SITE RE-ASSESSMENT (SR) REPORT

Bendix Autolite Corp
(a.k.a. Honeywell International Inc. and AlliedSignal)
Fostoria, Seneca County, Ohio

U.S. EPA ID: OHD 066 046 228
January 2008

Prepared by: Date: 11-6-08
Ghassan Tafla, Site Coordinator
Division of Emergency & Remedial Response
Northwest District Office

Date: 11/6/08
Archie L. Lunsey II, Supervisor
Division of Emergency & Remedial Response
Northwest District Office

Reviewed by: Date: 11-6-08
Tiffani Kavalec, Manager
Division of Emergency & Remedial Response
Central Office

Approved by: Date: 10/9/08
Erica Islas, Project Manager
U.S. EPA, Region 5

SITE REASSESSMENT
(SR) REPORT

for

Bendix Autolite Corp (a.k.a. Honeywell International Inc. and AlliedSignal)

Fostoria, Seneca County, Ohio

U.S. EPA ID: OHD 066 046 228

January 2008

OHIO ENVIRONMENTAL PROTECTION AGENCY
Division of Emergency & Remedial Response
Lazarus Government Center
122 South Front Street
Columbus, Ohio 43216

January 2008

SITE RE-ASSESSMENT
(SR) REPORT

Bendix Autolite Corp

(a.k.a. Honeywell International Inc. and AlliedSignal)

Fostoria, Seneca County, Ohio

U.S. EPA ID: OHD 066 046 228

January 2008

Prepared by: _____ Date: _____

_____

Ghassan Tafla, Site Coordinator

Division of Emergency & Remedial Response

Northwest District Office

_____ Date: _____

_____

Archie L. Lunsey II, Supervisor

Division of Emergency & Remedial Response

Northwest District Office

Reviewed by: _____ Date: _____

_____ Tiffani Kavalec, Manager

Division of Emergency & Remedial Response

Central Office

Approved by: _____ Date: _

_____

Erica Islas, Project Manager

U.S. EPA, Region 5

TABLE OF CONTENTS

Section		Page
1.0	EXECUTIVE SUMMARY	1
2.0	SITE BACKGROUND	2
2.1	Site Description	2
2.2	Site History	2
2.3	Site Geology & Hydrology	5
2.4	Regulatory History	6
3.0	SITE INSPECTION & FIELD ACTIVITIES	7
3.1	Site Representatives Interview	7
3.2	Reconnaissance Inspection	7
4.0	SAMPLING LOCATIONS & DISCUSSION OF RESULTS	8
4.1	Soil	8
4.2	Groundwater Sampling	8
5.0	MIGRATION PATHWAYS	10
5.1	Soil Exposure Pathway	10
5.2	Surface Water Pathway	10
5.3	Air Pathway	10
5.4	Groundwater Pathway	11

6.0 REFERENCES.....12

LIST OF FIGURES

Figure-1 Site Location Map

Figure-2 Study Area & Locations of Interest

Figure-3 Geology Map

APPENDICES

Photographic Log Appendix A

Merger Notification Appendix B

Deeds Records Appendix C

Residential Wells Analytical Data Appendix D

Solvent Usage Survey Appendix E

Incident Report Appendix F

Ohio EPA Division of Drinking and Ground Water IOC Appendix G

Well & Boring Logs Appendix H

Ground Water Data Appendix I

Chemical Analysis of Soil Samples Appendix J

Honeywell Production Wells VOC Data Summary Appendix K

US EPA Ozone Implementation Table

Appendix L

Fostoria Population Figures & Maps Appendix M

1.0 EXECUTIVE SUMMARY

The Ohio Environmental Protection Agency (Ohio EPA), Division of Emergency and Remedial Response (DERR) entered into a cooperative agreement with the United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Site Re-assessment (SR) of the Bendix Autolite Corp (a.k.a. Honeywell International Inc. or AlliedSignal Inc.), located in Fostoria, Seneca County, Ohio. The purpose of this reassessment is to determine the current status of Honeywell's facility by gathering and evaluating new information of current conditions, since the Screening Site Inspection (SSI) was completed under the federal Superfund Program in 1991. In addition, the reassessment documents these conditions, so that U.S. EPA can determine whether additional Superfund resources and/or further remedial activities are necessary.

