without properly characterizing the soils and/or groundwater to determine that they can be lawfully relocated without posing a threat to the public health safety, or welfare, or the environment. The determination shall consider whether the soil and/or groundwater is subject to regulations under Part 111 of Act 451.

All groundwater monitoring wells and other similar devices installed as part of the corrective action activities at the site will need to be properly abandoned when they are no longer needed for their original purpose or modified purpose, in accordance with Part 625, Mineral Wells of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; and Part 127 Water Supply and Sewer Systems of the Public Health Code, 1978 PA 368, as amended and the rules promulgated thereunder. Proper abandonment of groundwater monitoring wells and other potential conduits for contamination should be performed within 60 days after use has been discontinued. Documentation of abandonment should be submitted to the STD District Office responsible for oversight.

If you have any questions, please contact Mr. Terry Hiske, Project Manager, at the Jackson District Office, Department of Environmental Quality, Storage Tank Division, 301 East Louis Glick Highway, Jackson, Michigan, or at telephone number 517-780-7928.

Sincerely,

Lee Carter
District Supervisor
Storage Tank Division
517-780-7920

LC:lkg

cc: Fluor Daniels, GTI
Sedgwick James of Michigan, Inc
Mr. Terry Hiske, DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION

RECEIVED JUL 2 1998 MDEQ - STORAGE TANK DIVISION JACKSON

# SUPPLEMENTAL REPORT COVER SHEET

**INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY.** The Certified Underground Storage Tank Professional (CP) MUST sign below. Failure to submit this report within the stated time period may result in Administrative Penalties as provided for in Part 213, Section 21313a of Act 451, P.A. 1994 as amended.

FACILITY NAME: Buddy's Sunoco #28

FACILITY ID NUMBER: 0-002107

ADDRESS: 3005 Packard

CONFIRMED RELEASE NUMBER(S): Not Known

CITY: Ann Arbor ZIP: 48108 COUNTY: Washtenaw

O/O NAME: Pipeline Oil Sales, Inc.

DATE(S) RELEASE DISCOVERED: 9/19/94

O/O ADDRESS: 744 E. South Street, Jackson STATE: MI ZIP: 49203

CONTACT PERSON: Jeffery Hanson PHONE NUMBER: (517) 782-0467

## ANSWER ALL QUESTIONS, (DO NOT LEAVE BLANKS):

1. a. Has the UST been emptied? X Yes ___ No (If no, explain why):
   b. Has the UST system been properly closed? X Yes ___ No (If no, explain why):
2. Free product present: a. Currently? ___ YES X NO If YES, total gallons recovered since last report:
   b. Previously? X YES ___ NO If YES, total gallons recovered to date: 5.25
3. Have vapors been identified in any confined spaces (basement, sewers, etc.)? ___ YES X NO
4. State the number of homes where drinking water is or was affected as a result of a release from this facility: None
5. Estimated distance and direction from point of release to nearest:
   a. Private well: 1 mile to NE b. Municipal well: >1 Mile a. Surface water/wetland: Swift Drain located 1100 feet to southeast
6. Since last report: a. cubic yards of soil remediated: 0 b. gallons of groundwater remediated: 0
7. Totals to date: a. cubic yards of soil remediated: 870 b. gallons of groundwater remediated: 0
8. Michigan RBCA Site Classification (1-4): 4 Previous RBCA Site Classification (1-4): 4
9. Has contamination migrated off-site above Tier 1 Residential RBSLs ___ YES X NO
   If YES, have off-site impacted parties been notified ___ YES ___ NO (per Section 21309a(3) of Part 213)
10. Is an institutional control required for contamination that has migrated or will migrate off-site? X Yes ___ No

## CERTIFICATION OF REPORT COMPLETION

I, the undersigned CP, hereby attest to the best of my knowledge and belief that the statements in this document and all attachments are true, accurate and complete. I certify that it was submitted to the USTD on 6-29-98
date submitted **(REQUIRED)**

CP Original Signature - **(REQUIRED)** 6-29-98 Date

James M. Alfonsi
PRINT QC Project Manager's Name

Patrick Conway, CPG
PRINT CP's Name

Fluor Daniel GTI, Inc.
CONSULTANT

23937 Research Drive, Farmington Hills, Michigan 48335
ADDRESS

(248) 473-0720 TELEPHONE NO. (248) 473-0892 FAX NO.

## CERTIFICATION OF CLOSURE

1. Type of RBCA Evaluation: ___ Tier 1 X Tier 2 ___ Tier 3
2. Closure report based on which type of land use?: ___ Residential X Commercial III ___ Commercial IV ___ Industrial
3. Institutional Controls: Yes X Notice of Corrective Action X Restrictive Covenant ___ Other

I certify under penalty of law that corrective actions associated with the above referenced release at this facility were completed in accordance with Part 213, Act 451, P.A. 1994 as amended, and current departmental guidance and procedures available at the time the work was completed.

I further certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

CP Signature - **(REQUIRED)** 6-29-98 Date

**PLEASE RETURN THIS COMPLETED REPORT AND ASSOCIATED ATTACHMENTS TO THE APPROPRIATE USTD DISTRICT OFFICE, LISTED ON THE BACK OF THIS PAGE.**



EQP 38435 (REV. 3/97)

FLUOR DANIEL GTI

June 29, 1998

Mr. Terry Hiske
Environmental Quality Analysis
Underground Storage Division
Michigan Department of Environmental Quality
4th Floor State Office Building
301 Louis Glick Highway
Jackson, MI 49201

**Subject:** **Pipeline Oil Sales (Buddy's #28)**
**3005 Packard Road**
**Ann Arbor, Washtenaw County, Michigan**
**Facility ID#: 0-002107**
**MERA Site ID#: 810449**

Dear Mr. Hiske:

Fluor Daniel GTI, Inc. (Fluor Daniel GTI), on behalf of Pipeline Oil Sales (Pipeline), has prepared this letter and enclosures in response to the Michigan Department of Environmental Quality's (MDEQ) audit of corrective actions dated January 27, 1998. As suggested in the MDEQ January 27, 1998 letter, a restriction has been placed on the property limiting land use to obtain regulatory closure under Part 213, of Michigan Public Act 451, as amended.

Exposure to adsorbed and dissolved phased hydrocarbons remaining in the property's subsurface has been limited by a restrictive covenant filed with the Washtenaw County Register on May 6, 1998. The restrictive covenant restricts the property to commercial use and restricts the use the property's groundwater for potable or non-potable applications. For a more specific description of the land use restrictions see the enclosed restrictive covenant.

The Notice to Local Unit of Government of Corrective Action and Land Restriction form, notifying the City of Ann Arbor of the property restrictions, was sent by certified mail to the City of Ann Arbor on June 23, 1998.

Exposure to dissolved phased hydrocarbons in the vicinity monitoring well MW-12 adjacent to Platt Road, which is a City of Ann Arbor right of way, is restricted by the use of an alternate institutional control mechanism. Based on the following criteria outlined in the MDEQ Storage Tank Division's (STD) Operational Memorandum No. 12, Platt Road provides an alternative institutional control mechanism for exposure to dissolved phased hydrocarbons:

1. The right-of-way is developed and maintained and used as a highway.
   Platt Road is an existing roadway and reliably restricts the possibility that drinking water wells may be installed for potable water or other uses which may result in exposure to groundwater contamination at levels in excess of the Tier I risk based screening levels (RBSLs).

2. Platt Road has indications of being permanent.
   Platt Road is not likely to ever be relocated, vacated, or abandoned.

23937 Research Drive / Farmington Hills, MI 48335 USA (248) 473-0720 FAX (248) 473-0892

Mr. Terry Hiske
Michigan Department of Environmental Quality

**Subject:** **Pipeline Oil Sales (Buddy's #28), 3005 Packard Road, Ann Arbor, Michigan**
**Facility ID#: 0-002107, MERA Site ID#: 810449**

3. A determination that groundwater contamination will not migrate beyond the boundaries of the highway.
   Platt Road provides a reliable means to prevent unacceptable exposure to groundwater within the right-of-way. Based on the review of the environmental information of the former Shell station located west and across the street (Platt Road) from the subject property, dissolved phased hydrocarbons are not migrating past Platt Road; therefore, the dissolved phase hydrocarbon plume attenuates underneath Platt Road.

4. All other relevant exposure pathways have been evaluated and eliminated under the RBCA criteria.
   The dissolved phased hydrocarbon concentrations in the vicinity of monitoring well MW-12 do not exceed Tier 1 RBSLs for direct contact with groundwater, soil, inhalation or other relevant pathways.

Based upon the use of property restrictions and alternative institutional control mechanisms limiting exposure to dissolved phased hydrocarbons at the subject property, the objectives of a Tier II risk based corrective action regulatory closure under Part 213, of Michigan Public Act 451, as amended have been obtained.

If you have any questions or comments please contact me at (248) 473-0720.

Sincerely,

**Fluor Daniel GTI, Inc.**

James M. Alfonsi
Project Manager
Geologist

Cc: Jeffery Hanson, Pipeline Oil Sales, Inc.
Patrick Conway, Fluor Daniel GTI, Inc.

Enclosures

p:\projects\pline\pline#28\cls2.wpd

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION

# NOTICE TO PUBLIC AND LOCAL UNIT OF GOVERNMENT OF CORRECTIVE ACTION AND LAND USE RESTRICTIONS

*This information and form is required under Sections 21309a(3), 21310a(5) and 21316 of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Failure to comply with the provisions of this Act may result in civil fines not to exceed $10,000 for each day the violation continues or failure to comply continues.*

**Instructions:** (1) Use this form for the notification requirements when the corrective action does not result in unrestricted use of the property. (2) If corrective action is based on the use of institutional controls regarding off-site migration of regulated substances, submit a draft copy of this notification with the corrective action plan and wait for USTD approval before providing notice to impacted persons. If the institutional controls are for on-site contamination, the owner/operator may proceed with providing notice to the impacted persons. (3) Send the notice to persons that are directly impacted by the release and the proposed corrective action. (4) Send the notice to Local Units of Government (LUG). 5) Submit a copy of the notice and proof of providing the notice with the Closure Report (EQP 3843) to the appropriate USTD District Office listed on the back of the Closure Report Cover Sheet. This form must be completed in its entirety.

Owner or Operator: *H&A Investments Company, Inc.*

Site Name: *Buddy's Sunoco #28*

Site Address: *3005 Packard* City: *Ann Arbor* State: *Michigan* Zip: *48108*

Contact Person: *Jeffrey Hanson* Phone Number: *(517) 782-0467*

Mailing Address: *744 East South Street* City: *Jackson* State: *Michigan* Zip: *49203*

Qualified Consultant: *Fluor Daniel GTI, Inc.*

Address: *23937 Research Drive* City: *Farmington Hills* State: *Michigan* Zip: *48335*

Contact Person: *Diane C. Pawelec* Phone Number: *(248) 473 – 0720*

A corrective action plan for the above site has been developed as a result of a release from an underground storage tank. The corrective action plan relies on the following land use or resource use limitation(s):

*Refer to Exhibit A (attached) for a listing of the land use limitations.*

(DESCRIBE THE SCOPE OF LAND USE OR RESOURCE USE LIMITATIONS)

A copy of the Notice of Corrective Action(s), and/or Restrictive Covenant(s), and/or alternate mechanism is attached.

I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified.

Jeff Hanson, VICE PRESIDENT — 3/16/98

Owner or Operator's Signature — Date

Pursuant to Section 21309a(3) of Part 213, site release information and the corrective action plan are available for public inspection upon request from the Underground Storage Tank Division District Office located at

*Jackson District office, 301 E. Louis Glick Hwy., Jackson, Michigan 49201-1556*

**EXHIBIT 1**

**RESTRICTIVE COVENANT**

**3005 PACKARD ROAD, ANN ARBOR, MICHIGAN**

Proposed Scope of land use or resource use restriction (Note: Additional land use restrictions or resources use restrictions may be added if necessary):

- Land use of the property referenced above shall be consistent with the Commercial III category of land use as defined by the MDEQ-USTD. If there is a proposed change in the land use at any time in the future, that change may necessitate further evaluation of potential risks to the public health, safety, and welfare and to the environment. The Department of Environmental Quality shall be contacted regarding any proposed change in the land use, and the change may necessitate further evaluation of potential risks to the public health, safety, and welfare and the environment.

- Soil shall not be removed from the property unless it is characterized to determine it can be relocated without posing a threat to the public health, safety, welfare, or the environment in the new location.

- All workers who may come in contact with the groundwater must wear OSHA approved personal protective equipment which protects against chemicals of concern as determined by the most recent groundwater analytical results, as necessary to protect workers' health and safety.

- All concrete floors in the existing buildings located on the site must be adequately maintained to minimize the potential for vapor intrusion into the building from subsurface soils or groundwater.

- Construction of any buildings within the restricted area delineated on the site map (exhibit A) shall include the installation and maintenance of concrete floors or other barrier to vapor intrusion; removal of soil and groundwater impacted above the appropriate volatilization to indoor air risk based cleanup criteria; or other measures that prevent exposure of building occupants to contaminant vapors above applicable OSHA criteria.

- Groundwater at the property cannot be used for potable or nonpotable purposes.

- Installation of groundwater wells for any use other than monitoring quality is prohibited.

RECORDED
WASHTENAW COUNTY, MI

MAY 6 10 08 AM '98

PEGGY A. HAINES
COUNTY REGISTER

# RESTRICTIVE COVENANT

**DEQ** MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - UNDERGROUND STORAGE TANK DIVISION

*This information and form is required under Sections 21310a(2) and 21316 of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Failure to comply with the provisions of this Act may result in civil fines not to exceed $10,000 for each day the violation continues or failure to comply continues.*

INSTRUCTIONS: Use this form for filing the restrictive covenant with the register of deeds. This form is needed when the corrective action is based on a restrictive covenant for institutional controls. This form is not needed if an alternate mechanism is approved by the Department of Environmental Quality (Department) pursuant to Section 21310a(3) and 21310(4) of Part 213. If corrective action is based on the use of institutional controls regarding off-site migration of regulated substances, wait for USTD approval before recording the Restrictive Covenant with the register of deeds for contamination that has migrated or will migrate off-site. If the institutional controls are for on-site contamination, the owner/operator may proceed with recording the Restrictive Covenant with the register of deeds. In all cases, submit a copy of the Restrictive Covenant and proof of recording with the Closure Report (EQP 3843) to the appropriate USTD District Office listed on the back of the Closure Report Cover Sheet. This form must be completed in its entirety.

The below listed owner/operator has implemented a corrective action plan requiring institutional controls in the form of a restrictive covenant. The corrective action plan was developed as a result of a release from a Leaking Underground Storage Tank(s) (LUST) and was prepared pursuant to the provisions in Section 21310a(2) of Part 213. Regulated substances were discovered during the investigation and/or removal of Underground Storage Tanks (USTs).

This restrictive covenant is filed with the County Register of Deeds and covers the land identified in the following, and more fully described in Attachment A, attached. (*Attach a legal property description as Attachment A for the land where the restrictive covenant would apply, and a survey map of the areas addressed by this restrictive covenant.*). The restrictive covenant defines the areas addressed by the corrective action plan and the scope of any land use or resources limitations. The survey defining the areas addressed by the corrective action plan is attached. (*Describe the scope of any land use or resource use limitations.*)

***Land use of the property referenced below shall be consistent with the commercial III category of land use as defined by the MDEQ-USTD. If there is a proposed change in land use at any time in the future, that change may necessitate further evaluation of potential risks to the public health, safety, and welfare and to the environment. The Department of Environmental Quality shall be contacted regarding any proposed change in the land use, and the change may necessitate further evaluation of potential risks to the public Health, safety, and welfare and the environment. Soil shall not be removed from the property unless it is characterized to determine it can be relocated without posing a threat to the public health, safety, welfare, or the environmental of the new location. All workers who may come in contact with the groundwater must wear OSHA approved personal protective equipment which protects against chemicals of concern as determined by the most recent groundwater analytical results, as necessary to protect worker's health and safety. All concrete floors in the existing buildings located on the site must be adequately maintained to minimize the potential for vapor intrusion into the building from subsurface soils or groundwater. Construction of any buildings within the restricted area delineated on the site map shall include the installation and maintenance of concrete floors or other barriers to vapor intrusion; removal of soil and groundwater impacted above appropriate volatilization to indoor air risk based cleanup criteria; or other measures that prevent exposure of building occupants to containment vapors above applicable OSHA criteria. Groundwater at the property cannot be used for potable or nonpotable purposes. Installation of groundwater monitoring wells for any use other than monitoring groundwater quality is prohibited.***

The restrictive covenant is being filed by the below listed legal titleholder or with the express written permission of the legal titleholder. *(Attach permission statement from the legal titleholder if he/she is not signing this document.)*

Owner/Operator implementing the corrective action plan: ***H&A Investments Company, Inc.***

Release Date(s): ***September 19, 1994***

County where deed is registered: ***Washtenaw County***

Common description of land, township/city, County: ***3005 Packard, Ann Arbor, Washtenaw County, Michigan***

Now Therefore ***H&A Investments Company, Inc., 744 E. South Street, Jackson, Michigan 49203***, (hereinafter referred to as the "titleholder"), hereby imposes restriction on the property and covenants and agrees that:

1. The Titleholder shall restrict activities on the property that may interfere with corrective action, operation and maintenance, monitoring, or other measures necessary to assure the effectiveness and integrity of the corrective action.

2. The Titleholder shall restrict activities that may result in exposure to regulated substances above levels established in the corrective action plan.

3. The Titleholder shall prevent a conveyance of title, an easement, or any other interest in the property from being consummated without adequate and complete provision for compliance with the corrective action plan and prevention of exposure to regulated substances described in item 2 above.

4. The Titleholder shall grant to the Department of Environmental Quality (Department) and its designated representatives the right to enter the property at reasonable times for the purpose of determining and monitoring compliance with the corrective action plan, including but not limited to the right to take samples, inspect the operation of the corrective action measures, and inspect records.

5. Soil shall not be removed from the property described herein, unless it is characterized to determine if it can be relocated without posing a threat to the public health, safety, welfare or environment in the new location.

6. The state may enforce the restrictions set forth in the covenant by legal action in a court of appropriate jurisdiction.

The restrictions and other requirements described in this Restrictive Covenant shall run with the land and be binding to the titleholder's successors, assigns, and lessees or their authorized agents, employees or persons acting under their direction or control. The restrictions shall apply until the Department determines that regulated substances no longer present an unacceptable risk to the public health, safety or welfare or to the environment. A copy of this Restrictive Covenant shall be provided to all heirs, successors, assigns, and transferees.

This Restrictive Covenant shall not be amended, modified or terminated except by a written instrument executed by and between the Titleholder at the time of the proposed amendment, modification, or termination, and the Department. Within five (5) days of executing an amendment, modification or termination of the Restrictive Covenant, the Titleholder shall record such amendment, modification or termination with the County Register of Deeds, previously named, and within five (5) days thereafter, the Titleholder shall provide a true copy of the recorded amendment, modification or termination to the Department.

If any provision of this Restrictive Covenant is also the subject of any laws or regulations established by any federal, state or local government, the stricter of the two standards shall prevail.

The undersigned person, if executing this Restrictive Covenant on behalf of the Titleholder, represents and certifies that they are duly authorized and have been fully empowered to execute and deliver this Restrictive Covenant.
I hereby attest to the accuracy of the statements in this document and all attachments. I further certify that the language on this form has not been modified in any way.

H&A Investments Company, Inc
Corporation Name/Titleholder

Jeffrey L. Hanson
Legal Titleholder or Authorized Representative's Signature

4-14-98
Date

JEFFERY L. HANSON TREASURER
Print Legal Titleholder or Authorized Representative's Name

**IN WITNESS WHEREOF**, the said Titleholder of the above described property has caused the Restrictive Covenant to be executed on the 14th day of April, 1998.

Signed in the presence of:

Marsha S. Sparks
Witness

Witness

Marsha S. Sparks
Print Witness' Name

Janice Siefker
Print Witness' Name

Jeffrey L. Hanson, Treasurer of H&A Investments Company, Inc. subscribed and sworn to me before this 14th day of April, 1998

Janet M. Hilleary
Notary Public Janet M. Hilleary

Jackson County, Michigan
(Insert County)

My Commission Expires: Dec 19, 2001

Drafted by:
*Fluor Daniel GTI, Inc.*
*Diane C. Pawelec, CPG*
*23937 Research Drive, Farmington Hills, Michigan 48335*

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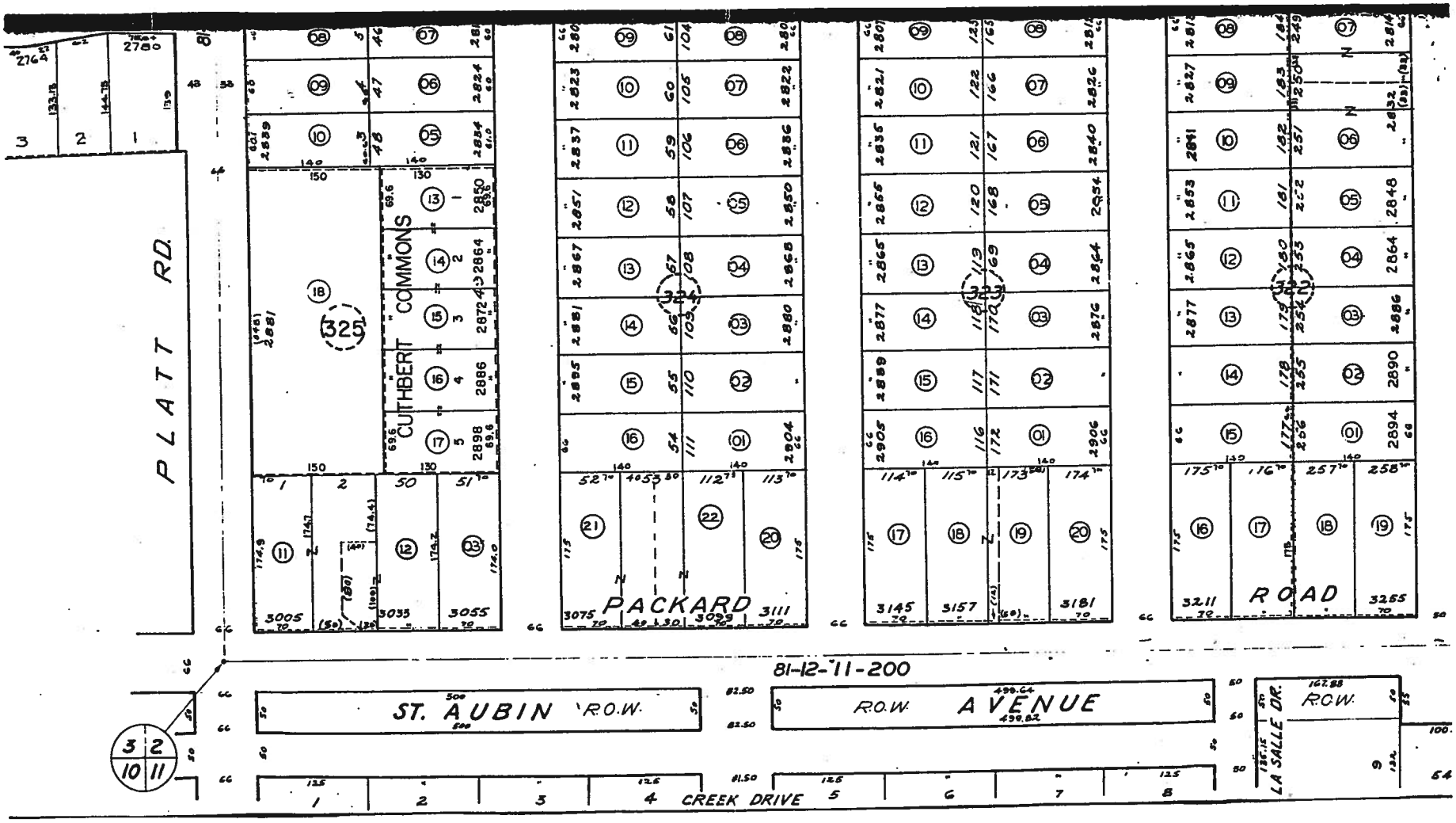
**ATTACHMENT A**

**Legal Description**

All of Lot 1 and partial of Lot 2 described as beginning in the southwest corner of Lot 2 thence north 174.4 feet thence east 70 feet thence south 74.43 feet thence south 89 degrees 48 minutes 30 seconds west 40 feet thence south 80 feet thence south 45 degrees 05 minutes 45 seconds east 28.24 feet thence south 89 degrees 48 minutes 30 seconds west 50 feet to point of beginning at Darlington Subdivision in the City of Ann Arbor, Washtenaw County, Michigan. Tax I.D. # 12-02-325-011


PLATT RD.
CUTHBERT COMMONS
PACKARD
ROAD
81-12-11-200
ST. AUBIN R.O.W.
R.O.W. AVENUE
LA SALLE DR.
R.O.W.
CREEK DRIVE
325
324
323

PM
ENVIRONMENTAL, INC.

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Fax 517-323-7228
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Grand Rapids, MI 49546
Ph. 616-285-8857
Fax 616-285-8026
pmegr@pmenv.com

**ISO 9001 REGISTERED**

***Phase I Environmental Site Assessment Update of the Marathon Gasoline Dispensing Station and Convenience Store***
***Located at 3005 Packard Road, Ann Arbor, Michigan***
***PM Environmental, Inc. Project No. 01-244***

## INTRODUCTION

PM Environmental, Inc., (PME) has completed a Phase I Environmental Site Assessment (ESA) Update for the Marathon Gasoline Dispensing Station and Convenience Store located at 3005 Packard Road, Ann Arbor, Washtenaw County, Michigan (hereafter referred to as the "subject site"). This information contains the project summary and site investigation results, including field observations and environmental background research, in general accordance with Section 4.7.3 of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I ESA Process (ASTM Designation: E-1527-00) and with Comerica Bank's Phase I ESA requirements.

The subject site consists of a 0.5-acre parcel of land located at the northeast corner of Packard Road and Platt Road. The subject site is occupied by a 1,860 square foot convenience store located in the central portion of the parcel. Two gasoline pump islands are present to the west of the building and one gasoline pump island is present to the south of the building, all of which are covered by metal canopies. One 20,000-gallon dual-compartment gasoline UST is located in a single basin west of the subject building and western pump islands.

The current UST system consists of one 20,000-gallon compartmental gasoline UST installed in 1997. The UST is constructed of composite steel and fiberglass (Glasteel II). All associated piping and product lines are constructed of double walled fiberglass reinforced plastic. An automatic tank and piping leak detection system is operated on the property. The UST system meets current 1998 Federal upgrade requirements.

PME updated the Phase I ESA report completed by PME in January 2004. The previous report was completed in general conformance with the scope and limitations of the ASTM Standard Practice for Environmental Site Assessments: Phase I ESA Process (Designation: E-1527-2000). The information provided in the January 2004report sufficiently addressed conditions of the subject site property from 2004 to 1930, at which time data failure occurred. In accordance with Sections 4.7.1 and 4.7.2 of the ASTM Practice E-1527-00, the information provided in the previous report has been adopted for use in this Update Report. This adoption is justified by ASTM because, in PME's professional opinion, conditions at the subject site property likely to affect Recognized Environmental Conditions (RECs) in association with the subject site have not materially changed since the January 2004 Phase I ESA was conducted.

**THIS REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF <u>FUSION OIL COMPANY</u>, AND <u>COMERICA BANK</u>, EACH OF WHOM MAY RELY ON THE REPORT'S CONTENTS.**

In accordance with Section 4.7.3 of the ASTM Practice E-1527-00, the minimum requirements for an update of a Phase I ESA include: 1) interviews, 2) a new site reconnaissance, and 3) an update of the records review. Any exceptions or deletions from this practice are described in the Limitations section included in Appendix G.

## PREVIOUS SITE INVESTIGATIONS

PME reviewed the previous Phase I ESA completed by PME in January 2004 for the subject property. The current property layout is similar to that discussed in the previous Phase I ESA.

PME identified five on-site recognized environmental conditions (RECs) and three off-site RECs associated with the subject property. The RECs pertained to the unknown heating source for former buildings associated with the property; the possibility for orphan USTs from former operations; the former service operations performed on the subject property, the former hoist systems, and the possibility for a release from the current system. PME identified the east and south adjoining drycleaners, the southwest adjoining property, and a closed LUST site within one-eighth of a mile to the west of the subject property as off-site RECs.

In March 2004, PME completed a Phase II ESA on the subject property, which consisted of the completion of an electromagnetic (EM-31) survey, the advancement of five soil borings, all of which were converted into temporary monitoring wells, and the collection of groundwater samples from six existing permanent monitoring wells.

The EM-31 survey did not identify any anomalies in the area surrounding the current building. However, the entire property was not surveyed.

Geology encountered during previous site investigation activities consisted of clay to 8.0 feet bgs, interbedded sand and clay from 8.0 to 15.0 feet bgs, clay from 15.0 to 18.0 feet bgs, and sand and gravel from 18.0 to 30.0 feet bgs, the maximum depth explored. Groundwater was previously encountered at 6.0 to 8.0 feet bgs perched on top of the clay layer. The groundwater flow direction is to the west-southwest.

PME has identified the following RECs associated with the previous site investigations:

- Review of previous LUST closure activities indicates previous soil and groundwater samples collected on the subject property were not analyzed for the current required gasoline parameters. Specifically, samples collected between 1994 and 1997 were only analyzed for benzene, toluene, ethyl benzene, xylenes (BTEX), methyl-tert-buty ether (MTBE), polynuclear aromatic compounds (PNAs) and lead. Current additional parameters required by the MDEQ since December 2004 include n-propylbenzene, isopropyl benzene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene for unleaded gasoline and 1,2-dibromoethane and 1,2-dichloroethane for leaded gasoline.

- No verification sampling was completed in the areas of the former gasoline and kerosene pump islands to the west and south of the subject building. The possibility exists for additional contamination to be present in these areas above the applicable Risk Based Screening Levels (RBSLs).

- Review of analytical results from previous site investigations indicates soil contaminant concentrations are not delineated to the east and south of PSB-5 and MW-3, and to the west of PSB-3, PSB-5, SB-10, SB-5, and MW-8, to the current Part 213 Tier I Soil Drinking Water Protection RBSLs, which are the current Part 213 LUST closure requirements.

- Review of analytical results from PME's March 2004 sampling event indicates soil contaminant concentrations of xylenes were identified at PSB-5 above the current Part 213 Tier I Commercial III Soil Volatilization to Indoor Air Inhalation RBSLs and Soil Direct Contact RBSLs, and above the Part 213 Soil Saturation Concentration (Csat) Screening levels. No free product was observed in the temporary monitoring well set at the boring location. However, the possibility exists for free product to exist in the area of PSB-5. Additionally, current MDEQ Part 213 LUST closure requirements include remediation of all areas containing contaminant concentrations above Csat.

- Review of analytical results from previous site investigations indicates groundwater contamination is not delineated to the east of MW-11, MW-3, and MW-6, to the south of MW-6, MW-14, and MW-13, and to the west of MW-13, MW-2, MW-1, MW-8, MW-12, and TMW-3, to the current Part 213 Tier I Groundwater Drinking Water RBSLs, which are the current Part 213 LUST closure requirements.

Refer to Appendix B for a copy of the previous Phase I ESA and Phase II ESA completed by PME.

## INTERVIEWS

PME interviewed Mr. Jeff Hanson of Pipeline Oil Sales, Inc, the current owner of the subject site. According to Mr. Hansen, the occupants and operations at the subject site have remained the same since January 2004. Documentation of individuals interviewed for this Phase I ESA Update report is included in Appendix A.

## SITE RECONNAISSANCE

Ms. Beth Bailey, Project Consultant for PME, completed the site reconnaissance on September 22, 2005 at 1:45 p.m. Qualification statements for the environmental professionals involved in this Phase I ESA Update are included as Appendix C. At the time of reconnaissance weather conditions were approximately 75° F and sunny. The site was inspected in a meander and search pattern. Photographs taken at the time of the site reconnaissance have been included as Appendix D.

The subject site consists of a 0.5-acre parcel of land located at the northeast corner of Packard Road and Platt Road. The subject site is occupied by a 1,860 square foot convenience store located in the central portion of the parcel. Two gasoline pump islands are present to the west of the building and one gasoline pump island is present to the south of the building, all of which are

covered by metal canopies. One 20,000-gallon dual-compartment gasoline UST is located in a single basin west of the subject building and western pump islands.

The current UST system consists of one 20,000-gallon compartmental gasoline UST installed in 1997. The UST is constructed of composite steel and fiberglass (Glasteel II). All associated piping and product lines are constructed of double walled fiberglass reinforced plastic. An automatic tank and piping leak detection system is operated on the property. The UST system meets current 1998 Federal upgrade requirements.

The subject site layout and the interior of the subject building were similar to the January 2004 site reconnaissance observations.

PME also completed a visual inspection of the adjoining properties from the subject site and public thoroughfares during the September 22, 2005 site reconnaissance. Adjoining properties were similar to those observed during the January 2004 site reconnaissance.

The north adjoining property, identified as 2881 Platt Road, is occupied by a dental office. The dental office occupies the previously identified residential dwelling.

The east adjoining property, identified as 3025-3033 Packard Road, is occupied by the Wash & Dry cleaners (3031 Packard) and Nabalee Produce Market (3033 Packard). During the site reconnaissance, PME observed condensation leaking from a pipe in the back of the cleaners building and onto the subject property. Significant staining was observed in the area. **PME previously identified this property as a REC, and based on the observed site conditions, this property remains a REC to the subject property.**

The south adjoining property, identified as 3000-3022 Packard Road, is occupied by a retail strip mall. Occupants of the retail strip mall were similar to those identified in the previous Phase I ESA. PME previously identified the drycleaners on this property to represent a REC. However, the drycleaners appears to be for drop off only, and is not registered as a small quantity generator with the MDEQ. Additionally, groundwater flow in the area has been documented to the west-southwest, away from the subject site. Therefore, PME no longer identifies this property as an off-site REC.

The west adjoining property, identified as 2995 Packard Road, is occupied by a BP gasoline dispensing station and convenience store.

## UPDATE OF RECORDS REVIEW

PME reviewed the following records to fill in data gaps and update records since the January 2004 file reviews.

## LOCAL ASSESSING DEPARTMENT

No assessing records which were different from those reviewed in the previous Phase I ESA were available at the City of Ann Arbor Assessing Department. A copy of the current assessing records is included in Appendix E.

## LOCAL BUILDING DEPARTMENT

City of Ann Arbor Building Department records from 2001 to 2005 were not available for review because the files were being placed on microfiche. Therefore, PME was unable to review current building records for the subject property.

## LOCAL FIRE DEPARTMENT

PME reviewed City of Ann Arbor Fire Department records for the subject property. No recent inspections or violations were on record for the subject property.

## REGULATORY FILE REVIEW

PME subcontracted a third party environmental database report from FirstSearch Technology Corporation (FirstSearch), Indianapolis, Indiana. PME has included the Environmental FirstSearch Report in Appendix F. The following sites were identified as issues which should be discussed.

***Buddy's Packard Marathon*** – This site is identified as 3005 Packard Road, Ann Arbor, and is the subject site. Review of the FirstSearch database indicates this site as a closed LUST site and an active UST site. Information about the subject property is referenced throughout this report.

***Packard Amoco*** – This site is identified as 2995 Packard Road, Ann Arbor, and adjoins the subject site to the west. Review of the FirstSearch database indicates no changes have occurred since the January 2004 Phase I ESA (i.e. no new releases have been reported and no documented changes have been made to the UST system). PME previously reviewed MDEQ-RRD files for this property, which indicated the property does not represent an off-site REC to the subject property.

***Carl Read*** – This site is identified as 3050 Platt Road, Ann Arbor, and is located at the southwest corner of Platt and Packard. PME previously identified this site as a REC based on the unknown condition of the USTs removed from the property in July 1991. No release has been reported for this property. Based on the distance from the subject property, across Platt Road and Packard Road, and the documented regional groundwater flow direction to the west-southwest away from the subject property, PME no longer identifies this site as an off-site REC.

***Wash and Dry*** – This site is identified as 3031 Packard Road, Ann Arbor, and adjoins the subject site to the east. Review of the FirstSearch database indicates this site is a conditionally

exempt small quantity generator with no violations reported. Additionally, this property historically contained a dry cleaning solvent UST that was closed in place in November 1990. PME previously identified this property as a REC. **Based on the on-going dry cleaning activities on the property, this site represents a REC to the subject site.**

***Sakstrups Towing Inc.*** – This site is identified as 3055 Parckard Road, Ann Arbor, and is located within one-eighth of a mile to the east of the subject site. Review of the FirstSearch database indicates this site as a closed LUST site with one release reported and an inactive UST site. Review of MDEQ-RRD files indicates one 200-gallon waste oil UST was removed from the property in 1997. Review of analytical results from samples collected from the former basin location indicate limited contaminant concentrations were identified above the current Part 213 Tier I Soil Drinking Water Protection RBSLs. Contamination is delineated towards the subject property. Based on review of the MDEQ-RRD file for the property, PME no longer identifies this site as a REC.

## SUMMARY AND CONCLUSIONS

PME has completed the Phase I ESA Update for the Marathon Gasoline Dispensing Station and Convenience Store located at 3005 Packard Road, Ann Arbor, Washtenaw County, Michigan in general accordance with Section 4.7.3 of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I ESA Process (ASTM Designation: E-1527-00) and with Comerica Bank's Phase I ESA requirements.

PME previously identified the following on-site RECs in the January 2004 Phase I ESA:

- PME was unable to identify the heat source associated with the building constructed on the property between 1940 and 1947 and demolished between 1964 and 1967. The possibility exists that the building was heated with fuel oil stored in a UST. The possibility exists for an orphan UST to be present on the property and/or for a release of fuel oil to have occurred.

- Limited historical records for USTs associated with the subject property were obtained from reasonable sources (MDEQ, City of Ann Arbor, etc.) The possibility exists for orphan USTs associated with the former station may exist on the subject property.