The Bendix Autolite Corp (aka Honeywell International Inc. or Allied Signal), herein referred to as the Site, was the subject of ground water investigation that begun in April, 1984, and has consistently identified the presence of contamination in the ground water beneath the site. The detected contamination in the ground water was identified as volatile organic compounds (VOCs), including trichloroethylene (TCE) and benzene. Off-site ground water contamination also was detected in the residential wells located to the north, downgradient from the Site.

Ohio EPA conducted an on-property and off-property, site reconnaissance on January 10, 2008, to document the current conditions at the Site property. This reconnaissance was done by visiting the facility and meeting with Mr. Justin A. Tazzi, representing Honeywell and with Laura Stirban, Project Manager representing MACTEC Engineering and Consulting, Inc. hired by the Honeywell International Inc. No environmental sampling was conducted under this site reassessment. However, additional groundwater information was gathered regarding the current site conditions and discussed in the next section of this report. Photographs of the current site conditions are represented in **Appendix A.**

2.0 SITE BACKGROUND

2.1 Site Description

The Site is a manufacturing facility located at 1600 North Union Street, Fostoria, Seneca County, Ohio 44830. The Site is approximately 55 acres in size and is owned by the Honeywell International Inc., and is located in an industrial area in northern Fostoria (SE1/4NW1/4 sec.31, T. 3N; R.13E.) (see **Figure 1** for site location). The site is an active spark plug manufacturing facility.

2.2 Site History

The Site commenced operation in 1934 under the name of Electric Autolite as a spark plugs manufacturing facility. Operations at the site prior to 1934 are not known. The site was owned by Electric Autolite until 1961 when Ford Motor Company purchased the site in 1961 and continued operations until 1973. As a result of anti-trust litigation, Ford Motor Company divested itself of the property through sale to Bendix Corporation in November of 1973. The property became known as Bendix Autolite Corporation. In 1982, the Allied Corporation acquired the Bendix Corporation. The Allied Corporation merged Signal Companies to become AlliedSignal Inc. in 1985. AlliedSignal Inc. and Honeywell Inc.merged on December 1, 1999,but retained the Honeywell Inc. name(**See Appendix B**). The spark manufacturing operations have been housed under the Autolite brand name since the Allied – Bendix acquisition. However, the deed remains listed in the Seneca County Recorders Office under the name of Bendix Autolite Corporation (**See Appendix C**).

The wastewater produced during manufacturing operations is regulated by U.S. EPA electroplating standards and metal finishing standards. Wastewater is discharged to the city of Fostoria sanitary sewer system through three underground outfalls.

To comply with federal regulations implemented in 1972, Ford Motor Company applied to Ohio Department of Health (ODH) for permits to conduct spark plug and steel spark plug shell degreasing at the Site. The degreasing operation was already underway at the facility at the time Ford Motor Company submitted its application. TCE was being used as the degreasing agent at a rate of approximately 430 pounds per hour. It is not known whether any permits were issued.

On August 13, 1980, Bendix submitted a Resource Conservation and Recovery Act

(RCRA) section 3010 form to notify U.S. EPA about hazardous waste activity at the Site. This form stated that the hazardous wastes generated on-site consisted of spent halogenated solvents (mainly TCE) from degreasing operations, and spent cyanide solutions from metal heat treating operations. Approximately 21,000 pounds of spent halogenated solvents and 4,200 pounds of spent cyanide solutions were generated each year. These wastes were stored in drums. According to a RCRA interim status inspection report prepared by OEPA, the facility qualified as a generator only; these wastes could not be treated on-site or stored for more than 90 days.