- The subject property was occupied by two automotive service garages, one constructed between 1940 and 1947 and demolished between 1964 and 1967, and one occupying the current building was construction between 1964 and 1967 and conversion into the current convenience store in 1988. The initial building constructed on the property was located in the same general area as the current building. Waste streams associated with the service garages would have consisted of used motor oils, transmission fluids, radiator fluids, antifreeze, etc. The historical waste management practices associated with the former service operations are unknown and could be a source of subsurface contamination.

- The possibility exists that the former service garages that occupied the subject property from development until 1988 operated in-ground hydraulic hoists. In-ground hydraulic hoists have associated underground hydraulic oil reservoirs, which can be a source of contamination from leaks.

- The former service garage constructed on the subject property between 1940 and 1947 may have historically operated a septic field on the property. The historical waste management practices associated with the former septic field are unknown.

PME identified these additional on-site RECs through review of previous site investigations:

- Review of previous LUST closure activities indicates previous soil and groundwater samples collected on the subject property were not analyzed for the current required gasoline parameters. Specifically, samples collected between 1994 and 1997 were only analyzed for benzene, toluene, ethyl benzene, xylenes (BTEX), methyl-tert-buty ether (MTBE), polynuclear aromatic compounds (PNAs) and lead. Current additional parameters required by the MDEQ since December 2004 include n-propylbenzene, isopropyl benzene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene for unleaded gasoline and 1,2-dibromoethane and 1,2-dichloroethane for leaded gasoline.

- No verification sampling was completed in the areas of the former gasoline and kerosene pump islands to the west and south of the subject building. The possibility exists for additional contamination to be present in these areas above the applicable Risk Based Screening Levels (RBSLs).

- Review of analytical results from previous site investigations indicates soil contaminant concentrations are not delineated to the east and south of PSB-5 and MW-3, and to the west of PSB-3, PSB-5, SB-10, SB-5, and MW-8, to the current Part 213 Tier I Soil Drinking Water Protection RBSLs, which are the current Part 213 LUST closure requirements.

- Review of analytical results from PME's March 2004 sampling event indicates soil contaminant concentrations of xylenes were identified at PSB-5 above the current Part 213 Tier I Commercial III Soil Volatilization to Indoor Air Inhalation RBSLs and Soil Direct Contact RBSLs, and above the Part 213 Soil Saturation Concentration (Csat) Screening levels. No free product was observed in the temporary monitoring well set at the boring location. However, the possibility exists for free product to exist in the area of PSB-5. Additionally, current MDEQ Part 213 LUST closure requirements include remediation of all areas containing contaminant concentrations above Csat.

- Review of analytical results from previous site investigations indicates groundwater contamination is not delineated to the east of MW-11, MW-3, and MW-6, to the south of MW-6, MW-14, and MW-13, and to the west of MW-13, MW-2, MW-1, MW-8, MW-12, and TMW-3, to the current Part 213 Tier I Groundwater Drinking Water RBSLs, which are the current Part 213 LUST closure requirements.

The following off-site REC has been identified:

- The east adjoining property is currently and has historically been occupied by a drycleaners. Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination. The historical waste management practices associated with the property are unknown.

These RECs have been brought to the attention of the client within the requirements of the ASTM Standard Designation E-1527-2000.

The additional investigation, which we believe to be necessary to investigate the on-site and off-site RECs, would consist of the advancement of sixteen soil borings and the sampling of seven on-site monitoring wells at an estimated cost of $18,360. This cost estimate does not include any off-site delineation of contamination. This cost estimate does not include an optional QA/QC package, which will be necessary if the data obtained will be used for a Part 201/213 closure and/or BEA.

This report was reviewed for its completeness and accuracy. Please feel free to contact us at (248) 336-9988 to discuss this report.

**REPORT PREPARED BY:**
PM Environmental, Inc.

Beth Bailey
Project Consultant

**REPORT REVIEWED BY:**
PM Environmental, Inc.

Steve Price
Vice President – Due Diligence

**Location:**

*Retail Gasoline Station and*
*Convenience Store*
*3005 Packard Road*
*Ann Arbor, Michigan 48108*

**Prepared For:**

*Mr. Salem Salamey*
*6053 Chase Road*
*Dearborn, Michigan 48126*

***PHASE I ENVIRONMENTAL SITE ASSESSMENT OF THE RETAIL GASOLINE STATION AND CONVENIENCE STORE LOCATED AT 3005 PACKARD ROAD, ANN ARBOR, MICHIGAN 48108***

**January 15, 2004**

**Prepared by:**

*PM Environmental, Inc.*
*1035 East Saginaw Highway*
*Lansing, Michigan 48906*

## EXECUTIVE SUMMARY

PM Environmental, Inc. (PME) was retained by Mr. Salem Salamey, Dearborn, Michigan ("user") to perform a Phase I Environmental Site Assessment (ESA) of the property located at 3005 Packard Road, Ann Arbor, Washtenaw County, Michigan (hereafter referred to as the "subject site"). The Phase I ESA was completed in general accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I ESA Process (ASTM Designation: E-1527-2000) and Comerica's Guidance Document for Phase I ESAs.

**THIS REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF MR. SALEM SALAMEY AND COMERICA BANK AND EACH MAY RELY ON THE REPORT'S CONTENTS.**

The scope of this Phase I ESA includes a review of reasonably ascertainable historical records, including aerial photography, city directories, county plat maps, Sanborn Fire Insurance Maps, city tax assessment records, city fire department records, city building department records, and county health department records. The scope also includes a review of any previous site investigations, the current topographical map, and regulatory databases. A visual inspection of the subject site and buildings therein and an inspection of the adjoining properties is also completed. Michigan Department of Environmental Quality (MDEQ) files for the subject site and any properties that PME has determined to be a potential Recognized Environmental Condition (REC) to the subject site, based on the database and site observations, are also reviewed. Additionally, interviews with knowledgeable site contacts are conducted. No subsurface investigation of the property was undertaken as part of this Phase I ESA.

The subject site consists of a 0.5-acre parcel of land located north of Packard Road and east of Platt Road. The current subject site building is located on the central portion of the property, with two gasoline dispensers located to the west of the subject building and one gasoline dispenser located to the south of the current subject building. The UST basin is located to the west of the subject building. Maintained grass is located on the west and south portion of the property along the Packard and Platt Road right-of-ways.

An understanding of the subject site area was obtained from reasonably ascertainable standard and other historical sources extending back to 1930. Data failure occurred prior to that date and between 1931 and 1939, between 1941 and 1954 and between 1955 and 1962. Standard and other historical sources were able to document that the first developed use of the subject site occurred between 1940 and 1955 as a retail gasoline station with automotive service. Historically, two separate subject buildings have existed at the subject property. It appears that the initial subject building was located in approximately the same location as the current subject building. Due to the scale and resolution of the aerial photographs, the location of the former gasoline dispensers and UST basin are unknown from initial development of the property until 1969. It appears that the initial subject building was demolished sometime between 1964 and 1967 when the current subject building was constructed. The current subject building was fully remodeled in 1988 and 1995. The use of the subject building from 1967 until 1988 consisted of a retail gasoline station with automotive service. Automotive service has

not been performed at the subject site since 1988. Records pertaining to the USTs likely associated with the subject building from initial development until 1969 were not identified by PME. One 20,000-gallon gasoline UST was installed at the subject property in 1969. One 6,000-gallon gasoline and one 1,000-gallon fuel oil (later converted to kerosene) UST was installed at the subject property in 1976. The three USTs were removed in 1997 and replaced with the current USTs. The USTs were located in approximately the same location as the current UST basin. Currently the site contains one 20,000-gallon compartmental gasoline UST located west of the subject building. Prior to original development, the subject site consisted of undeveloped land that was potentially used as agricultural cropland.

The subject site is currently connected to natural gas and municipal water and sanitary sewer. Municipal sewer and water service were provided to the subject site in 1966, which is not consistent with the first developed use of the subject property. An onsite septic system and potable water well were likely used on the subject property from initial development until 1966 (see bullet below). A 1,000-gallon kerosene UST was installed south of the subject building in 1976 and removed in 1997. The heating source from the initial building construction is unknown and may have been fuel oil with an associated UST (see bulleted item below).

PME reviewed various reports that were previously completed for the subject site and adjoining properties at the Michigan Department of Environmental Quality (MDEQ), Remediation & Redevelopment Division (RRD), Jackson District Office, Jackson, Michigan. A confirmed release was reported to the MDEQ on August 29, 1994, based upon analytical results from a sampling event completed prior to a UST upgrade. Several site investigations were completed from 1994 to 1998, and Fluor Daniel submitted a closure report to the MDEQ on August 27, 1997. An Audit of Corrective Actions was completed by the MDEQ in July 1998, which indicated that the MDEQ concurs that corrective actions have been completed and the site has a Tier II Restricted Use Commercial III Closure. Based upon review of these reports, PME agrees that adequate corrective actions have been completed regarding the 1994 UST release.

The state and federal regulatory records review identified the following sites within the ASTM's approximate minimum search distance (AMSD):

- Three Leaking Underground Storage Tank (LUST) sites (including the subject site and west adjoining property)
- One State Hazardous Waste Site (SHWS)
- Two Small Quantity Generators of Hazardous Waste Sites (subject site and east adjoining property)
- Four Registered Underground Storage Tank (UST) Sites (subject site, southwest, west, and east adjoining properties)

PME contacted the MDEQ-RRD regarding environmental liens on the subject site, and no environmental liens exist.

**Historical RECs**

- Several site investigations were completed from 1994 to 1998 associated with a confirmed release in 1994, and Fluor Daniel submitted a closure report to the MDEQ on August 27, 1997. An Audit of Corrective Actions was completed by the MDEQ in July 1998, which indicated that the MDEQ concurs that corrective actions have been completed and the site has a Tier II Restricted Use Commercial III Closure. Based upon review of these reports, PME agrees that adequate corrective actions have been completed regarding the 1994 UST release.

**Non CERCLA Related Concerns**

PME did not complete an asbestos inspection since the current building was fully remodeled in 1988 and 1995.

No sensitive ecological areas, including potential wetlands, were observed on the subject site property.

PME observed two pole-mounted transformers located along the northern property boundary. The transformers, which are owned by MichCon, appeared to be in good condition with no evidence of leaks or staining and contained labels indicating the transformers are non-PCB containing.

**Environmental Non Compliance**

Environmental non-compliance was not identified associated with the subject site.

**UST System Compliance**

The current UST system consists of one 20,000-gallon compartmental (12,500-gallon and 7,500-gallon) gasoline UST that was installed in 1992. The UST is located to the west of the current subject site building. The UST system meets current 1998 Federal upgrade requirements, including current pollution liability insurance.

**PME assumes the prospective buyer of the subject site intends on using the existing USTs. In PME's opinion it would be difficult to get a "Baseline Environmental Assessment (BEA)" affirmed by the MDEQ due to length of time the current UST system has been operating.**

**Current RECs**

In the professional opinion of PME, an appropriate level of inquiry has been made into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability, and no evidence or indication of RECs has been revealed, with the exception of the following <u>on-site</u> RECs:

- The possible former use of heating oil and an associated UST to heat the historical building at the subject site represents a REC in connection with the subject site. It is possible that an orphaned UST exists.

- Based on the limited information available for the original USTs that were installed prior to 1955 and used until 1969, a possibility that additional orphan USTs remain present at the subject site, which represents a REC. Additionally, records pertaining to the removal of the 550-gallon and 1,000-gallon USTs installed in 1966 identified by the Ann Arbor Building Department were not identified by PME; therefore, the possibility that additional orphan USTs remain present at the subject site, which represents a REC.

- The potential for hazardous materials associated with the former automotive service operations from at least 1967 until 1988 to have been discharged onto the ground or into an onsite septic system via floor drains represents a REC in connection with the subject site. The location of the former onsite septic system is unknown. The property is now connected to municipal sewers.

- Based upon the unknown integrity of the former hoist system likely used when the property conducted automotive service and potential underground reservoir(s) and the potential for hydraulic fluid to have impacted the subsurface, a REC has been identified.

- The use of the current UST system and associated pump islands since 1997.

The following <u>off-site</u> RECs were identified:

- The east and south adjoining properties are currently and/or have historically operated as dry cleaning facilities. Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination, which represents a REC.

- According to the EDR report, the southwest adjoining property is listed as a registered UST site. PME submitted a FOIA request to review available information from the MDEQ-RRD for this facility; however, no records existed. Due to distance considerations, unknown contents and location of USTs and no documentation stating the condition of the USTs upon removal, the potential leakage from the USTs represent a REC to the subject site.

- EDR has identified Sakstrups Towing, Inc. (3055 Packard Road) as a closed LUST site located approximately 400-feet east of the subject site. Because this site is located beyond the east adjoining property (see bulleted item above), a FOIA request was not submitted to the MDEQ-RRD for this site. Addressing the REC associated with the east adjoining property (i.e. dry cleaners) would likely identify any migration of potential contamination originating from this site. Due to distance considerations, the unknown extent of soil and/or groundwater contamination and

the anticipated groundwater flow direction towards the west (towards the subject site), PME has identified this site as an off-site REC.

The summary presented above is general in nature and should not be considered apart from the entire text of the report, which contains the qualifications, considerations and subject site details mentioned herein. Details of findings and conclusions are elaborated upon in this report.

These RECs have been brought to the attention of the client within the requirements of the ASTM Standard Designation E-1527-2000. Because RECs were identified during the performance of the Phase I ESA, a Phase II ESA is warranted in order to determine the nature, extent, magnitude, and materiality of the off-site RECs at the property. The estimated scope would be approximately four soil borings and sampling approximately two existing groundwater-monitoring wells. The estimated cost of the additional investigation, which we believe to be necessary, is $6,000.00.

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (517) 485-3333 to discuss this report.

**REPORT PREPARED BY:**
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Project Geologist

**REPORT REVIEWED BY:**
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Janice E. Grulke
Project Consultant

Peter S. Bosanic, P.E.
Principal Engineer

## SECTION 1.0 - HISTORICAL REVIEW:

Research of historical records for the subject site was completed to evaluate the current and past uses of the subject site. The research was completed to assess whether operations were conducted that involved the use, storage and/or disposal of hazardous waste, hazardous substances, and/or petroleum products.

An understanding of the subject site area was obtained from reasonably ascertainable standard and other historical sources extending back to 1930, data failure occurred prior to that date and between 1931 and 1939, between 1941 and 1954 and between 1955 and 1962. Interviewees provided independent knowledge of subject site and surrounding area usage which in turn provided information confirming historical subject site and general adjoining and surrounding land usage. See Appendix A for specific documentation of standard and other historical sources consulted and availability of these sources. The history of the subject site and adjoining and surrounding areas, which was able to be derived from standard historical sources and other sources to satisfy the ASTM standard requirements for uses of a property (except those excluded by data failure), have been described within the text of this report.

Standard and other historical sources were able to document that the first developed use of the subject site occurred between 1940 and 1955 as a retail gasoline station with automotive service. Historically, two separate subject buildings have existed at the subject property. It appears that the initial subject building was located in approximately the same location as the current subject building. Due to the scale and resolution of the aerial photographs, the locations of the former gasoline dispensers and UST basin are unknown. It appears that the initial subject building was demolished sometime between 1964 and 1967 when the current subject building was constructed. The current subject building was fully remodeled in 1988 and 1995. The use of the subject buildings from 1967 until 1988 consisted of a retail gasoline station with automotive service. Automotive service was not performed at the subject site from 1988 until present.

Records pertaining to the USTs associated with the subject building from initial development until 1969 were not identified by PME. **Based on the limited information available for the original USTs that were installed prior to 1955 until 1969, a possibility that additional orphan USTs remain present at the subject site, which represents a REC.** One 20,000-gallon gasoline UST was installed at the subject property in 1969. One 6,000-gallon gasoline and one 1,000-gallon fuel oil (later converted to kerosene) UST was installed at the subject property in 1976. The USTs were located in approximately the same location as the current UST basin. The three USTs were removed in 1997. Currently the site contains one 20,000-gallon compartmental gasoline UST located west of the subject building.

Prior to initial development, the subject site consisted of undeveloped land that was potentially used as agricultural cropland. No evidence of historic "farm hub" operations has been identified on the subject site through review of aerial photography dating back to 1940.

### Section 1.1: Chain of Title

A chain of title was not conducted for the subject property. PME utilized aerial photography, city directories, assessing information, and interviews with individuals knowledgeable of the subject site area as sources to determine the historical usage of the subject site property (see Appendix A). Information from these sources is referenced throughout this report.

#### Section 1.1.1: Environmental Liens

PME contacted Ms. Jackie Barnett of the MDEQ-Remediation and Redevelopment Division's (RRD's) Compliance Cost Recovery Department for environmental lien information. According to Ms. Barnett, there are no environmental liens encumbering the subject site, or any pending, threatened, or past environmental litigation, environmental administrative procedures, or notices from government entities regarding possible violations of environmental law or possible environmental liability.

### Section 1.2: Aerial Photographs and Sanborn Map Coverage

Historical aerial photography is often useful in identifying past usages of a property or surrounding area, building locations, and discernible notable features, which may indicate potential environmental concerns with regard to the subject site or surrounding area.

Reasonably ascertainable aerial photography was obtained from Michigan State University Aerial Archive, East Lansing, Michigan for 1940, 1955, 1963, 1969, 1978, 1985 and 1993 (scales and original sources unknown) (Appendix B). Additional aerial photography was obtained from the Washtenaw County Equalization Department, Ann Arbor, Michigan for 1960 (Scale: 1"=400'), 1966 (Scale Unknown), 1979, 1984 (Scales: 1"=400'), 1990 (Scale: 1"=400') and 2002 (Scale: 1" = 200'). Reference to the subject site or adjoining site usages in a particular aerial year is based on information obtained through site observations as well as standard and other historic sources. It should be noted that the scale and resolution of the aerial photographs provided for only general descriptions of the subject site and adjoining properties and limited description and discernment of site-specific features.

Sanborn Fire Insurance Maps are historical map records of fire prevention hazards for specific urban areas. These maps often provide data that sometimes can be used to determine the presence of USTs, aboveground storage tanks (ASTs), type of building materials, location of flammable material storage, and types of businesses that occupied a particular site. Sanborn Fire Insurance Maps typically are dated from the late 1800's to the 1950's, and include updates for selected areas as recently as 1990. Sanborn Fire Insurance Maps were not available for the subject site area (original source unknown, secondary source: Environmental Data Resources). A certificate of "No Coverage" is included in Appendix B.

**1940 Aerial Year (MSU)**

Due to the scale and resolution of this aerial photograph, specific features are difficult to discern; however, the subject site and adjoining properties appear to consist of undeveloped land potentially used as agricultural cropland, with the exception of the southwest adjoining property.

The southwest adjoining property appears to be developed with a commercial building, which is consistent with current observations and currently occupied by Buster Food Mart (3050 Packard Road).

**1955 Aerial Year (MSU)**

Due to the scale and resolution of this aerial photograph, specific features are difficult to discern; however, the subject site appears to have undergone development.

The southwest adjoining property appears similar to the 1940 aerial photograph.