On May 8, 1984, Chester Engineers, Inc., of Coraopolis, Pennsylvania prepared a baseline monitoring report to determine Autolite's compliance with the U.S. EPA electroplating and metal finishing point source standards. According to this report, samples taken from the on-site outfalls to Fostoria sanitary sewer system revealed the presence of TCE. At that time TCE was not used in large quantities at the site.

On May 24, 1984, Autolite informed Ohio EPA that TCE was detected in two on-site process water wells at levels of 12 parts per million (ppm) in one well and 0.4 ppm in the other (Autolite 1984). Subsequently, the Seneca County Department of Public Health (SCDPH), in conjunction with Autolite, sampled the process wells, the on-site retention basin (located in the northern section of the site), an off-site quarry (located southeast of the site), and five residential wells located near the site. These samples were analyzed for VOCs and metals. TCE was detected in both process water wells (maximum concentrations of 20,529 parts per billion [ppb] and 800 ppb). The compounds 1,1,1-trichloroethane and 1,2-transdichloroethene were also detected in the process water well samples, with concentrations of 378 ppb and 23 ppb. TCE was also detected at a concentration of 2.5 ppb in a private residential well located approximately 1/8 mile north of the site (**see Appendix D**).

On December 3, 1984, SCDPH advised about 100 residents living immediately north of the site to use bottled water for drinking. This was a response to the detection of TCE in some of the residential well samples collected from the area north of the site. These samples were collected on November 30, 1984 by SCDPH. Autolite supplied the bottled water to the residents.

In October 1984, Autolite hired T. A. Gleason and Associates (TAGA), a Cincinnati – based environmental and geotechnical engineering consulting firm, to conduct a comprehensive groundwater study at the site. These investigations included the installation of test borings and monitoring wells, and the sampling of subsurface soils. TAGA also conducted extensive groundwater sampling in the area. During this study, VOC concentrations ranging as high as 20,000 ppb were detected in the monitoring wells and process wells located on site. VOCs were also detected (with concentrations as high as 20,700 ppb) in off-site industrial wells located southeast and southwest of Honeywell's property. Water samples collected from 78 residential wells located north and northwest of the BAC site were also analyzed. VOCs were detected in 18 of the 78 residential wells, with concentrations ranging from 1 to 52 ppb.

In an effort to determine the extent of VOC contamination in Fostoria's groundwater

supply, Ohio EPA conducted a survey of area industries in 1985; this survey addressed solvent usage and operating practices at various industries (**See Appendix E**). Autolite responded to the survey and stated that the facility generated 1,1,1-tricholorethane (approximately 1,650 gallons per year), 2-butanone (approximately 50 gallons per year), and a waste sodium hydroxide solution (approximately 8,600 gallons per year). The company had also previously generated approximately 55 gallons of waste cyanide each year, but at some point before the survey this practice ceased when Autolite changed to a different solvent. These hazardous wastes were transported off-site to a U.S. EPA – approved facility for disposal. According to the file information, no treatment, waste storage beyond 90 days, or disposal occurred on-site. By 1985 the solvents being used at the facility were 1,1,1-tricholorethane, mineral spirits, TCE, 2-butanone, benzene, dioctyl phthalate. All spent solvents used at the site were sent to an off-site recycling facility.

In April 1985, Ohio EPA requested the voluntary participation of Autolite in a remedial investigation and feasibility study (RI/FS) of the area north of Fostoria. In April 1986, TAGA submitted the initial work plan for the RI/FS to Ohio EPA. In 1986, the neighborhoods in the area of North Union, Bittersweet and Walnut streets were connected to the city of Fostoria water supply system. In December 1986, Autolite and four other Fostoria industries were served with summons in response to a citizens' complaint and were named in a lawsuit alleging TCE pollution of groundwater and soil. The other industries named in the suit were Fostoria Industries, Roppe Rubber Company, Union Carbide, and Norton Manufacturing Company (see **Figure 2** for sites location).

In October 1987, the "Work Plan and Description of Current Situation Remedial Investigation/Feasibility Study (RI/FS) Fostoria, Ohio" and accompanying documents were issued by T. A. Gleason and Associates. The report focused on the northern study area with Union Carbide to independently pursue RI/FS activity related to their site.