The remaining adjoining properties appear to consist of undeveloped land potentially used as agricultural cropland.

**1960 Aerial Year (Washtenaw County)**

Due to the resolution of this aerial photograph, specific features are difficult to discern, however it appears that a commercial building is located in the center of the subject property.

The north and west adjoining property appears to consist of vacant, undeveloped land.

The east adjoining property appears to be developed with a commercial building, which is consistent with current observations and currently occupied by Wash and Dry (3031 Packard Road).

The south adjoining property appears to be developed with a commercial strip mall, which is consistent with current observations (refer to Section 1.3 for current and historical occupants).

The southwest adjoining property appears similar to the 1940 and 1955 aerial photographs.

**1963 Aerial Year (MSU)**

Due to the scale resolution of this aerial photo, specific features are difficult to discern; however, the subject site and adjoining properties appear similar to the 1960 aerial photograph.

**1966 Aerial Year (Washtenaw County)**

In this aerial year, the initial subject building is present. The location of the associated fuel dispensers and UST basin could not be determined.

The adjoining properties appear similar to the 1960 and 1963 aerial photographs, with the exception of the west adjoining property.

The west adjoining property appears to be developed with a retail gasoline station, which is consistent with current observations and is currently occupied by Amoco (2995 Packard Road).

**1969 Aerial Year (MSU)**

Due to the scale and resolution of this aerial photo, specific features are difficult to discern; however, it appears that the subject site has undergone redevelopment and the current subject building observed during the site reconnaissance is present. The adjoining properties appear similar to the 1966 aerial photograph, with the exception of the north adjoining property.

The north adjoining property appears to be developed with a residential dwelling, which is consistent with current observations.

**1978 Aerial Year (MSU)**

Due to the scale and resolution of this aerial photo, specific features are difficult to discern; however, the subject site and adjoining properties appear similar to the 1969 aerial photograph.

**1979, 1984, 1990 (Washtenaw County) 1985 and 1993 Aerial Years (MSU)**

In these aerial photographs, the subject site and adjoining properties appear similar to the 1978 aerial photographs.

**2002 Aerial Year (Washtenaw County)**

In this aerial year, the current subject building, canopy and UST basin are present as observed during the site reconnaissance. The subject building is located in approximately the same location as the historical building observed in previous aerial photographs. The UST basin appears west of the subject building and the dispensers are located west and south of the current dispensers.

The adjoining properties appear similar to the 1978, 1979, 1984, 1985, 1990, and 1993 aerial photographs.

### Section 1.3: City Directories

Reasonably ascertainable R.L. Polk's City Directories and Bresser's Cross-Index Directories of Ann

Arbor, Michigan were researched. Bresser's Cross-Index Directories indicated the following limited and selective listing of historical occupancies at the subject site and adjoining properties from 1957 to 2003. Polk's City Directories were not available. PME reviewed the city directories to determine if any of the occupants would represent a potential REC to the subject site. Directories were researched in at least three-year increments. It should not be construed that the earliest date represented is the initial date of occupancy. Other descriptions regarding adjoining property historical usage and development should also be referenced as provided in the text of this report.

**Subject Site – 3005 Packard Road**

| | |
|---|---|
| 2003 - 1983 | **Buddy's Mini Mart** |
| 1979 – 1978 | **K&N Sunoco** |
| 1975 - 1974 | **Easy's Auto Service** |
| 1969 | **Packard and Platt Sunoco Service** |
| 1964 | Under Construction |
| 1960 | No Address Listing |
| 1957 | **Mitchell's Service and Gasoline Station** |

**North Adjoining – 2881 Platt Road**

| | |
|---|---|
| 2003 - 1993 | Karl Natanson |
| 1989 – 1983 | Kirk Cuthbert |
| 1979 - 1978 | Andrew F. Anderson |
| 1975 - 1974 | Guy Everett |
| 1969 | Minnie Cuthbert |
| 1964 - 1957 | No Address Listing |

**East Adjoining – 3031 Packard Road**

| | |
|---|---|
| 2003 - 1969 | **Wash and Dry** |
| 1964 | **Hollis Clayton Laundry** |
| 1960 - 1957 | No Address Listing |

**South Adjoining - 3000 Packard Road**

| | |
|---|---|
| 2003 - 1988 | Little Ceasars Pizza |
| 1984 – 1979 | Wrightman Electric |
| 1975 - 1969 | **Honda of Ann Arbor** |
| 1964 - 1957 | No Address Listing |

**South Adjoining - 3010 Packard Road**

| | |
|---|---|
| 2003 | Fantasy Attic Costumes |
| 1999 – 1998 | Ann Arbor Hardware |
| 1975 - 1969 | **Honda of Ann Arbor** |
| 1964 - 1957 | No Address Listing |

**South Adjoining - 3012 Packard Road**

| | |
|---|---|
| 2003 - 1993 | Health Care for Women |
| 1989 – 1988 | Blanchard Associates, Five Star Realty Group |
| 1984 - 1978 | Clock Shop, McRaes Clocks |
| 1975 – 1957 | Stevens Department Store |

**South Adjoining - 3014 Packard Road**

| | |
|---|---|
| 2003 | Ann Arbor City Place |
| 1999 – 1998 | No Address Listing |
| 1994 - 1957 | Community Pharmacy |

**South Adjoining - 3016 Packard Road**

| | |
|---|---|
| 2003 | Groom and Go |
| 1999 – 1998 | Clippindales |
| 1994 - 1988 | Golden Chains, Inc. |
| 1984 - 1983 | Ann Arbor Construction, Golden Chains, Inc. J&W Painting |
| 1979 – 1978 | H&R Block, R K Keniston Insurance, State Farm Insurance, Uni-Tak Company |
| 1975 – 1974 | No Address Listing |
| 1969 | Niemela-Calvin Construction |
| 1964 | **Maynard's BJ Mower and Electrical Motor Service** |
| 1960 - 1957 | Weldon Insurance and Real Estate Agency |

**South Adjoining - 3018 Packard Road**

| | |
|---|---|
| 2003 - 1988 | **U and I Dry Cleaners** |
| 1984 – 1983 | Moon Shop Alterations |
| 1979 - 1978 | Hide Away Yarn |
| 1975 - 1974 | R K Keniston Insurance, State Farm Insurance Company |
| 1969 | Asgar Jamal Dentist |
| 1964 | Vacant |
| 1960 - 1957 | G and H Barber Shop |

**South Adjoining - 3020 Packard Road**

| | |
|---|---|
| 2003 | Panda Restaurant |
| 1999 – 1998 | Ann Arbor Hardware |
| 1975 - 1969 | **Honda of Ann Arbor** |
| 1964 - 1957 | No Address Listing |

**South Adjoining - 3022 Packard Road**

| | |
|---|---|
| 2003 | Bombay Grocers |
| 1999 – 1998 | Ann Arbor City Place |
| 1994 - 1974 | A&D Business Machines, Royal Typewriter Company |
| 1969 | A&D Business Machines |
| 1964 | Vacant |
| 1960 | Henry A Dorn |
| 1957 | No Address Listing |

**Southwest Adjoining - 3050 Platt Road**

| | |
|---|---|
| 2003 | Buster and More, Mr. Cash, Pronto Communications |
| 1999 – 1964 | Buster's Food Mart |
| 1960 | Gamble Store, **Read's Family Store** |
| 1957 | Gamble Store |

**West Adjoining – 2995 Packard Road**

| | |
|---|---|
| 2003 | **Packard Road Amoco** |
| 1999 - 1998 | No Address Listing |
| 1994 – 1993 | Delush Construction |
| 1989 – 1988 | Delush Construction, **Bakers Packard** |
| 1984 – 1974 | **Bakers Packard, Packard-Platt Service** |
| 1969 | **Baker's Shell Service** |
| 1964 - 1954 | No Address Listing |

### Section 1.4: Interviews with Knowledgeable Site Contacts

Mr. Jeff Hanson, the "key site manager," completed a Phase I ESA Questionnaire, which was provided by PME. Mr. Hanson represents Pipeline Oil Sales, Inc., the current owner of the property since 1999. The following affirmative responses were provided:

- The presence of petroleum products at the site (Section 1.0).
- Current/historic use of the subject site or adjoining properties as a gasoline station (Section 1.0).
- Current/historic use of the subject site or adjoining properties as a dry cleaning facility (Section 2.10).

- Whether or not stained soil is/was present on the property (Section 2.0).
- Current/historic presence of storage tanks located on the property (Section 2.4).
- Current/previous presence of vent pipes and fill pipes (Section 2.4).
- Knowledge of environmental site assessment of the property that indicated the presence of petroleum products on the property (Section 1.6).
- Former presence of contamination on the subject site due to release from previous UST system (Section 1.6).

The following unknown response was provided:

- Current/historic presence of chemicals in containers greater than 5.0 gallons (Section 2.2.1)
- Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs (Section 2.6.0)?
- Whether or not pole or pad-mounted transformers are located on the subject site (Section 2.6.0).

Additionally, PME interviewed representatives from the Ann Arbor Fire Department, Ann Arbor Assessing Department and the Washtenaw County Health Department. In general, interviewees supported the information reviewed from other historical sources (i.e., aerial photos, city records, etc.).

### Section 1.5: Building Department/Assessor Records

The City of Ann Arbor building records are included within the tax assessment records. The following table summarizes relevant building permits on file at the City of Ann Arbor Assessing Department:

**Table 1: Building Permits for 3005 Packard Road**

| Date of Issue | Reason For Issue | Occupant at time of Issue |
|---|---|---|
| 9/16/66 | Building Plan | Unknown |
| 11/16/66 | 550-gallon and 1,000-gallon UST Installation | Unknown |
| 5/7/74 | UST Installation | Easy's Auto Service |
| 11/5/86 | Alter Existing Building | Buddys Mini Mart |
| 6/29/87 | Repairs | Buddys Mini Mart |

**Records pertaining to the removal of the 550-gallon and 1,000-gallon UST installed in 1966 were not identified by PME; therefore, the possibility that additional orphan USTs remains present at the subject site, which represents a REC.**

PME obtained and reviewed reasonably ascertainable tax assessment information provided by the City of Ann Arbor Assessor's Office. Copies of all available assessment records for the subject site and the current legal description are included as Appendix C.

**Section 1.6: Previous Site Investigations**

PME reviewed the following reports that were previously completed for the subject site at the Michigan Department of Environmental Quality (MDEQ), Remediation & Redevelopment Division (RRD), Jackson District Office, Jackson, Michigan (Appendix D):

- Initial Abatement Report, September 24, 1994 (Envirologic Technologies, Inc. (Envirologic), Kalamazoo, MI)
- Initial Assessment Report (IAR), November 10, 1994 (Envirologic)
- Free Product Report, November 21, 1994 (Envirologic)
- Phase I Hydrogeologic Report, February 8, 1995 (Envirologic)
- Phase II Hydrogeologic Work Plan, April 6, 1995 (Envirologic)
- Final Assessment Report (FAR), August 28, 1997 (Fluor Daniel GTI, Inc., Farmington Hills, MI)
- Closure Report, November 14, 1997 (Fluor Daniel GTI)
- Audit of Corrective Actions, January 27, 1998 (MDEQ, Lansing, Michigan)
- Letter in Response to Corrective Action Audit, June 29, 1998, (Fluor Daniel GTI)
- Audit of Corrective Actions, July 8, 1998 (MDEQ, Lansing, Michigan)

In 1994, Envirologic conducted a sub-surface investigation to gather data for a UST removal and upgrade project. Three soil borings were installed near the existing USTs. Staining and odors were detected in the soil. A release was reported based on analytical results of soil and groundwater samples. Geology at this site consisted of interbedded clays and sands to approximately 18.0 feet bgs, where sand of an undetermined thickness occurs.

During initial assessment activities, ten additional soil borings were advanced at the subject property. Groundwater was encountered between 6.0 to 8.0 feet below ground surface (bgs). The groundwater flow direction appeared to vary across the subject site. Groundwater contamination was determined to migrate off-site beneath Packard and Platt Roads. The investigation indicated that free phase kerosene (free product) was discovered in SB-6 and SB-7 (Figure 2) located near former kerosene UST. Between November 16 and November 17, 1994, four USTs were removed. A total of 870 cubic yards of soil was excavated and disposed of off-site at a licensed disposal facility. During the installation of the current USTs, a recovery well (RW-1) was installed between SB-6 and SB-7 and recovery of free product began using a bailer. A free product report was filed with the MDEQ indicating one inch of product was observed and approximately 0.125 gallons was recovered.

On February 8, 1995 Envirologic conducted a Phase I Hydrogeologic Study. The investigation included the advancement of five soil borings and four permanent groundwater-monitoring wells. Results of the investigation indicated concentrations of benzene, toluene, ethylbenzene and xylenes (collectively BTEX) were detected above the former Michigan Environmental Resource Act (MERA) Type B Cleanup Criteria. PNAs and MTBE were detected below MERA Type B Cleanup Criteria. Total lead was detected below MERA Default Type A Cleanup Criteria. Groundwater analytical results indicated BTEX and MTBE above the MERA Type A Cleanup Criteria. PNAs and lead were

detected below laboratory method detection limits (MDLs). The Phase I Hydrogeologic Report recommended addition investigation to define the extent of BTEX and MTBE in groundwater. The MDEQ conducted an audit of the Phase I Hydrogeologic Report on February 15, 1997, and found the report to be adequate.

Envirologic submitted a Phase II Hydrogeologic Study Work Plan on April 7, 1995, proposing the advancement of eleven soil borings and the installation of eight monitoring wells for the purpose of completing the horizontal and vertical delineation of the kerosene release. The work plan also proposed the collection and laboratory analysis of soil and groundwater samples for BTEX, PNAs, and lead. The report cover sheet indicated that a total of 5.25 gallons of free product had been recovered as of April 7, 1995. The MDEQ conducted an audit of the Phase II Hydrogeologic Study Work Plan on April 14, 1997, and found the work plan to be acceptable.

Fluor Daniel GTI, Inc. submitted a FAR dated August 28, 1997, to the MDEQ. The FAR included the results of additional subsurface investigation, which included the advancement of thirteen soil borings, installation of thirteen monitoring wells, and the collection and laboratory analysis of groundwater samples to complete the vertical and horizontal extent of BTEX and MTBE in groundwater. Laboratory results for groundwater samples indicated that BTEX, MTBE and PNA concentrations were below Michigan Tier 1 Generic Groundwater Contact Criteria. Free product was not detected in any of the monitoring wells. A UST Closure Report for a former Shell Service Station located directly across Platt Road, west of the subject site, at 2995 Packard was obtained from the MDEQ and reviewed. The closure report was reviewed to determine if BTEX and MTBE in groundwater migrated from the subject property to the former Shell Service Station property. The closure report indicated that soil samples collected from boring adjacent to Platt Road were not impacted with BTEX and MTBE. The final assessment investigation activities resulted in completion of the vertical and horizontal delineation of BTEX and MTBE in groundwater.

A Tier 1 Unrestricted Residential Closure Report was submitted to the MDEQ dated November 14, 1997, by Fluor Daniel GTI, Inc. No additional site investigation was performed as part of the closure report. According to the report, the extent of soil and groundwater contamination has been defined to applicable Tier 1 Residential Risk Based Screening Levels (RBSLs) which included soil and groundwater Direct Contact Criteria (DC and GC respectively). Volatilization of hydrocarbons into indoor air was not determined to be a relevant pathway based on the depth to groundwater being 6.0 to 8.0 feet bgs.

An Audit of Corrective Actions dated January 27, 1998 was performed by the MDEQ. According to the letter, the MDEQ ***did not*** concur with the conclusion that corrective actions have been completed. Specifically, the closure report did not address off-site contamination or restrict the possible usage of impacted groundwater. MW-12 is located on or approximate to the site property line and contained 1,400 parts per billion of dissolved benzene along with other gasoline constituents. The levels found in this monitoring well and its location indicated that contamination has migrated off-site. Information found in the file for the former Shell station, located west of the Buddy's site, directly across Platt

Road, does not indicate that this contamination has crossed the roadway; however, utilities are located beneath the roadways along the property's south and west frontages. The utilities may be intercepting dissolved phase contamination. Additionally, soils at this site consist of interbedded clays and sands to approximately 18.0 feet bgs, where sand of an undetermined thickness occurs. This sand layer could be utilized as a source of drinking water. There may be communication between the interbedded layers and the sand layer (18.0 feet and greater). The levels of contaminants found at this site are above Drinking Water and Soil Groundwater Protection Criteria but are below Soil Direct Contact and groundwater Direct Contact criteria.

Fluor Daniel GTI, Inc. prepared an amended Tier II Restricted Commercial III Closure report in response to the MDEQ's audit of corrective actions. A restrictive covenant has been placed on the property limiting land use. A Notice to Local Unit of Government of Corrective Action and Land Restriction form notifying the City of Ann Arbor of the property restrictions was sent on June 23, 1998.

An Audit of Corrective Actions dated July 9, 1998 was performed by the MDEQ. According to the letter, the MDEQ ***agrees*** with the conclusion that corrective actions at the site have been completed in accordance with Part 213. Corrective Action at the site has resulted in the Restricted use of the site based on a Tier 2 evaluation, utilizing institutional controls.

Based upon review of these reports, PME agrees that corrective actions have been completed at the site regarding the previous release.

### Section 1.7: Other Sources/Historical Plat Maps

County atlases and plat maps are historical map records of property ownership, which may sometimes indicate the location of building structures or occupancy. These maps are published by county and further broken down into townships. Within the township maps, individual ownership of land, as well as possible land usage, is documented. County atlases and plat maps are generally available from the mid to late 1800s through present day. More recent maps typically specify ownership, while early county atlases and plat maps generally specify land ownership and sometimes, building structures.

Historical county plat maps were available for the following years: 1930, 1964, 1967, 1970, 1973, 1975, 1977, 1979, 1981-1982, 1982-1983, 1985, 1987, 1989, 1991, 1994, 1997 and 1999 (Appendix B). The following ownership information is provided by the plat maps:

| | |
|---|---|
| 1964 - 1999 | City of Ann Arbor |
| 1930 | Darlington Subdivision |

## SECTION 2.0 - SITE INSPECTION:

A site inspection was completed to observe site conditions, evaluate the data and observations and to

assess the environmental risk associated with the subject property. The site was inspected in a meander and search pattern. Site photographs taken at the time of the on-site reconnaissance of the subject site and adjoining properties are included as Appendix E.

### Section 2.1.0: Name of Inspector(s), Date and Time of Inspection

Mr. Brian Chmielewski, Project Geologist for PME, conducted the site inspection on November 18, 2003 at 11:00 a.m. Qualification statements for the environmental professionals involved in this ESA are included as Appendix F.

### Section 2.1.1: Weather

At the time of reconnaissance, weather conditions were approximately 45° F and mostly cloudy.

### Section 2.1.2: Physical Setting

The subject site consists of a 0.5-acre parcel of land located north of Packard Road and east of Platt Road. The current subject site building is located on the central portion of the property, with two gasoline dispensers located to the west of the subject building and one gasoline dispenser located to the south of the subject building (Photographs #1 - 4). The UST basin is located to the west of the subject building. Maintained grass is located on the west and south portion of the property along the Packard and Platt Road right-of-ways.