Also, at this time, Roppe Rubber through its consultant, Keck Consulting Services, Inc., issued the "Report of Hydrogeologic Investigation Roppe Rubber Company, Fostoria, Ohio". Following the release of these documents, progress on the RI/FS as it relates to the north Fostoria study area generally ceased. Contributing factors to the cessation of RI/FS activity include:

1. Roppe Rubber's contention that the results of the hydrogeologic investigation of their site combined with no demonstrated on-site use of TCE suggested their company should not be expected to incur further costs associated with RI/FS activity.

2. National Electric Carbon's (NECC), AKA Union Carbide, decision to pursue a separate RI/FS for their site.

3. Fostoria Industries' concern with Ohio EPA's decision to separate the RI/FS into two separate study areas (NECC and the north

Fostoria study area) and communication problems involving T. A. Gleason/AlliedSignal.

4. Ohio EPA's reassessment of their options based upon the timeliness with which work was progressing and, as perceived by the agency, a poor history of cooperation between PRPs.

In January 1994, AlliedSignal, Inc. experienced a benzene release at the site. Based on recovered material, AlliedSignal, Inc. estimated the release at 625 gallons. Of the recovered material, approximately 40 gallons was removed from a sanitary sewer line catch basin (see **Appendix F**).

In January 1995, the Ohio EPA Division of Drinking and Ground Water reviewed the hydrogeological investigation reports for AlliedSignal and Roppe Rubber along with other Ohio EPA files with regard to the ground water contamination in northern Fostoria. The subsequent report received from Division of Drinking and Ground Water supports the assumption that AlliedSignal is a major contributor to the groundwater contamination beneath their site. Migration of the contaminants potentially threatens additional private water supplies north-northwest of the site (see **Appendix G**).

2.3 Site Geology & Hydrology

Site Geology:

Fostoria, Ohio is located near the crest of the Findlay Arch in Northwestern Ohio. This arch is a structural high bordered by basins to the east, north, and southwest. The bedrock in the Fostoria area is the Lockport Dolomite (see **Figure 3**) with a thickness of approximately 300 feet. Porosity consists of solution channels, fossil molds, and fractures.

The bedrock is overlain by fill and glacial deposits of varying thickness. The overburden is generally 10 feet or less at Honeywell and thickens to approximately 30 feet approximately 1 mile to the south.

Site Hydrology:

The principal aquifer in the Fostoria area is a carbonate aquifer, i.e., the Lockport Dolomite (Lockport Aquifer). Most of the water flow is through solution channels and horizontal

fractures with the most productive zone in the upper 150 to 175 feet. Groundwater flow in the vicinity of Fostoria is to the northwest with influences from at least two areas of potentially significant groundwater discharge (see **Figure 2**). One of these areas includes the production wells of Honeywell, Roppe Rubber, Fostoria Industries, and the former North Manufacturing Co.

The potential for contaminants to migrate into groundwater from the Honeywell site is also based on the following geological information. The soil in the area of the site consists of Milton silt loam underlain by Wisconsinan-age ground moraine composed of a 2- to 8-foot thick layer made up of unsorted mixture of clay, silt, sand, and coarser fragments of sand (United States Department of Agriculture [USDA] 1980, United States Geological Survey [USGS] 1967).

The dolomite bedrock is underlain by Rochester shale near the Honeywell site and the dolomite is approximately 3 feet below the ground surface. Well logs of the area near the Honeywell site show that residential wells obtain water from the Dolomite bedrock, which is the area of concern (AOC). The depth to the AOC is about 10 feet (see **Appendix H** for well logs and boring logs of the Honeywell site area). Private residential wells extend to depths between approximately 59 to 90 feet (see **Appendix H**).

Based on the topography of the Honeywell site and file information, regional groundwater is assumed to in a northerly direction. Local groundwater flow may be influenced by the formation of cones of depressions due to the continuous pumping of the on-site process wells, and off-site production wells located southwest and southeast of the Honeywell site. The on-site process wells (B-1 & B-2) are pumping at the rate of 100 gallons per minute (gpm) and 200 gpm respectively.