The initial subject building was located in approximately the same location as the current subject building (see Section 1.0 for historical usages and dates) (Figure 2). The location of the former gasoline dispensers and UST basin is unknown from initial development until 1969.

The subject site is further described as located in Township three South (T.3S), Range six West (R.6W), Section 2, Ann Arbor, Washtenaw County, Michigan.

According to previous subsurface investigations completed at the subject site, geology at this site consisted of interbedded clays and sands to approximately 18.0 feet bgs, where sand of an undetermined depth occurs. Groundwater was encountered between 6.0 to 8.0 feet bgs. The groundwater flow direction varied across the subject site.

### Section 2.1.3: Current Property Use

The subject site is currently utilized as a retail gasoline station and convenience store.

### Section 2.1.4: Intended Property Use

The intended property use is consistent with the current use.

### Section 2.1.5: Utilities

The subject site building is currently connected to natural gas and municipal water and sanitary sewer. Michigan Consolidated Gas Company (MichCon) currently provides natural gas to the subject site. However, due to company policy, MichCon will not release the date of connection of the building to natural gas. According to the City of Ann Arbor Building Department, a permit to install a 550-gallon and 1,000-gallon UST was issued in 1966. The former contents of these USTs are unknown. The likely heating source from the initial building construction in unknown and likely consisted of fuel oil and an associated UST. **The use of fuel oil and an associated UST at the subject site represents a REC in connection with the subject site.**

### Section 2.1.5a: Municipal Water/Water Wells

According to the Ann Arbor Township Water and Sewer Department, municipal water service was provided to the subject site in 1966, which is not consistent with the first development use of the property. Therefore, it is likely that the subject property used on private potable water well from sometime prior to 1954 until municipal water was provided to the subject property in 1966. Record of a private water well was not identified. A water well was not observed during the site reconnaissance and was likely abandoned and no longer exists; however, documentation of how this well was abandoned was not provided to PME and could act as a contaminate transport mechanism to the underlying aquifer if not abandoned properly.

### Section 2.1.5b: Municipal Sanitary Sewer/Septic System

According to the Ann Arbor Water & Sewer Department, municipal sanitary sewers were provided to the subject site in 1966, which is not consistent with the first development use of the property as a retail gasoline station with automotive service from sometime prior to 1957. It is likely that an onsite sewage disposal system was used on the subject property. **The potential for hazardous materials associated with the former automotive service operations to be released onto the subject site via an onsite septic system represents a REC in connection with the subject site.**

No floor drains were observed within the current subject building during the site reconnaissance, with the exception of the restrooms.

### Section 2.1.5c: Storm Sewer

No storm water catch basins were observed in the subject site parking lot.

### Section 2.2.0: Site Building(s)

Based upon review of aerial photographs, the initial subject site building was constructed between 1940 and 1955. It appears that the initial subject building was demolished sometime between 1964 and 1967 when the current subject building observed during the site reconnaissance was constructed. It appears that the original and current subject buildings were constructed in approximately the same location. The current subject site building contains a total of 1,860-square feet of floor space. Interior finish materials of the subject building consist of concrete and ceramic tile floor coverings, drywall walls, and acoustical ceiling tiles throughout the building. Floor drains were not identified during the site reconnaissance, with the exception of the restrooms.

#### Section 2.2.1: Current Interior Waste Streams

The interior waste stream consists of typical office and food waste.

Individual containers of motor oil, gasoline additives, etc. for retail sale are stored on shelves in the convenience store, which does not represent a REC.

#### Section 2.2.2: Historical Interior Waste Streams

According to city directories, automotive service was performed at the subject site from sometime prior to 1957 until 1988. **The historical usage of the subject site as an automotive service facility and retail gasoline station represents a REC based upon the unknown waste management practices of the former occupants and the potential mismanagement of hazardous substances and petroleum products associated with automotive service and repair, including motor oil, brake fluid, antifreeze, etc.**

### Section 2.3.0: Building Exterior

Asphalt pavement immediately surrounds the subject site building, and concrete pavement is present beneath the canopy and over the UST basin. Two fuel dispensers are located to the west of the subject site building. An additional fuel dispenser is located to the south of the subject building. One trash dumpster is located north of the subject building. Groomed grass is located along the Packard and Platt Road right-of-ways.

#### Section 2.3.1: Exterior Site Operations

Fueling operations occur to the west and south of the subject site building. Customer and employee parking occur in the parking lots surrounding, and to the north of the subject site building.

The location of historical fueling operations is unknown from initial development until 1969.

PME observed approximately eight drum rings in the asphalt parking lot located to the north of the

subject building (Photograph #5). Evidence of leaks or spills from the former drums was not observed at the time of the site reconnaissance.

### Section 2.3.2: Hazardous Waste Disposal

No hazardous wastes are currently generated or stored at the subject site

Historically, the subject property has been used as an automotive service facility from sometime prior to 1957 until 1988 and as a retail gasoline station since 1988 until present. It is possible that hazardous wastes such as solvents were improperly disposed of on-site.

### Section 2.3.2.a: Agricultural Waste

Based upon review of aerial photography, the subject site was potentially used for agricultural cropland prior to 1940 until sometime prior to 1955. The mere historical agricultural cropland usage is viewed as a "deminimis condition" by PME as defined in the ASTM Standard E-1527-00. Most agricultural chemicals sprayed on crops are very diluted with water. Often areas on agricultural land that present the potential for environmental concerns are chemical and pesticide storage and mixing area where concentrated spills can occur, vehicle maintenance areas, land disposal areas, fuel supply areas, and dry wells. No such areas (i.e., "farm hubs") have been identified to be historically present on the subject site property, as determined through review of reasonable ascertainable standard and other historical sources.

### Section 2.3.3: Solid Waste Stream and Disposal

Food and office solid waste is placed in the trash dumpster located in the northern parking lot (Photograph #6). No evidence of current or historic dumping has been identified during the completion of this Phase I ESA.

### Section 2.4: USTs/ASTs

Table 1 below provides a summary of the historic and current USTs present at the subject site, which was obtained from the review of MDEQ-WHMD, Lansing, Michigan records (Appendix J):

**Table 1: UST Information**

| Tank ID Number | Size (Gallons) | Contents | Est. Date Installed | Date Removed | Source of Information |
|---|---|---|---|---|---|
| 1 | 6,000 | Gasoline | 1976 | 1997 | EDR Report, MDEQ Registration Records, Previo Environmental Site Investigations |
| 2 | 20,000 | Gasoline | 1969 | 1997 | EDR Report, MDEQ Registration Records, Previou Environmental Site Investigations |
| 4 | 1,000 | Kerosene | 1976 | 1997 | EDR Report, MDEQ Registration Records, Previou Environmental Site Investigations |
| 5 | 20,000 | Gasoline | 1997 | In-Use | EDR Report, MDEQ Registration Records, Previou Environmental Site Investigations, Site Reconnaissance |

Records pertaining to the USTs likely associated with the subject building from initial developm until 1969 were not identified by PME. **Based on the limited information available for the origi USTs that were installed prior to 1955 until 1969, a possibility that additional orphan US remain present at the subject site, which represents a REC.**

The current UST system consists of one 20,000-gallon compartmental (12,500-gallon and 7,5( gallon) gasoline UST. The UST is located to the west of the current subject site building (see Figu 2). The UST system meets current 1998 Federal upgrade requirements, including current polluti liability insurance (a copy of this policy is included within Appendix I). The Simplicity automa leak detection system was observed mounted on a wall in the office. Record of a MDEQ inspectic conducted on February 12, 2002, is also provided in Appendix I that stated, "Interstitial or montl monitoring shall be conducted in accordance with 280.44 (C). Section 280.44 (C)". A letter from t MDEQ dated March 18, 2002 indicated that the previous violation had been corrected. Table summarizes the current UST system and the components designed to prevent and detect a release

**Table 2: Current UST System Specifications**

| | |
|---|---|
| **Tank ID Number** | 5 |
| **Substance Stored** | Gasoline |
| **Est. Year Installed** | 1997 |
| **Size (gallons)** | Compartmental: 12,500-gallon and 7,500-gallon (20,000-gallon total) |
| **Tank Construction** | Composite (Steel with Fiberglass)(Glasteel II) |

| | |
|---|---|
| **Corrosion Protection Equipped? Internal or External?** | Not Applicable Due To UST Construction |
| **Tank Release detection?** | Automatic Tank Gauging, Manual Tank Gauging, Tank Tightness Testing, Inventory Control, Interstitial Monitoring of Double Walled Tank |
| **Piping Construction** | Double Walled, Fiberglass Reinforced Plastic |
| **Piping Corrosion Protection** | Not Applicable Due to Piping Construction |
| **Piping Release Detection?** | Automatic Line Leak Detectors, Line Tightness Testing and Interstitial Monitoring of Double Walled Piping |
| **Overfill Protection Equipment?** | Overfill Devices Have Been Installed |
| **Spill Protection Equipment?** | Spill Protection Equipment Have Been Installed |
| **Do inventory records show discrepancies or shortages?** | No |
| **Tightness Tested? Date of Last Test?** | Yes: 11/20/03 |
| **Registration Status** | The most recent registration of the current UST present on the subject site provided to PME by Pipeline Oil Sales and on file at the MDEQ-Waste & Hazardous Materials Division (WHMD) is dated January 1999. PME recommends the registration be updated with the MDEQ- (WHMD), Lansing, Michigan upon the sale of the property. |
| **Tanks Meet 1998 Requirements?** | Record of a MDEQ inspection, conducted on February 12, 2002, is also provided in Appendix I that stated, "Interstitial or monthly monitoring shall be conducted in accordance with 280.44 (C). Section 280.44 (C)". A letter from the MDEQ dated March 18, 2002 indicated that the previous violation had been corrected. |
| **Number of Monitoring Wells Currently On-Site** | Approximately two on-site monitoring wells were observed during the site reconnaissance. |

### Section 2.5: Pits, Ponds, Lagoons and Waste Disposal Areas

No pits, ponds, lagoons or waste disposal areas were identified.

### Section 2.6.0: Potential PCB Containing Materials

PME did not assess the light ballasts or capacitors since it was outside the scope of work and was not requested by the client.

Automotive service was performed at the subject site from initial development until 1988 and it is likely that underground hoists were present in the subject building. Flooring likely covered any evidence of former hoist when extensive remodeling occurred in 1988 and 1995. Underground hoists can operate with an underground reservoir of hydraulic fluid, which historically often contained polychlorinated biphenyls (PCBs) (i.e., a hazardous substance). **Based upon the unknown integrity of the hoist system and underground reservoir(s) potentially present, and the potential for hydraulic fluid to have impacted the subsurface, a REC has been identified.**

PME observed two pole-mounted transformers located along the northern property boundary (photograph # 7). The transformers, which are owned by MichCon, appeared to be in good condition with no evidence of leaks or staining and contained labels indicating the transformers are non-PCB containing.

### Section 2.6.1: Electromagnetic Fields

Identification of electromagnetic fields is not included in within the scope of work for this Phase I ESA. However, PME did not observe any high-tension wires or substations in the vicinity of the subject site.

### Section 2.7: Vegetation

No stained or stressed vegetation was observed during the site reconnaissance.

### Section 2.8: Oil and Gas Wells

PME reviewed the MDEQ-Geologic Survey Division (GSD) web site (www.deq.state.mi.us/mir) to determine if an oil and/or gas well existed previously on the subject site or surrounding area. According to the MDEQ-GSD web site, no records of an oil and/or gas well existing on or adjacent to the subject site area were identified.

### Section 2.9.0: Topography

The United States Geological Survey Division (U.S.G.S.) 7.5-Minute Topographic Map of the Ypsilanti West Quadrangle, 1967 (revised in 1983) for the subject site was reviewed in accordance with the ASTM standards (Figure 1). The map was reviewed to determine if conditions exist whereby hazardous substances or petroleum products migrate to or from the subject site to surface water, groundwater or soil.

Based on the topographic map, the subject site is located at an elevation of approximately 820 feet above mean sea level. The immediate subject site area appears to gently slope downward to the west towards an unidentified intermittent stream, which is located approximately one quarter of a mile away at an elevation of 800 feet.

### Section 2.9.1: Drainage Patterns

Storm water that does not infiltrate the subsurface would drain to the storm water sewers located along Packard and Platt Roads. No storm water catch basins were identified on the subject site property during the site reconnaissance.

### Section 2.9.2: General Soil Profile

According to the United States Department of Agriculture's Soil Survey of Washtenaw County, Michigan (published June 1991) the subject site area is characterized as the Nappanee Series (Appendix H). The Napanee series consists of somewhat poorly drained, nearly level, and gently sloping soils formed in loamy and clayey textured glacial till. These soils occur on till plains, moraines, and lake plains. In a representative profile the surface layer is dark grayish-brown silty clay loam eight inches thick. The sub soil is firm, mottled brown, and twelve inches thick. The upper part is silty cay, and the lower part is clay. The underlying material is grayish-brown silty clay.

### Section 2.9.3: Geology

The "Hydrogeologic Atlas of Michigan", produced by Western Michigan University and the United States Environmental Protection Agency, 1981; "Quaternary Geology of Southern Michigan", Department of Geological Sciences, University of Michigan, Ann Arbor, Michigan (1982); and "Bedrock Geology of Southern Michigan", Michigan Department of Natural Resources (MDNR), Geological Survey Division (1987) were reviewed.

According to the aforementioned sources, the Michigan Formation of the Meramecian Series and Mississippian System, which is part of the Paleozoic Era, underlies this area of Washtenaw County. Bedrock is covered by end moraines of coarse-textured glacial till, which is characterized as gray, grayish brown or reddish brown, non-sorted glacial debris consisting of sandy loam or sandy clay with varying amounts of cobbles or boulders. Thickness of this geology varies between 100 to 200 feet.

Based on previous site investigations, geology at the subject site consists of interbedded clays and sands to approximately 18.0 feet bgs, where sand of an undetermined thickness occurs.

### Section 2.9.4: Local Groundwater Flow

A review of topographic features/gradient may be suggestive of the hydrogeologic gradient in the immediate subject site area, since in a general way, the water table typically conforms to surface topography. Based on topographical features, the anticipated groundwater flow direction would be to the west (Section 2.9.0). Based on previous subsurface investigations at the subject site, the groundwater flow direction appeared to vary across the subject site, likely due to the presence of current and former UST basins and fill material.

The north adjoining property currently consists of a residential dwelling (Photograph #8) (2881 Platt Road) (Photograph #14). According to aerial photographs and city directories, the residential dwelling was constructed between 1964 and 1969. Prior to construction, the north adjoining property was undeveloped land potentially used as agricultural cropland.

**East Adjoining Property**

The east adjoining property currently consists of a commercial dry cleaner occupied by Wash and Dry (3031 Packard Road) (Photographs # 9 - #10). According to aerial photographs and city directories, the commercial building was constructed between 1960 and 1964 and has operated as dry cleaner since 1964. **Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination, which represents a REC.** Prior to construction, the east adjoining property was undeveloped land potentially used as agricultural cropland.

**South Adjoining Properties**

The south adjoining property is currently consists of a commercial strip mall with various tenants (Photograph #11 - #12). According to aerial photographs and city directories, the commercial building was constructed between 1955 and 1957 and has operated as a automobile dealer with possible vehicle service (Honda of Ann Arbor) from sometime prior to 1969 until at least 1975, mower and electrical motor service (Maynard's BD Mower and Electrical Motor Service) in 1964 and a dry cleaner (U and I Dry Cleaners) from sometime prior to 1988 until present. Automotive service garages often involve the usage of petroleum products and other hazardous substances including antifreeze, motor oil, brake fluid, transmission fluid, etc. Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination, which represents a REC. **The potential mismanagement and/or improper disposal practice of the substances described above represent a REC.** Prior to construction, the south adjoining property was undeveloped land potentially used as agricultural cropland.

**Southwest Adjoining Property**

The southwest adjoining property currently consists of a commercial grocery store occupied by Buster Food Mart (3050 Packard Road) (Photograph #13). According to aerial photographs and city directories, the commercial building was constructed between 1955 and 1957. EDR has identified the southwest adjoining property as a UST site. PME submitted a FOIA request to review available information from the MDEQ-RRD for this facility; however, no records existed. According to the EDR report, two 500-gallon USTs were installed at the property in 1930. The contents and location of the former UST is unknown. According to the report the UST were removed from the ground;

however, a date was not available. **Due to distance considerations, unknown contents and location of USTs and no documentation stating the condition of the USTs upon removal, potential leakage from the USTs represent a REC to the subject site.** Prior to construction, the southwest adjoining property was undeveloped land potentially used as agricultural cropland.

**West Adjoining Property**

The west adjoining property is currently occupied by a commercial gasoline station (Amoco) (photograph #14). According to aerial photographs and city directories, the commercial building was constructed between 1966 and 1969 and has operated as a gasoline station with/without automotive service from sometime prior to 1969 until present. The property is listed as a closed LUST site (Section 4.7). Prior to construction, the west adjoining property was undeveloped land potentially used as agricultural cropland.

Through site observations, regulatory records review, and review of reasonably ascertainable standard and other historical sources for the subject site area, PME has not identified any of these adjoining properties to represent a potential off-site REC to the subject site, with the exception of the east, south and southwest.

## SECTION 3.0 - ASBESTOS CONTAINING MATERIALS (ACM) INSPECTION

PME did not complete an asbestos inspection since the current building was fully remodeled in 1988 and 1995.

Asbestos products are heat resistant, flexible, and durable, and are commonly found in building construction and insulating materials (e.g., floor tile, fire preventative structures, pipe wrap, etc,). Collectively, asbestos containing products are often referred to as Asbestos containing materials or ACM) ASTM Standard Designation E-1527-2000 defines ACM as containing more than one percent asbestos. Friable ACM is defined as any material containing more then 1% asbestos, as determined by using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable refers to materials that contain asbestos bound by cement, plastic, adhesive, etc., which if handled through routine maintenance, will not become friable.

Under the United States Environmental Protection Agency (USEPA) NESHAP regulation, ACMs are any material found to contain asbestos in concentrations greater than one percent, as determined by polarized light microscopy (PLM). RACMs are: a) Friable asbestos material, b) Category I non-friable ACM that has become friable, c) Category I non-friable ACM that will be or has been subject to grinding, cutting, abrading, or d) Category II non-friable ACM that has a high probability of becoming crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by NESHAP. Category I non-friable ACMs are asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos. Category II non-friable materials, excluding Category I

- Several site investigations were completed from 1994 to 1998 associated with a confirmed release in 1994, and Fluor Daniel submitted a closure report to the MDEQ on August 27, 1997. An Audit of Corrective Actions was completed by the MDEQ in July 1998, which indicated that the MDEQ concurs that corrective actions have been completed and the site has a Tier II Restricted Use Commercial III Closure. Based upon review of these reports, PME agrees that adequate corrective actions have been completed regarding the 1994 UST release.

**Non CERCLA Related Concerns**

PME did not complete an asbestos inspection since the current building was fully remodeled in 1988 and 1995.

No sensitive ecological areas, including potential wetlands, were observed on the subject site property.