People within the Fostoria municipal boundaries depend on surface water supplied by the Fostoria Water Department. However, during the drier periods Fostoria Water Department also uses four municipal wells to supply water. These wells are located approximately 1 ½ miles south of the Honeywell site. Water from the individual municipal wells is blended prior to distribution. Some of the residents that are residing outside the municipal boundaries, but within a 3-mile radius of the Honeywell site, use residential wells as their source of drinking water. In Spring of 1986, the neighborhoods in the area of North Union, Bittersweet and Walnut streets were connected to the city of Fostoria water supply system. However, population within 3-mile radius of Honeywell site that are not connected to a municipal water supply system is considered to be the population potentially affected by any groundwater contamination attributed to Honeywell site.

2.4 Regulatory History

USEPA investigation milestone dates for the Allied Signal site were: Site Discovery on

August 1, 1980; Preliminary Assessment on September 25, 1985 by Ohio EPA; and, Site Inspection on May 21, 1991 by U.S. EPA. The site was moved off the Active CERCLIS site list to the Archived list on March 4, 1996. Evidently, it was archived on the same day as the Expanded Site Inspection (ESI) by U.S. EPA was completed. Site momentum was halted in circa 1996, evidently due to the ESI. Ohio EPA started this Site Re-assessment Report (SR) dated March 2008.

Honeywell International is regulated by Ohio EPA's Northwest District Office (NWDO) for RCRA activities by the Division of Hazardous Waste Management; and, for air emissions, by the Division of Air Pollution Control (DAPC). Regarding RCRA issues, "Last inspection was June 2007 - all violations returned to compliance, and there are no other outstanding violations". "We found no issues at the facility and all of the requests …. have been submitted," per NWDO--DAPC. (Ohio EPA--NWDO, 2008.)

3.0 SITE INSPECTION AND FIELD ACTIVITIES

3.1 Site Representatives Interview

On January 10, 2008, Ghassan Tafla and Dale McLane of Ohio EPA met with Justin A. Tazzi (Health, Safety & Environmental Leader) representing Honeywell and Laura Stirban (Project Manager) representing MAXTEC Engineering and Consulting, Inc., hired by Honeywell Inc. During our meeting we were informed that production well B-1 is being pumped continuously without any treatment and discharged directly into the City of Fostoria sanitary sewer system for the purpose of remediation. However, production well B-2 is pumped for production process cooling water to supply the daily operation at the Honeywell facility. During the meeting we were provided with groundwater information regarding the site which is attached in **Appendix I**.

3.2 Reconnaissance Inspection

On January 10, 2008, Ohio EPA conducted a reconnaissance inspection of the Honeywell site and surrounding area including the properties that are belong to Fostoria Industries, Dollar General Store and the former Chrysler Foundry. The reconnaissance inspection included a walk-through of the Honeywell site and focused on the areas of production well B-1, production well B-2 and manufacturing areas where solvent use may have occurred. The Honeywell site is bordered on the west by Union Street, on the north by Jones Road, on the east by Main Street and on the south by a grassy area that is part of the Honeywell property and a quarry. The Chesapeake and Ohio Railroad tracks are adjacent to the site on the southwest (see Figure 4 for site features).

The site occupies approximately 55 acres in size and is owned by the Honeywell International Inc., and is located in an industrial area in northern Fostoria (SE1/4NW1/4 sec.31, T. 3N; R.13E.). An office/manufacturing building is located near the center of the site and fenced around three sides of the building. The only unfenced side is the entrance side of the building. Access to the manufacturing area is controlled and monitored by a gate and guard stationed in the north side of the fence. Photographs of the Honeywell site are provided in **Appendix A.**

4.0 SAMPLING LOCATIONS & DISCUSSION OF RESULTS

4.1 Soil

No soil sampling was conducted under this reassessment. However, previous soil samples collected from the Honeywell site during Screening Site Inspection detected TCL compounds and TAL analytes at levels above background concentrations in the on-site soil samples. The TCL contaminants present in the on-site soil samples included acenaphthene (130 J ug/kg), fluorene (220 J ug/kg), phenanthrene (2,100 ug/kg), flouranthene (3,100 ug/kg), and pyrene (3,100 ug/kg), all detected in sample S1 (see Table 4-1 in **Appendix J** for the complete analysis and the definition of the qualifiers). TAL analytes present in the on-site soil samples included antimony (5.6 BNJ mg/kg in sample S2), and selenium (0.85 BWJ mg/kg in sample S3). These analytes were not detected in the background soil sample (sample S6). Lead (466 mg/kg) and zinc (309 mg/kg) was detected at higher concentration than the background soil sample.

4.2 Groundwater Sampling

No groundwater sampling was conducted under this reassessment. However, we were able to obtain some groundwater analytical data, and an informal review of the data by Honeywell representatives. As mentioned before, Honeywell has two on-site production water wells B-1 and B-2 in addition to number of monitoring wells.

B-1 is pumped to capture a chlorinated solvent plume which had a probable source underneath the former vapor de-greaser located inside of the main production facility building. Water from Well B-1 is discharged directly to the sanitary sewer. Well B-2 is pumped for production process cooling water.

Sample data from well B-1 is available from May. 1984 to December, 2001. Similar data is available for well B-2, with a gap in the data from 1997 to the later part of 1999. Groundwater sample results can be found in a Table titled “Honeywell Production Wells VOC Data Summary (see **Appendix K**).

According to Honeywell representatives, the last ground water sampling event collected for analysis from the abovementioned production wells was in 2004. Water levels have been measured in deep bedrock groundwater monitoring wells during a period from 2001-2005. It is also our understanding that some sampling of the monitor wells has been taking place on a semi-annual basis, but we were not provided with any additional data of a more recent nature.

The most recent data for Well B-1 (December, 2001) indicates that Trichloroethylene is present at a concentration of 3,800 parts per billion, or 3.8 parts per million. The cis-isomer of 1,2 Dichloroethylene is present at a concentration of 140 parts per billion.

The most recent data for Well B-2 (June, 2001) indicates that Trichloroethylene is present at a concentration of 390 parts per billion, total 1,2 Dichloroethylene (both cis and trans isomers) is present at a concentration of 190 parts per billion, and low levels of 1,1,1 Trichloroethane are present at a concentration of 10 parts per billion.

Previous groundwater samples collected from process wells in April 1984, Honeywell has consistently identified the presence of trichloroethylene (TCE) at maximum levels of approximately 20,000 parts per billion (ppb). Other volatile organic compounds (VOCs), including benzene (4700 ppb) as of September 1994, have also been detected in the ground water beneath the site. Off-site VOC groundwater contamination has also been demonstrated. To the north, downgradient VOCs were detected in 18 of 78 residential wells, with concentrations of total VOCs ranging from 1 to 52 parts per billion (ppb). Maximum Contaminant Levels (MCLs) were exceeded for either TCE or tetrachloroethene in nine residences. Some of these wells were near a drainage ditch that had received waste effluent from among others, Honeywell, Inc.
The residences within this subdivision were connected to a municipal water supply system by the spring of 1986.

On August 21, and August 22, 1990, Ecology and Environment conducted a Screening Site Inspection (SSI) at AlliedSignal, Inc. site. The SSI included the collection of six soil samples and five groundwater samples. VOCs, including TCE (14,000 DJ ppb), 1,2-dichloroethene (22 ppb), and tetrachloroethene (21 ppb) were detected in the groundwater.

On September 1, 1994, Ohio EPA sampled both production wells B-1 and B-2 at Honeywell, Inc. and another four wells at Roppe Rubber for TCLP volatiles. Benzene (4700ppb) and TCE (5600 and 680 ppb) were found at Honeywell, Inc. The concentrations exceed the action limit of 500 ppb for both benzene and TCE. Roppe Rubber samples identified TCE concentrations of 36, 13, and 11 ppb and vinyl chloride at 41 ppb.