PME observed two pole-mounted transformers located along the northern property boundary. The transformers, which are owned by MichCon, appeared to be in good condition with no evidence of leaks or staining and contained labels indicating the transformers are non-PCB containing.

**Environmental Non Compliance**

Environmental non-compliance was not identified associated with the subject site.

**UST System Compliance**

The current UST system consists of one 20,000-gallon compartmental (12,500-gallon and 7,500-gallon) gasoline UST that was installed in 1992. The UST is located to the west of the current subject site building. The UST system meets current 1998 Federal upgrade requirements, including current pollution liability insurance.

**PME assumes the prospective buyer of the subject site intends on using the existing USTs. In PME's opinion it would be difficult to get a "Baseline Environmental Assessment (BEA)" affirmed by the MDEQ due to length of time the current UST system has been operating.**

**Current RECs**

In the professional opinion of PME, an appropriate level of inquiry has been made into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability, and no evidence or indication of RECs has been revealed, with the exception of the following <u>on-site</u> RECs:

- The possible former use of heating oil and an associated UST to heat the historical building at the subject site represents a REC in connection with the subject site. It is possible that an orphaned UST exists.

- Based on the limited information available for the original USTs that were installed prior to 1955 and used until 1969, a possibility that additional orphan USTs remain present at the subject site, which represents a REC. Additionally, records pertaining to the removal of the 550-gallon and 1,000-gallon USTs installed in 1966 identified by the Ann Arbor Building Department were not identified by PME; therefore, the possibility that additional orphan USTs remain present at the subject site, which represents a REC.

- The potential for hazardous materials associated with the former automotive service operations from at least 1967 until 1988 to have been discharged onto the ground or into an onsite septic system via floor drains represents a REC in connection with the subject site. The location of the former onsite septic system is unknown. The property is now connected to municipal sewers.

- Based upon the unknown integrity of the former hoist system likely used when the property conducted automotive service and potential underground reservoir(s) and the potential for hydraulic fluid to have impacted the subsurface, a REC has been identified.

- The use of the current UST system and associated pump islands since 1997.

The following off-site REC were identified:

- The east and south adjoining properties are currently and/or have historically operated as dry cleaning facilities. Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination, which represents a REC.

- According to the EDR report, the southwest adjoining property is listed as a registered UST site. PME submitted a FOIA request to review available information from the MDEQ-RRD for this facility; however, no records existed. Due to distance considerations, unknown contents and location of USTs and no documentation stating the condition of the USTs upon removal, the potential leakage from the USTs represent a REC to the subject site.

- EDR has identified Sakstrups Towing, Inc. (3055 Packard Road) as a closed LUST site located approximately 400-feet east of the subject site. Because this site is located beyond the east adjoining property (see bulleted item above), a FOIA request was not submitted to the MDEQ-RRD for this site. Addressing the REC associated with the east adjoining property (i.e. dry cleaners) would likely identify any migration of potential contamination originating from this site. Due to distance considerations, the unknown extent of soil and/or groundwater contamination and the anticipated groundwater flow direction towards the west (towards the subject site), PME has identified this site as an off-site REC.

### Section 10.2: Recommendations

These RECs have been brought to the attention of the client within the requirements of the ASTM Standard Designation E-1527-2000. Because RECs were identified during the performance of the Phase I ESA, a Phase II ESA is warranted in order to determine the nature, extent, magnitude, and materiality of the off-site RECs at the property. The estimated scope would be approximately four soil borings and sampling approximately two existing groundwater-monitoring wells. The estimated cost of the additional investigation, which we believe to be necessary, is $6,000.00.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
JACKSON DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

June 13, 2006

**SUBMITTAL OF A**
**BASELINE ENVIRONMENTAL ASSESSMENT**

**Submitter:**
Packard Mini Mart, L.L.C.
3005 Packard Road
Ann Arbor, Michigan

**BEA ID#:**
B200600738JK

**Property Address/Location:**
3005 Packard Road
Ann Arbor, Michigan

The Department of Environmental Quality (DEQ) has received on June 7, 2006, a Baseline Environmental Assessment (BEA) dated May 31, 2006 and prepared by PM Environmental, Inc., for the above submitter. This BEA disclosure was submitted pursuant to Section 20126(1)(c) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.20126.

The submitter has not requested a written determination by the DEQ on the adequacy of the BEA, as allowed in Section 20129a of Part 201 of the NREPA. The BEA may be reviewed in the future to determine its adequacy. If the BEA is determined to be inadequate, the submitter may be liable under Part 201 for the contamination at the facility.

The DEQ is not at this time making any findings about whether the submitter is otherwise liable or covered by any other exemption from liability under Part 201. This BEA does not alter liability with regard to a subsequent release or threat of release or any exacerbation of existing conditions. This BEA is only for the person and property identified in the petition. The use of the property and any response activity undertaken must be in accordance with the requirements of all applicable or relevant and appropriate state and federal laws and regulations. Liability protection is conditioned on the timely and satisfactory completion of any response activities described in the submittal. Pursuant to R 299.5919(2), if the submitter sells or transfers the property, the submitter is required to disclose the BEA to a subsequent owner or operator in order to be entitled to an exemption from liability.

The BEA is based on the proposed use of hazardous substances as identified in the BEA. The DEQ will maintain an administrative record of each BEA. If at any time you provide the DEQ with post-BEA information related to your BEA, the DEQ will retain such information with the administrative record. Such post-BEA information will not be considered part of the BEA and acceptance of such information by the DEQ should in no way be construed to mean the DEQ will review or advise the submitter regarding the adequacy of such information for any purpose.

The submitter, as the owner and/or operator of a facility, has the following Due Care responsibilities under Section 20107a of Part 201 and Part 10 of the Part 201 Rules, unless covered by the exemptions in Section 20107a(4) or (5):

- Undertake measures as are necessary to prevent exacerbation of the existing contamination.
- Exercise due care by undertaking response activity 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.
- 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.
- Notify the DEQ if there are discarded or abandoned containers that contain hazardous substances on the property using Form EQP4476.
- Notify the DEQ and adjacent property owners if contaminants are migrating off the property (refer to Form EQP4482).
- Notify the local fire department if there is a fire or explosion hazard.
- Notify utility and easement holders if contaminants could cause unacceptable exposures and/or fire and explosion hazards.

Rule 1003(5) requires a person who is subject to the provisions of Section 20107a to maintain documentation of compliance with these requirements and to provide such documentation to the DEQ upon request. If the property use changes in the future, additional due care measures may be necessary. The property owner and operator must re-evaluate and document their continued compliance with Section 20107a.

The submitter may also have responsibility under applicable state and federal laws, including, but not limited to Part 201, Environmental Remediation; Part 111, Hazardous Waste Management; Part 211, Underground Storage Tank Regulations; Part 213, Leaking Underground Storage Tanks; Part 615, Supervisor of Wells of the NREPA; and the Michigan Fire Prevention Code, 1941 PA 207, as amended.

The BEA constitutes a response activity, consequently, this submittal is subject to Section 20137(4) and (5) of the NREPA.

Authorized signature:

Mitchell Adelman, District Supervisor
Remediation and Redevelopment Division
Jackson District
517-780-7852

6/13/06
Date

Attachment

Rev 6/21/04

FOR DEQ USE ONLY
BEA Disclosure # B2006C0738JC

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
REMEDIATION AND REDEVELOPMENT DIVISION

# DISCLOSURE OF A BASELINE ENVIRONMENTAL ASSESSMENT
## (FORM EQP4446 (REV. 4/03))

*(Under the authority of Part 201, 1994 Act 451, as amended, and the Rules promulgated thereunder)*

***DO NOT use this form for requesting a Baseline Environmental Assessment ("BEA") adequacy determination, OR if the property is not a facility, OR if the BEA was complete before the effective date of the BEA rules.*** *Please answer the following questions as completely as possible.*

*Name and address of submitter* (individual or legal entity):*
Packard Mini Mart, LLC
3005 Packard Road
Ann Arbor, Michigan

*Status relative to the property:*

| | Former | Current | Prospective |
|---|---|---|---|
| Owner* | ☐ | ☐ | ☒ |
| Operator* | ☐ | ☐ | ☒ |

*Address/location of property where BEA was conducted:*
3005 Packard Road
Ann Arbor, Michigan

County: Washtenaw

**Provide the property tax identification number(s) or, if applicable, the ward and item number(s) for the property identified in the BEA.** Required pursuant to Rule 907.
09-12-02-325-011

Contact person: Mr. Chehir Ayachi Telephone #: 5174149541

If the address of the person seeking liability protection above is different from the address that should be used to correspond with the contact person, please provide the contact person's address:

RECEIVED
JUN - 7 2006
MDEQ-REMEDIATION & REDEVELOPMENT DIV.

*Check the appropriate response to each of the following questions.*

1. **Is it known that the source of contamination at the property is primarily from any of the following?**

| | YES | NO |
|---|---|---|
| • **A leaking underground storage tank (UST) regulated under Part 213, 1994 PA 451, as amended.** | ☒ | ☐ |
| • **A licensed landfill or solid waste management facility.** | ☐ | ☒ |
| • **A licensed hazardous waste treatment, storage, or disposal facility.** | ☐ | ☒ |
| • **Oil and gas development related activities.** | ☐ | ☒ |

The source of the release that resulted in this property becoming a "facility" will determine which DEQ division will maintain a file regarding this BEA.

2. **Based on the Part 201 Rules, this BEA is a:**

Category N ☐
Category D ☐
Category S ☒

3. **Is the property at which the BEA was conducted a "facility"* as defined by Section 20101?** If the answer to this question is NO, do not submit the BEA to the DEQ.

YES ☒ NO ☐

4. **Was the BEA conducted* prior to or within 45 days after the date of purchase*, occupancy, or foreclosure of the property, whichever is earliest, and completed* not more than 15 days after the date required by Section 20126(1)(c) or Rule 299.5903(8)?** If the answer to either portion of this question is no, you are ineligible for an exemption from liability based on the BEA. YES ☒ NO ☐

5. **Is the BEA being disclosed to the DEQ no later than 8 months after the earliest of the date of purchase, occupancy, or foreclosure?** All disclosures pursuant to Rule 919(3) must be submitted to the DEQ no later than 8 months after the earliest of the date of purchase, occupancy, or foreclosure. YES ☒ NO ☐

6. **Are any USTs or abandoned or discarded containers identified in the BEA?** If yes, this information must be provided on Form EQP4476. YES ☒ NO ☐

7. **Does this BEA rely on an isolation zone or an engineering control that requires an affidavit pursuant to Rule 299.5909(3) or 299.5909(4)?** If yes, a completed affidavit, Form EQP4479, must be attached or the BEA will not be considered complete. YES ☐ NO ☒

With my signature below, I certify that the enclosed BEA and all related materials are complete and accurate to the best of my knowledge and belief. 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 of Submitter: _____ 5/31/06
(Person legally authorized to bind the person seeking liability protection) Date

Name (Typed or Printed) Mr. Chehir Ayachi

Title Member

# CATEGORY-S BASELINE ENVIRONMENTAL ASSESSMENT CONDUCTED PURSUANT TO SECTION 20126(1)(c)OF 1994 PA 451, PART 201, AS AMENDED, AND THE RULES PROMULGATED THEREUNDER

Location:
*Retail Gasoline Station and Convenience Store*
*3005 Packard Road*
*Ann Arbor, Washtenaw County, Michigan*

Prepared For:
*Mr. Chehir Ayachi*
*Packard Mini Mart, LLC*
*C/O Mr. Ike Kuczer*
*Sky Bank*
*32255 Northwestern Highway*
*Farmington Hills, Michigan 48334*

**VOLUME 1 OF 2**

**CATEGORY-S BASELINE ENVIRONMENTAL ASSESSMENT CONDUCTED PURSUANT TO SECTION 20126(1)(C) OF 1994 PA 451, PART 201, AS AMENDED, AND THE RULES PROMULGATED THEREUNDER, FOR THE RETAIL GASOLINE STATION AND CONVIENCE STORE (PARCEL ID NUMBER 09-12-02-325-011) LOCATED AT 3005 PACKARD ROAD IN ANN ARBOR, WASHTENAW COUNTY, MICHIGAN**

**May 31, 2006**

**Prepared by:**

PM Environmental, Inc.

22655 S. Chrysler Drive
Hazel Park, MI 48030
Office: 248.336.9988
Fax: 248.336.9989

3340 Ranger Road
Lansing, MI 48906
Office: 517.321.3331
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5380 Cascade Road Suite, 200
Grand Rapids, MI 49546
Office: 616.285.8857
Fax: 616.285.8026

**Category-S Baseline Environmental Assessment Conducted Pursuant to Section 20126(1)(C) Of 1994 Pa 451, Part 201, as Amended, and the Rules Promulgated Thereunder**

## 1.0 IDENTIFICATION OF AUTHOR AND BEA COMPLETION

This Category-S Baseline Environmental Assessment (BEA) was conducted on May 30, 2006, by Mr. Brian Chmielewski, Project Geologist, and reviewed by Mr. Douglas McVey, Technical Operations Manager and Mr. Peter S. Bosanic, P.E., Principal and Vice President, PM Environmental, Inc. (PME), 3340 Ranger Road, Lansing, Michigan. Professional resumes for the environmental professionals involved are included in Appendix A. This Category-S BEA was completed on May 31, 2006 prior to the purchase of the property.

## 2.0 INTRODUCTION

PM Environmental, Inc., has been retained by Packard Mini Mart, LLC (Ann Arbor, Michigan), to provide environmental consulting services related to the development of a Category-S BEA for the retail gasoline station and convenience store (Parcel ID # 09-12-02-325-011) located at 3005 Packard Road in Ann Arbor, Washtenaw County, Michigan. Packard Mini Mart, LLC, plans on purchasing the subject site in the month of June 2006.

The subject site consists of 0.5-acres of land located north of Packard Road and east of Platt Road (Figure 1). The current subject site building is located on the central portion of the property, with two (2) gasoline dispensers located to the west of the subject building and one (1) gasoline dispenser located to the south of the current subject building. The current UST basin is located west of the subject building and consists of one (1) 20,000-gallon compartmental (12,500-gallon and 7,500-gallon) gasoline underground storage tank (UST) constructed of fiberglass. Maintained grass is located on the west and south portion of the property along the Packard and Platt Road right-of-ways (ROWs).

The subject site is a closed leaking underground storage tank (LUST) site. Specifically, a Tier II Restricted Commercial III Closure prepared by Flour Daniel GTI in 1998 exists for the subject site. The report was audited by the Michigan Department of Environmental Quality (MDEQ) and approved for closure. There is a deed restriction that eliminates the use of shallow groundwater for any purpose on the subject site and a notice was provided notifying the Local Unit of Government (LUG) that contamination exists below Packard and Platt Roads that adjoin the subject site. Concentrations of methyl tert butyl ether (MTBE) were documented to be present in groundwater on the subject site above Part 213 Tier 1 Residential Risk-Based Screening Levels (RBSLs). The

horizontal extent of contamination has not been defined to the west, south and east to Part 213 Tier 1 Residential Soil Drinking Water Protection (DWP) and Groundwater Drinking Water (DW) Risk-Based Screening Levels (RBSLs). The MDEQ currently requires full delineation.

PME previously completed a Phase I Environmental Site Assessment (ESA) dated January 15, 2004 (Appendix B) which identified the following on site historical and current Recognized Environmental Conditions (RECs):

- Several site investigations were completed from 1994 to 1998 associated with a confirmed release in 1994, and Fluor Daniel submitted a closure report to the MDEQ on August 27, 1997. An Audit of Corrective Actions was completed by the MDEQ in July 1998, which indicated that the MDEQ concurs that corrective actions have been completed and the site has a Tier II Restricted Use Commercial III Closure. Based upon review of these reports, PME agrees that adequate corrective actions have been completed regarding the 1994 UST release.

- The possible former use of heating oil and an associated UST to heat the historical building at the subject site represents a REC in connection with the subject site. It is possible that an orphaned UST exists.

- Based on the limited information available for the original USTs that were installed prior to 1955 and used until 1969, a possibility that additional orphan USTs remain present at the subject site, which represents a REC. Additionally, records pertaining to the removal of the 550-gallon and 1,000-gallon USTs installed in 1966 identified by the Ann Arbor Building Department were not identified by PME; therefore, the possibility that additional orphan USTs remain present at the subject site, which represents a REC.

- The potential for hazardous materials associated with the former automotive service operations from at least 1967 until 1988 to have been discharged onto the ground or into an onsite septic system via floor drains represents a REC in connection with the subject site. The location of the former onsite septic system is unknown. The property is now connected to municipal sewers.

- Based upon the unknown integrity of the former hoist system likely used when the property conducted automotive service and potential underground reservoir(s) and the potential for hydraulic fluid to have impacted the subsurface, a REC has been identified.

- The use of the current UST system and associated pump islands since 1997.

The following off site REC were identified:

- The east and south adjoining properties are currently and/or have historically operated as dry cleaning facilities. Dry cleaning operations commonly involve the usage of bleaches, detergents, fungicides, solvents, and turpentine, which, if improperly managed and/or disposed of, can be a source of contamination, which represents a REC.

- According to the EDR report, the southwest adjoining property is listed as a registered UST site. PME submitted a Freedom of Information Act (FOIA) request to review available information from the MDEQ-RRD for this facility; however, no records existed. Due to distance considerations, unknown contents and location of USTs and no documentation stating the condition of the USTs upon removal, the potential leakage from the USTs represent a REC to the subject site.

- EDR has identified Sakstrups Towing, Inc. (3055 Packard Road) as a closed LUST site located approximately 400-feet east of the subject site. Because this site is located beyond the east adjoining property (see bulleted item above), a FOIA request was not submitted to the MDEQ-RRD for this site. Addressing the REC associated with the east adjoining property (i.e. dry cleaners) would likely identify any migration of potential contamination originating from this site. Due to distance considerations, the unknown extent of soil and/or groundwater contamination and the anticipated groundwater flow direction towards the west (towards the subject site), PME has identified this site as an off-site REC.

PME completed an initial Phase II ESA dated April 4, 2004, (Appendix C) to address the above mentioned RECs and to confirm site conditions and to assess areas not investigated as part of the LUST investigation. The scope of the Phase II ESA included a geophysical survey using an electromagnetic (EM)-31, the advancement of five (5) soil boring/temporary monitoring wells and sampling six (6) existing permanent groundwater monitoring wells. Soil and/or groundwater samples were collected to investigate potential contamination from current and historical uses of the property as a gasoline station and potential migration of contamination from off-site sources. Soil and groundwater samples were submitted for laboratory analysis of gasoline range volatile organic compounds (VOCs) or full VOCs, polynuclear aromatic hydrocarbons (PNAs), polychlorinated biphenyls (PCBs), cadmium, chromium, and lead, or a combination thereof. Concentrations of contaminants that were identified were similar to those identified in the 1997 Closure Report.

The geophysical survey was completed around the perimeter of the subject building. Anomalies indicating the presence of orphaned USTs were not identified during the EM-31 geophysical survey. EM-31 limitations that may preclude data acquisition and interpretation include reduced signal penetration from overburden attenuation properties, rough or uneven ground surfaces, complicated overburden, standing water, ambient microwave noise, and dense, reinforced concrete pavements or foundations. The potential exists that additional USTs could be present and not identified if the

location of the UST was directly below an interior or exterior load bearing wall, or in areas PME was unable to survey. If any additional USTs are discovered during any development activities, the USTs should be removed in accordance with Part 211 of P.A. 451.