The TCL compounds detected in the groundwater samples may be attributable to the Honeywell site since halogenated solvents have been used on-site during degreasing operations. The TAL analytes (antimony, selenium, lead, and zinc) detected in the groundwater samples may be attributable to the Honeywell site since these analytes were also detected in the on-site soil samples.

Since TCL compounds and TAL analytes were detected in the on-site soil samples and groundwater samples, there is a strong indication that TCL compounds and/or TAL analytes have migrated from the Honeywell site into the groundwater.

5.0 MIGRATION PATHWAYS

5.1 Soil Exposure Pathway

The Honeywell site is located in an urban area in Fostoria, Ohio. It is active manufacturing facility with about 330 employees. The site is bordered by residential neighborhoods and other industries. Because it is a working manufacturing facility and is completely fenced, exposure to the soils from the nearby population is minimal. However, a potential exists that the on-site workers may come into direct contact with benzene, TCL compounds and TAL analytes.

- Benzene has been detected in the on-site soil samples and a spill of more than 625 gallons of benzene was reported on January 6, 1994.

- TCL compounds and TAL analytes have been detected in the on-site soil samples.

- TCL compounds and TAL analytes have been detected in the water samples collected from on-site production wells.

5.2 Surface Water Pathway

There is no potential for TCL compounds and TAL analytes to migrate from the site via surface water runoff. The Honeywell facility is bordered by city streets and railroad tracks which prevent surface water runoff. Any surface water runoff generated would likely remain within Honeywell's property and infiltrate into the soil.

5.3 Air Pathway

The Ohio EPA personnel did not initiate a formal air sampling program at the Honeywell site. The air pathway was not evaluated, and no samples were collected for analysis. However, there is a possibility of air migration of contaminants via particulates from open ground around the benzene spill area and from few smoke stacks that are part of the manufacturing operation at Honeywell (see **Appendix L**). There are approximately 3,215 people living within a 1-mile radius of the center of the site. The estimated population according to the 2000 census is as follows:

Radius	Population
0 - 1/4	247
1/4 - ½	510
½ - 1	2,458
1-2	6,730
2-3	4,598
3-4	2593
Total	17,136

5.4 Groundwater Pathway

This is the main pathway of concern at the facility. Beginning with samples collected from Honeywell production wells B-1 and B-2 in April 1984, it has consistently identified the presence of trichloroethylene (TCE) at maximum levels of approximately 20,000 parts per billion (ppb). Other volatile organic compounds (VOCs), including benzene (4700 ppb) as of September 1994, have also been detected in the ground water beneath the site. Ground water usage in the area is also a potential pathway of concern due to the fact that off-site VOC groundwater contamination has also been demonstrated.

Residential area to the north and downgradient to Honeywell, VOCs were detected in 18 of 78 residential wells, with concentrations of total VOCs ranging from 1 to 52 parts per billion (ppb). Maximum Contaminant Levels (MCLs) were exceeded for either TCE or tetrachloroethene in nine residences. The residences within this subdivision were connected to a municipal water supply system in the spring of 1986. However, it's not known how many residential wells within the 3-mile radius of Honeywell site are being used as a drinking water source. There are approximately 15,000 people are living within a 3-mile radius of the center of the site (see **Appendix M**).

Since benzene, TCL compounds and TAL analytes were detected in the on-site soil samples and groundwater samples, there is a strong indication that benzene, TCL compounds and/or TAL analytes have migrated from the Honeywell site into the groundwater.