PME completed a Phase I ESA Update dated October 18, 2005, (Appendix D) and the following additional on site RECs were identified based upon additional review of previous investigations:

- Review of previous LUST closure activities indicates previous soil and groundwater samples collected on the subject property were not analyzed for the current MDEQ required gasoline parameters. Specifically, samples collected between 1994 and 1997 were only analyzed for benzene, toluene, ethyl benzene, xylenes (collectively referred to as BTEX), MTBE, PNAs and lead. These were the appropriate parameters at the time of closure. Current additional parameters required by the MDEQ since December 2004 include n-propylbenzene, isopropyl benzene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene for unleaded gasoline and 1,2-dibromoethane and 1,2-dichloroethane for leaded gasoline.

- No verification sampling was completed in the areas of the former gasoline and kerosene pump islands to the west and south of the subject building. The possibility exists for additional contamination to be present in these areas above the applicable RBSLs.

- Review of analytical results from previous site investigations indicates soil contaminant concentrations are not delineated to the east and south of PSB-5 and MW-3, and to the west of PSB-3, PSB-5, SB-10, SB-5, and MW-8, to the current Part 213 Tier I DWP RBSLs, which are the current Part 213 LUST closure requirements.

- Review of analytical results from PME's March 2004 sampling event indicates soil contaminant concentrations of xylenes were identified at PSB-5 above the current Part 213 Tier I Commercial III Soil Volatilization to Indoor Air Inhalation RBSLs and Soil Direct Contact RBSLs, and above the Part 213 Soil Saturation Concentration (Csat) Screening levels. No free product was observed in the temporary monitoring well set at the boring location. However, the possibility exists for free product to exist in the area of PSB-5. Additionally, current MDEQ Part 213 Leaking Underground Storage Tank (LUST) closure requirements include remediation of all areas containing contaminant concentrations above Csat.

- Review of analytical results from previous site investigations indicates groundwater contamination is not delineated to the east of MW-11, MW-3, and MW-6, to the south of MW-6, MW-14, and MW-13, and to the west of MW-13, MW-2, MW-1, MW-8, MW-12, and TMW-3, to the current Part 213 Tier I Groundwater Drinking Water RBSLs, which are the current Part 213 LUST closure requirements.

PME completed additional site investigation in May 2006 which consisted of advancing two (2) additional soil borings, installing one (1) temporary monitoring well and sampling ten (10) existing monitoring wells. Concentrations of various VOCs were identified in soil and groundwater exceeding the MDEQ Part 213 Tier 1 Residential and Commercial III DWP, SVII, and DW RBSLs.

***Because concentrations of target analytes were detected above MDEQ Part 213 Tier 1 Residential and Commercial III RBSLs, the subject site is classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan Natural Resources Environmental Protection Act (NREPA).***

The subject site is currently owned by Pipeline Oil Sales, Inc. Packard Mini Mart, LLC plans on purchasing the subject site in June 2006 and intends to use the subject site as a gasoline filling station and convenience store. The future use of the site as a gasoline filling station will involve the use and storage of hazardous substances similar to those contaminants identified beneath the property. Therefore, a Category "S" BEA is the appropriate BEA. Packard Mini Mart, LLC intends to use the existing contaminant concentrations (or lack thereof) present in soil and groundwater beneath the subject site as the means to distinguish a potential new release from existing contamination. Semi-annual groundwater samples will be collected from up to six (6) existing monitoring wells and compared to the existing analytical data as a basis to distinguish existing contamination from any new release in accordance with Michigan Administrative Code R 299 5901-5919. UST and product line tightness tests were conducted for the UST system that was installed in 1997, which meets the EPA's 1998 Federal upgrade requirements, at the subject on May 26, 2006 (Appendix I). Results of the tightness testing indicated that the UST and product lines passed the 0.2-gallon per hour tightness tests and are within system specifications. (Section 5.2). The UST system was installed in 1997 and there is no indication that a release has occurred from this system; therefore, the UST system will be used as an engineering control as an alternative approach for the BEA (Section 6.0).

## 3.0 PROPERTY DESCRIPTION & INTENDED HAZARDOUS SUBSTANCE USE

### 3.1 Property Description

As stated in Section 2.0, the subject site consists of 0.5-acres of land located north of Packard Road and east of Platt Road. The current subject site building is located on the central portion of the property, with two (2) gasoline dispensers located to the west of the subject building and one (1) gasoline dispenser located to the south of the current subject building. The current UST basin is located west of the subject building and consists of one (1) 20,000-gallon compartmental (12,500-gallon and 7,500-gallon) gasoline UST constructed of fiberglass. Maintained grass is located on the west and south portion of the property along the Packard and Platt Road ROWs.

A copy of the legal description supplied from the City of Ann Arbor Assessing Department is included in Appendix E.

### 3.2 Intended Hazardous Substance Use

Packard Mini Mart, LLC proposes to use the property as a gasoline filling station and convenience store. Gasoline will be stored in the one (1) 20,000-gallon compartmental fiberglass UST located west of the subject site building (Figure 2). According to the MDEQ UST registration records, the UST is plumbed, via double-walled, fiberglass-reinforced, plastic piping, to a total of three (3) dispensers, which are located to the west and south of the subject building (see Figure 2). The UST system (including the associating product piping) is equipped with leak detection sensors that are connected to an automatic tank gauging (ATG) system that will shut down the UST system in the event of a leak or system component failure. The product dispensers are also equipped with emergency system shutoff switches and shear valves to prevent a release of product in the event that a dispenser nozzle is torn away.

Material safety data sheets (MSDSs) for hazardous materials that are intended to be stored and dispensed at the subject site are presented in Appendix H. Refer to Table 1 for the intended hazardous substance use. The petroleum products are similar to those present as site contaminants; therefore, a Category-S BEA is appropriate.

## 4.0 KNOWN CONTAMINATION

### 4.1 Soil and Groundwater Sampling and QA/QC Procedures

#### 4.1.1 Previous Environmental Investigations

**Phase I ESA dated January 15, 2004 completed by PME (refer to Section 2)**

**Phase II ESA dated April 4, 2004 completed by PME;**

The scope of the Phase II ESA (Appendix C) included a geophysical survey using an electromagnetic (EM)-31, the advancement of five (5) soil boring/temporary monitoring wells and sampling six existing permanent groundwater monitoring wells. Soil and groundwater samples were submitted for laboratory analysis of gasoline range VOCs or full VOCs, PNAs, PCBs, cadmium, chromium, and lead, or a combination thereof. The geophysical survey was completed around the perimeter of the subject building.

Anomalies indicating the presence of orphaned USTs were not identified during the EM-31

geophysical survey. EM-31 limitations that may preclude data acquisition and interpretation include reduced signal penetration from overburden attenuation properties, rough or uneven ground surfaces, complicated overburden, standing water, ambient microwave noise, and dense, reinforced concrete pavements or foundations. The potential exists that additional USTs could be present and not identified if the location of the UST was directly below an interior or exterior load bearing wall, or in areas PME was unable to survey. If any additional USTs are discovered during any development activities, the USTs should be removed in accordance with Part 211 of P.A. 451.

The purpose of the Phase II ESA was to address RECs identified in the January 2004 Phase I ESA completed by PME and to confirm site conditions and to assess areas not investigated as part of the LUST investigation. Concentrations of target analytes in soil exceeded the Part 213 Tier 1 Residential and Commercial DWP, Groundwater Contact Protection (GCP), Soil Volatilization to Indoor Air Inhalation (SVII), and/or Soil Direct Contact (SDC) RBSLs and Soil Saturation Concentration (Csat) screening level. Concentrations of target analytes in soil exceeded the Part 213 Tier 1 Residential and Commercial DWP in the soil near PSB-2 (west of the former kerosene UST and northeast of the southern gasoline dispenser) and PSB-3 (along the western property line west of the UST basin and western gasoline dispensers). Concentrations of target analytes in groundwater exceeded the Part 213 Tier 1 Residential and Commercial DW RBSLs collected from TMW-2 (west of the former kerosene UST and northeast of the southern gasoline dispenser), TMW-3 (along the western property line west of the UST basin and western gasoline dispensers), TMW-5 (south of the southern gasoline dispenser), MW-1 (along the western property line north of the current UST basin), MW-4 (west of the subject building and east of the western gasoline dispensers), MW-4d (adjacent to MW-4) and MW-2 (southwest of the western gasoline dispensers). The horizontal extent of soil and/or groundwater impact associated with the release of petroleum hydrocarbons from the site has not been defined to the west, south and east to Part 213 Tier 1 Residential DWP and DW RBSLs. Concentrations of contaminants that were identified were similar to those identified in the 1997 Closure Report.

Based upon the presence of contaminants at concentrations above the applicable Part 213 Tier 1 Residential and Commercial III RBSLs, the subject site is identified as a "facility," as defined by Part 201 of PA 451 of the Michigan Natural Resources Environmental Protection Act (NREPA). The owner/operator of the property is subject to the "due care" obligations of Section 20107a. (1) of Part 201 of PA 451.

**Phase I ESA Update dated October 18, 2005 completed by PME (refer to Section 2);**

### 4.1.2 Current Environmental Investigation

PME completed the field portion of a Phase II ESA on May 5, 2006, that consisted of drilling two (2) soil borings, installing one (1) temporary monitoring well and sampling ten (10) existing monitoring wells to obtain an understanding of current site conditions. Two (2) soil and 11 groundwater samples were submitted for laboratory analysis of gasoline range VOCs, PNAs and lead. Refer to Table 2 for a list of target analytes and their respective USEPA Methods for chemical analysis. Refer to Figure 2 for a figure depicting the soil boring/monitoring well locations with analytical results.

Specifically, the Phase II ESA activities were conducted in the following areas of the property:

| Location | Depth (feet) | Analysis | Objectives | Soil Sample Selection | Screened Interval |
|---|---|---|---|---|---|
| PSB-6 | 20.0 | Gasoline Range VOCs, PNAs & Lead | Assess soil conditions associated with the former pump islands | 3.0–4.0 feet bgs | NA |
| PSB/TMW-7 | 20.0 | Gasoline Range VOCs, PNAs & Lead | Assess soil and groundwater conditions associated with the current 20,000-gallon UST. | 11.0–12.0 feet bgs | 10.0-15.0 feet bgs |

#### 4.1.2.1 QA/QC Procedures for the Current Investigation

The soil borings were advanced to the desired depth using a Model 6610DT Geoprobe® drill rig. Soil sampling was performed for soil classification, verification of subsurface geologic conditions, and for investigating the potential and/or extent of soil and groundwater contamination at the subject site. Soil samples were generally collected on a continuous basis using a 5-foot long macro-core sampler.

During drilling operations, the drilling equipment was cleaned to minimize the possibility of cross contamination. These procedures included cleaning equipment with a phosphate free solution (i.e., Alkanox®) and rinsing with distilled water after each sample collection. Drilling and sampling equipment was also cleaned in this manner prior to initiating field activities.

Soil collected from two-foot sample intervals was screened using a PID to determine if VOCs were

present. Soil from specific depths was placed in plastic bags and allowed to volatilize. The headspace within each bag was then monitored with the PID. The PID is able to detect trace levels of organic compounds in the air space within the plastic bag. The PID utilizes a 10.2 electron volts (eV) lamp. Therefore, the PID can only detect organic vapors with an ionization potential less than or equal to 10.2 eV.

Soil and groundwater samples that were collected were submitted to Merit Laboratories, Inc., East Lansing, Michigan for chemical analysis. Refer to Table 3 through Table 6 for a summary of the soil and groundwater analytical results and a comparison to the Part 213 Residential, Commercial and Industrial RBSLs. Figure 2 depicts the soil and groundwater analytical results on a scaled site diagram.

Soil samples for VOC analysis were preserved with methanol in accordance with EPA method 5035 modified and then placed in appropriately labeled containers with Teflon® lined lids and/or sanitized glass jars, placed in a cooler and transported under chain of custody procedures for laboratory analysis within applicable holding times. Groundwater samples were collected using low-flow techniques in accordance with the April 1996, ***Low Flow (Minimal Drawdown) Ground-Water (sic) Sampling Procedures*** guidance document (EPA/540/S-95/504), published by the United States Environmental Protection Agency (USEPA). Groundwater samples were placed in appropriate sample containers placed in a cooler and transported under chain of custody procedures for laboratory analysis within applicable holding times.

The temporary monitoring well was constructed of two-inch diameter, schedule 40 PVC casing with a 5-foot long, 0.010-inch slotted screen. Well depth, well materials, and screened interval are documented on the well construction diagram presented in Appendix F.

Upon completion of the investigation, soil borings were abandoned by placing the soil cuttings back into the borehole, filling the void with bentonite chips, hydrating the chips, resurfacing and returning the area to its pre-drilling condition.

QA/QC samples were collected in general accordance with MDEQ ***Operational Memorandum Number 2***, effective February 1, 2005. The QA/QC samples included one (1) soil and one (1) groundwater duplicate, one (1) groundwater matrix spike, one (1) groundwater matrix spike duplicate, one (1) soil matrix spike, one (1) soil matrix spike duplicate, and one (1) soil/groundwater field blank, all of which were submitted for laboratory analysis of gasoline range VOCs, PNAs and lead (i.e., all target analytes included in the soil and groundwater analysis). One (1) water and one (1) methanol trip blank was also submitted for laboratory analysis of gasoline range VOCs. Please refer to Tables 3 through Table 6 for the results of the soil and groundwater duplicate samples. Soil and groundwater field blank, trip blank analysis, matrix spike and matrix spike duplicate are

included in the laboratory reports (Appendix G).

The collection of groundwater equipment blanks in association with the wells sampled using a peristaltic pump was not necessary because the groundwater samples were collected using new, inert, polyethylene and silicone tubing, which was changed between sampling locations. Groundwater samples collected using the peristaltic pump were dispensed into the sampling containers exclusively through the polyethylene and silicone tubing dedicated to each well. Soil samples were collected directly from new, inert, acetate macrocore liners that were changed between each 5-foot sampling interval.

### 4.2 Geology & Hydrogeology

The description of the subsurface conditions provided below was derived from on-site observations of soil samples and cuttings collected from the soil borings that were installed by PME. Based on observations of the soil samples and cuttings, the soil stratigraphy generally consists of 20.0 feet (maximum depth explored) of interbedded clays and sands. Geology observed by PME is consistent with previous site investigations.

In general, groundwater was encountered between 8.0 and 13.5 feet bgs. The thickness of the water-bearing unit was at least 2.0 feet. Groundwater appears to be continuous as evidenced by groundwater present in all soil borings advanced by PME and based upon previous subsurface investigations performed at the subject site. According to previous subsurface investigations completed at the subject site, groundwater flow direction appeared to vary across the subject site, likely due to the presence of current and former UST basins and fill material.

The quantity of groundwater present likely meets the definition of potable groundwater as defined in the Michigan Department of Environmental Quality (MDEQ)- Remediation & Redevelopment Division (RRD) Operational Memorandum No. 11, *Criteria to Eliminate the Potable Groundwater Pathway*, dated August 25, 1997. The following criteria were met to justify the potable groundwater exposure pathway:

- A continuous confining clay layer did not exist to a depth of 20.0 feet bgs (maximum depth explored) that would prevent communication with a lower aquifer.
- Groundwater appears to be continuous as evidenced by groundwater present in soil borings advanced by PME and based upon previous sub-surface investigations performed at the subject site.

The subject site is not located within an approved local wellhead protection area, based on

information provided through the MDEQ-Drinking Water and Radiological Protection Division's website.

There is a deed restriction that eliminates the use of shallow groundwater for any purpose on the subject site and a notice was provided notifying the Local Unit of Government (LUG) that contamination exists below Packard and Platt Roads that adjoin the subject site.

### 4.3 Chemical Analysis

Current soil and groundwater analytical data from PME's site investigations is summarized in Tables 3 through Table 6. The known contaminant levels for each target analyte are compared to the MDEQ Part 213 Tier 1 Residential and applicable Commercial III RBSLs in the above referenced tables.

#### 4.3.1 Historical Analytical Results (January 2004)

Concentrations of target analytes in soil exceeded the Part 213 Tier 1 Residential and Commercial III DWP, GCP, SVII, and/or SDC RBSLs and Csat screening levels. Concentrations of target analytes in soil exceeded the Part 213 Tier 1 Residential and Commercial III DWP in the soil near PSB-2 (west of the former kerosene UST and northeast of the southern gasoline dispenser) and PSB-3 (along the western property line west of the UST basin and western gasoline dispensers). Concentrations of target analytes in groundwater exceeded the Part 213 Tier 1 Residential and Commercial III DW RBSLs collected from TMW-2 (west of the former kerosene UST and northeast of the southern gasoline dispenser), TMW-3 (along the western property line west of the UST basin and western gasoline dispensers), TMW-5 (south of the southern gasoline dispenser), MW-1 (along the western property line north of the current UST basin), MW-4 (west of the subject building and east of the western gasoline dispensers), MW-4d (adjacent to MW-4) and MW-2 (southwest of the western gasoline dispensers). The horizontal extent of soil and/or groundwater impact associated with the release of petroleum hydrocarbons from the site has not been defined to the west, south and east to Part 213 Tier 1 Residential DWP and DW RBSLs. Concentrations of contaminants that were identified were similar to those identified in the 1997 Closure Report.

***Because concentrations of target analytes were detected above MDEQ Part 213 Tier 1 RBSLs, the subject site is classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan NREPA.***

### 4.3.2 Current Analytical Results

As stated in Section 4.1.2, a total of two (2) soil and 11 groundwater samples were collected from the soil borings and existing monitoring wells during PME's investigation in May 2006 and were submitted for laboratory analysis of gasoline range VOCs, PNAs and lead. These samples were collected to evaluate the existing potential contaminant conditions within the subject site's property boundaries, including areas where petroleum products are intended to be used, stored, and/or dispensed. Soil and groundwater QA/QC samples were also collected in general accordance with MDEQ ***Operational Memorandum Number 2***, effective February 1, 2005.

PME has summarized the analytical data in Tables 3 through Table 6. The known contaminant levels for each target analyte are compared to all Part 213 Residential/Commercial/Industrial RBSLs in the above referenced tables.

**Soil Analytical Results:**

Results of the soil analysis identified concentrations of various VOCs and lead in excess of the laboratory MDLs. Concentrations of PNAs were not identified in excess of laboratory MDLs. A summary of the soil analytical results is presented in Figure 2.

Concentration of benzene (24,100 $\mu$g/Kg), toluene (20,500 $\mu$g/Kg), ethylbenzene (16,300 $\mu$g/Kg), xylenes (48,900 $\mu$g/Kg), and 1,2,4-TMB (4,800 $\mu$g/Kg) were identified above the MDEQ Part 213 Tier 1 Residential and Commercial III DWP and/or SVII RBSLs in the soil sample collected from SB-7 between 11.0 and 12.0 feet bgs.

The remaining concentrations of gasoline range VOCs in soil above the laboratory MDLs did not exceed the most restrictive MDEQ Part 213 Tier 1 Residential DWP RBSLs.

**Groundwater Analytical Results**

Results of the groundwater analysis identified concentrations of gasoline range VOCs and lead in excess of laboratory MDLs. Concentrations of PNAs were not identified in groundwater above laboratory MDLs. A summary of the groundwater analytical results is presented in Figure 2.

Concentrations of benzene (30 $\mu$g/L - 490 $\mu$g/L), ethylbenzene (330 $\mu$g/L) and/or MTBE (70 $\mu$g/L – 2,700 $\mu$g/L) were identified above the MDEQ Part 213 Tier 1 Residential and Commercial III DW RBSLs in the groundwater samples collected from MW-1, MW-C, MW-2, MW-4s, MW-4d, MW-5 through MW-7 and TMW-7.

The remaining concentrations of VOCs detected above the laboratory MDLs did not exceed the most restrictive MDEQ Part 213 Tier 1 Residential DW RBSLs..

Several groundwater samples collected across the subject site identified concentrations of lead (i.e., between 5 µg/L and 36 µg/L) exceeding the MDEQ Part 213 Tier 1 Residential DW RBSL. However, because lead concentrations were not identified above the MDEQ Part 213 Tier 1 Statewide default background levels and/or the most restrictive Residential DWP RBSLs in the soil samples collected across the subject site, the concentrations of total lead in groundwater may be the result of sediment entrainment as a result of not filtering the samples using low-flow sampling methods. It is PME's opinion that the elevated lead concentrations are a result of the presence of suspended solids in the groundwater samples, resulting in "false positive" results, and not indicative of actual site conditions.

***Because concentrations of target analytes were detected above MDEQ Part 213 Tier 1 RBSLs, the subject site is classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan NREPA.***

#### 4.3.2.1 QA/QC Analytical Results

As stated in Section 4.1.2.1, QA/QC samples were collected in general accordance with MDEQ ***Operational Memorandum Number 2***, effective February 1, 2005. The QA/QC samples included one (1) soil and one (1) groundwater duplicate, one (1) groundwater matrix spike, one (1) groundwater matrix spike duplicate, one (1) soil matrix spike, one (1) soil matrix spike duplicate, and one (1) soil/groundwater field blank, all of which were submitted for laboratory analysis of gasoline range VOCs, PNAs and lead (i.e. all target analytes included in the soil and groundwater analysis). One (1) water and one (1) methanol trip blanks were also submitted for laboratory analysis of gasoline range VOCs.

Review of the analytical results for the field blank, equipment blank, and trip blank QA/QC samples indicates no target analyte concentrations in excess of laboratory MDLs, indicating that no cross contamination occurred. The analytical results of the soil duplicate sample Dup-1 (PSB-7) was similar to the results for PSB-7 indicating analysis reproducibility. The analytical results of the groundwater duplicate sample DUP-1-GW was similar to the results for TMW-7 indicating analysis reproducibility. Review of the analytical results for PSB-6MS, PSB-6MSD, MW-AMS, MW-AMSD, (see Appendix G) indicates that the MS and MSD results were consistent and within acceptable ranges, indicating accuracy of the data.

### 4.3.3 Summary of Soil and Groundwater Analytical Results (May 2006)

In summary, concentrations of various gasoline range VOCs were detected in soil and groundwater samples collected during PME's May 2006 site investigation exceeding the MDEQ Part 213 Tier 1 Residential and Commercial III DWP, DW and/or SVII RBSLs. However, the type and concentrations of contaminants are similar to those identified in the 1997 MDEQ audited Tier 2 Closure Report and do not appear to be related to a new release.

Because concentrations of gasoline range VOCs were identified above the laboratory MDLs, semi-annual groundwater samples will be collected from up to six (6) existing monitoring wells and compared to the existing analytical data as a basis to distinguish existing contamination from any new release in accordance with Michigan Administrative Code R 299 5901-5919. Therefore, new releases should be distinguished from existing contamination if the concentrations of any of the intended-use hazardous substances (Appendix H) are detected above previously identified concentrations.

## 5.0 LIKELIHOOD OF OTHER CONTAMINATION

Analytical results indicate that the soil and groundwater beneath the subject site has been impacted by various gasoline range VOCs, which is consistent with a release of unleaded gasoline. Based upon the documented historical use of the subject site as a gasoline filling station and the status of the subject site as a closed LUST site, it is not likely that the contamination identified at the subject site can be attributed to migration from an off site source; however, it is possible that contaminants other than gasoline range VOCs, PNAs, and/or lead may exist at other areas.

### 5.1 Surrounding Areas with Potential to Impact Subject Site

PME performed limited visual observations of the surrounding properties (Figure 2) in an attempt to identify areas of potential environmental risk to the subject property resulting from the former off site usage/activities. Observations of surrounding properties were limited to accessible public areas and areas that could be readily observed from the subject property. The properties adjoining the property are used for mixed commercial purposes. Based on review of the Phase I ESA, and soil/groundwater analytical results of PME previous investigations, the adjoining properties do not appear to have impacted the subject site.

### 5.2 Demonstration That Hazardous Substances That Will Be Used At The Site Have Not Been Released

Based on the long-time use of the subject site as a gasoline filing station, the potential exists for a wide variety of hazardous substances (i.e., gasoline range VOCs, PNAs and lead) to be present on the subject site. Since the intended use is as a gasoline filing station and convenience store, similar chemicals are anticipated to be used, stored, retained, dispensed, and/or removed at the subject site. These chemicals, if inadvertently released, will be stored, retained, and removed in accordance with state and local codes, laws, rules and regulations.

UST and product line tightness tests were conducted at the subject site on May 26, 2006 for the UST system that was installed in 1997, which meets the EPA's 1998 Federal upgrade requirements (Appendix I). Results of the tightness testing indicates that the UST and product lines passed the 0.2-gallon per hour tightness tests and are within system specifications. Periodic testing and maintenance of the UST system present at the subject site will occur in accordance with regulations set fourth by the MDEQ, and as needed, to ensure that the leak detection and inventory systems are functioning properly. The UST system will be used as an engineering control that will prevent a new release. Line and tank tightness testing information is included within Appendix I.

Because concentrations of gasoline range VOCs were identified above the laboratory MDLs, semi-annual groundwater samples will be collected from up to six (6) existing monitoring wells and compared to the existing analytical data as a basis to distinguish existing contamination from any new release in accordance with Michigan Administrative Code R 299 5901-5919. Therefore, new releases should be distinguished from existing contamination if the concentrations of any of the intended-use hazardous substances (Appendix H) are detected above previously identified concentrations.

In the event that a new release was to occur, Packard Mini Mart, LLC, will advance soil borings and temporary monitoring wells in the vicinity of the release and permanent monitoring wells will be sampled. Soil and groundwater samples will be collected and submitted for chemical analysis of target analytes indicative of the materials released and based on the MSDSs (Appendix H). This sampling will be done to evaluate the lateral and vertical extent of the release. Analytical results will be compared to applicable RBSLs at the time of the new release. Any new impact above the existing concentrations will be the liability of Packard Mini Mart, LLC.

## 6.0 ALTERNATIVE APPROACHES

In addition to the semi-annual sampling, gasoline will be stored in one (1) fiberglass-reinforced

plastic UST located west of the subject site building. The UST, which was installed in 1997, is plumbed with fiberglass-reinforced, plastic piping, to a total of three (3) dispensers, which are located west and south of the subject building. The UST system (including the associating product piping) are equipped with leak detection sensors that are connected to an ATG system that will shut down the UST system in the event of a leak or system component failure. The product dispensers are also equipped with emergency system shutoff switches and shear valves to prevent a release of product in the event that a dispenser nozzle is torn away.

UST and product line tightness tests were conducted for the UST system, which meet the EPA's 1998 Federal upgrade requirements, at the subject site on May 26, 2006. The result of the tightness testing indicates that the UST and product lines passed the 0.2-gallon per hour tightness tests and are within system specifications. Periodic testing and maintenance of the UST system present at the subject site will occur in accordance with regulations set fourth by the MDEQ, and as needed, to ensure that the leak detection and inventory systems are functioning properly.

## 7.0 CONCLUSIONS

The subject site is a closed LUST site. Specifically, a Tier II Restricted Commercial III Closure prepared by Flour Daniel GTI in 1998 exists for the subject site. The report was audited by the Michigan Department of Environmental Quality (MDEQ) and approved for closure. There is a deed restriction that eliminates the use of shallow groundwater for any purpose on the subject site and a notice was provided notifying the Local Unit of Government (LUG) that contamination exists below Packard and Platt Roads that adjoin the subject site. Concentrations of methyl tert butyl ether (MTBE) were documented to be present in groundwater on the subject site above Part 213 Tier 1 Residential Risk-Based Screening Levels (RBSLs). The horizontal extent of contamination has not been defined to the west, south and east to Part 213 Tier 1 Residential Soil Drinking Water Protection (DWP) and Groundwater Drinking Water (DW) Risk-Based Screening Levels (RBSLs). The MDEQ currently requires full delineation.

Laboratory results indicated the presence of various gasoline range VOCs in soil and groundwater samples collected from the subject site exceeding MDEQ Part 213 Tier 1 Residential and Commercial III RBSLs.

The types and concentrations of contaminants are similar to those identified in the previous 1997 Closure Report; ***however, because concentrations of target analytes were detected above MDEQ Part 213 Tier 1 RBSLs, the subject site is classified as a "facility," as defined by Part 201 of P.A. 451 of the Michigan NREPA.***

Based upon the documented historical use of the subject site as a gasoline filling station and the status of the subject site as an closed LUST site, it is not likely that the contamination identified at the subject site can be attributed to migration from an off site source; however, it is possible that contaminants other than gasoline range VOCs, PNAs, and/or lead may exist at other areas.

The intended use of the property will be as a gasoline filling station and convenience store; therefore, a Category-S BEA is appropriate to meet the needs of the proposed future property use.

Because concentrations of gasoline range VOCs were identified above the laboratory MDLs, semi-annual groundwater samples will be collected from up to six (6) existing monitoring wells and compared to the existing data as a basis to distinguish existing contamination from any new release in accordance with Michigan Administrative Code R 299 5901-5919. Therefore, new releases should be distinguished from existing contamination if the concentrations of any of the intended-use hazardous substances (Appendix H) are detected above previously identified concentrations.

In the event that a new release was to occur, Packard Mini Mart, LLC, will advance soil borings and temporary monitoring wells in the vicinity of the release and permanent monitoring wells will be sampled. Soil and groundwater samples will be collected and submitted for chemical analysis of target analytes indicative of the materials released and based on the MSDSs (Appendix H). This sampling will be done to evaluate the lateral and vertical extent of the release. Analytical results will be compared to applicable RBSLs at the time of the new release. Any new impact above the applicable criteria will be the liability of Packard Mini Mart, LLC.

In addition to the semi-annual sampling and the dispensers, gasoline will be stored in one (1) fiberglass-reinforced plastic UST located west of the subject site building. The UST, which was installed in 1997, is plumbed with fiberglass-reinforced, plastic piping, to a total of three (3) dispensers, which are located west and south of the subject building. The UST system (including the associating product piping) is equipped with leak detection sensors that are connected to an ATG system that will shut down the UST system in the event of a leak or system component failure. The product dispensers are also equipped with emergency system shutoff switches and shear valves to prevent a release of product in the event that a dispenser nozzle is torn away.

## 8.0 REFERENCES


- MDEQ ***Operational Memorandum No. 1 "Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels,"*** Revised December 10, 2004;

- MDEQ ***Operational Memorandum No. 11 "Criteria to Eliminate the Potable Drinking Water Pathway,"*** November 4, 1997;

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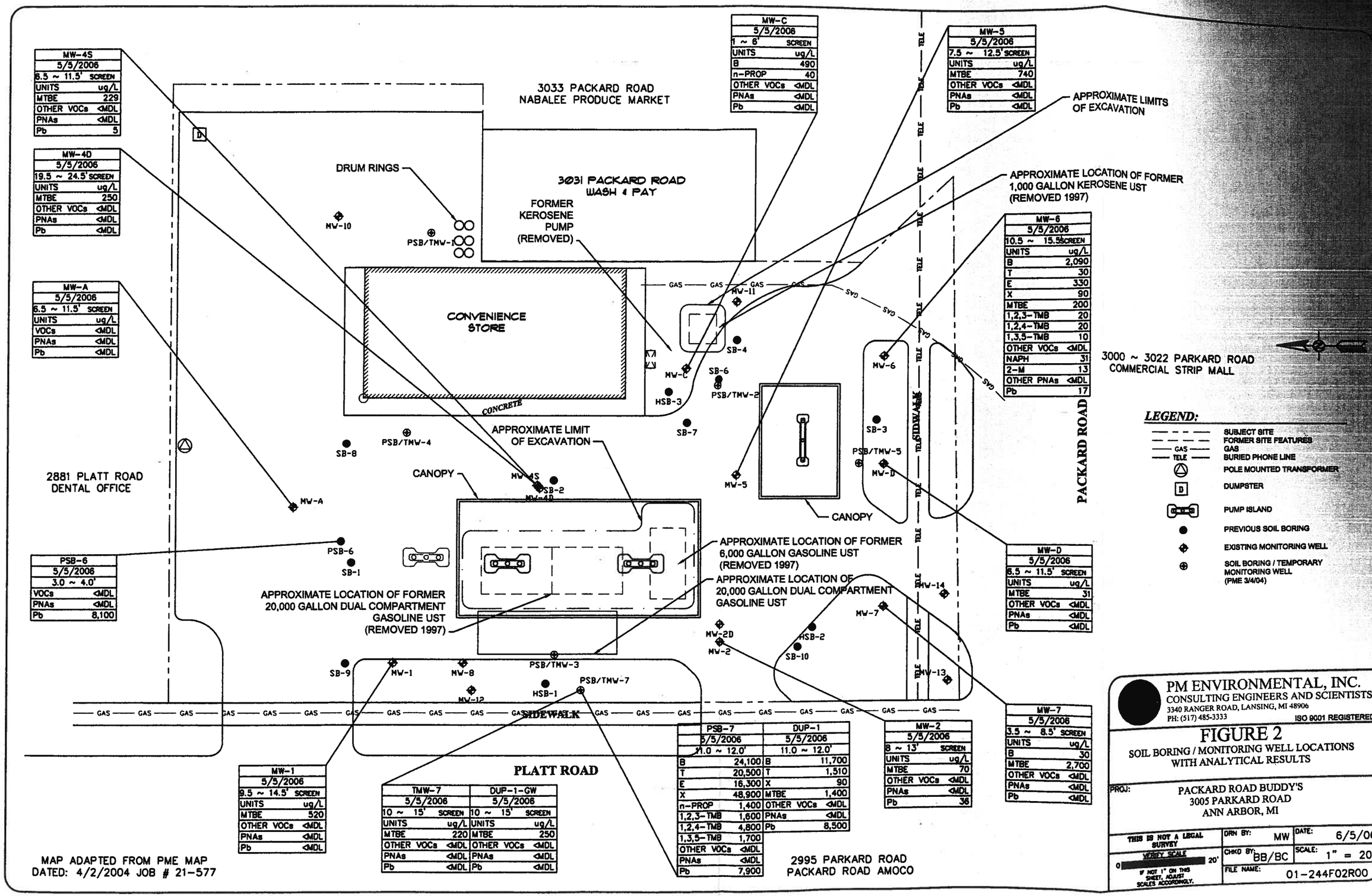


| MW-4S | |
|---|---|
| 5/5/2006 | |
| 6.5 ~ 11.5' SCREEN | |
| UNITS | ug/L |
| MTBE | 229 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | 5 |

| MW-4D | |
|---|---|
| 5/5/2006 | |
| 19.5 ~ 24.5' SCREEN | |
| UNITS | ug/L |
| MTBE | 250 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| MW-A | |
|---|---|
| 5/5/2006 | |
| 6.5 ~ 11.5' SCREEN | |
| UNITS | ug/L |
| VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| PSB-6 | |
|---|---|
| 5/5/2006 | |
| 3.0 ~ 4.0' | |
| VOCs | <MDL |
| PNAs | <MDL |
| Pb | 8,100 |

| MW-C | |
|---|---|
| 5/5/2006 | |
| 1 ~ 6' SCREEN | |
| UNITS | ug/L |
| B | 490 |
| n-PROP | 40 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| MW-5 | |
|---|---|
| 5/5/2006 | |
| 7.5 ~ 12.5' SCREEN | |
| UNITS | ug/L |
| MTBE | 740 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| MW-6 | |
|---|---|
| 5/5/2006 | |
| 10.5 ~ 15.5' SCREEN | |
| UNITS | ug/L |
| B | 2,090 |
| T | 30 |
| E | 330 |
| X | 90 |
| MTBE | 200 |
| 1,2,3-TMB | 20 |
| 1,2,4-TMB | 20 |
| 1,3,5-TMB | 10 |
| OTHER VOCs | <MDL |
| NAPH | 31 |
| 2-M | 13 |
| OTHER PNAs | <MDL |
| Pb | 17 |

| MW-D | |
|---|---|
| 5/5/2006 | |
| 6.5 ~ 11.5' SCREEN | |
| UNITS | ug/L |
| MTBE | 31 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| MW-7 | |
|---|---|
| 5/5/2006 | |
| 3.5 ~ 8.5' SCREEN | |
| UNITS | ug/L |
| B | 30 |
| MTBE | 2,700 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| MW-2 | |
|---|---|
| 5/5/2006 | |
| 8 ~ 13' SCREEN | |
| UNITS | ug/L |
| MTBE | 70 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | 36 |

| PSB-7 | | DUP-1 | |
|---|---|---|---|
| 5/5/2006 | | 5/5/2006 | |
| 11.0 ~ 12.0' | | 11.0 ~ 12.0' | |
| B | 24,100 | B | 11,700 |
| T | 20,500 | T | 1,510 |
| E | 16,300 | X | 90 |
| X | 48,900 | MTBE | 1,400 |
| n-PROP | 1,400 | OTHER VOCs | <MDL |
| 1,2,3-TMB | 1,600 | PNAs | <MDL |
| 1,2,4-TMB | 4,800 | Pb | 8,500 |
| 1,3,5-TMB | 1,700 | | |
| OTHER VOCs | <MDL | | |
| PNAs | <MDL | | |
| Pb | 7,900 | | |

| MW-1 | |
|---|---|
| 5/5/2006 | |
| 9.5 ~ 14.5' SCREEN | |
| UNITS | ug/L |
| MTBE | 520 |
| OTHER VOCs | <MDL |
| PNAs | <MDL |
| Pb | <MDL |

| TMW-7 | | DUP-1-GW | |
|---|---|---|---|
| 5/5/2006 | | 5/5/2006 | |
| 10 ~ 15' SCREEN | | 10 ~ 15' SCREEN | |
| UNITS | ug/L | UNITS | ug/L |
| MTBE | 220 | MTBE | 250 |
| OTHER VOCs | <MDL | OTHER VOCs | <MDL |
| PNAs | <MDL | PNAs | <MDL |
| Pb | <MDL | Pb | <MDL |