6.0 REFERENCES

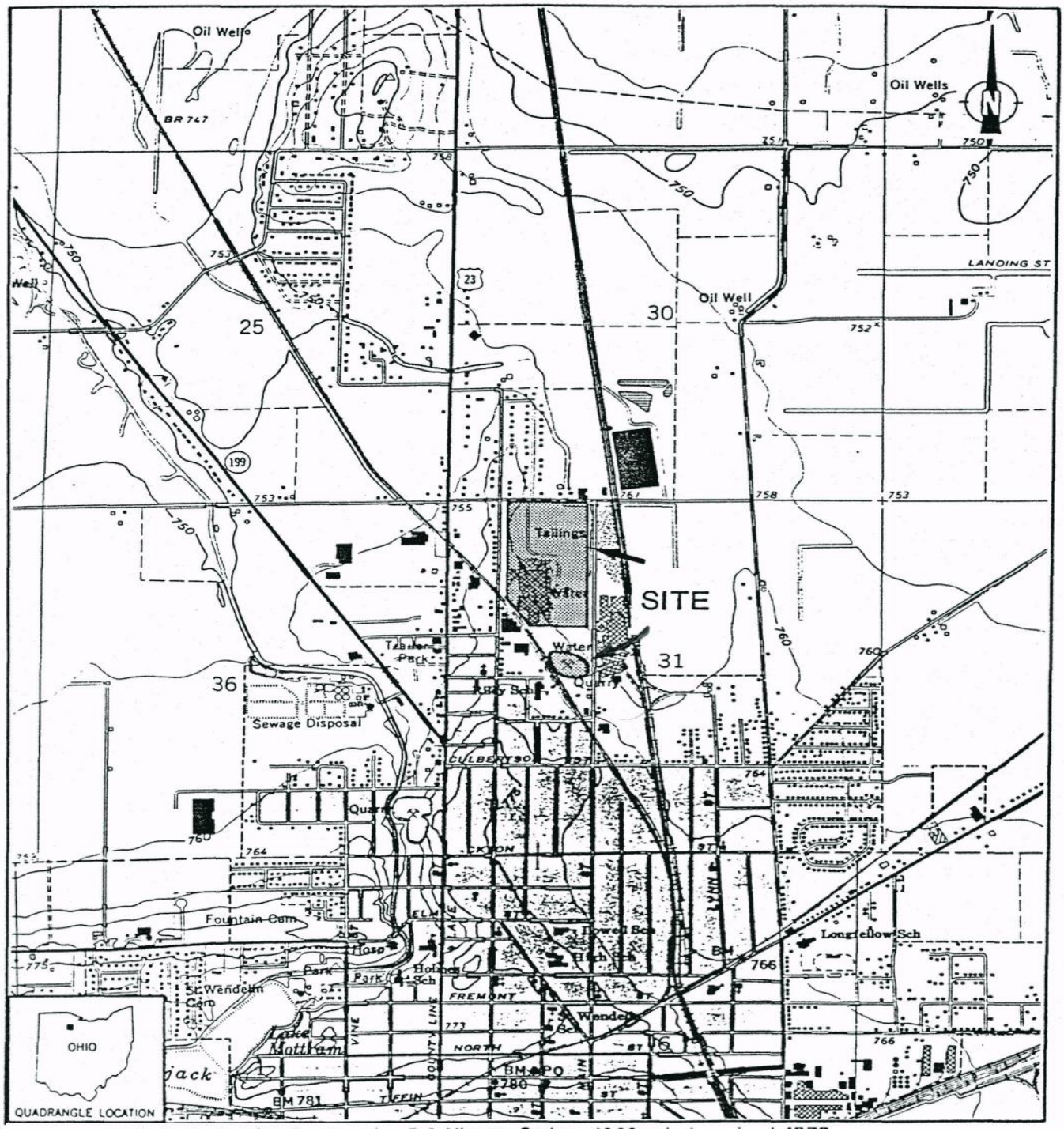
1. Ohio EPA, Northwest District Office Site Files.

2. Screening Site Investigation Report
Ecology and Environment, Inc., August 1991

3. Proposed Work Plan & Task I Findings T.A. Gleason and Associates, February 1986

4. Hydrological and Groundwater Quality Investigation T.A. Gleason and Associates, February 1986

5. U.S. EPA Home Web Page.



SOURCE: USGS. Fostoria, OH Quadrangle, 7.5 Minute Series, I960, photorevised 1972.

SCALE 0.5 = 1 mile

Appendix B
Merger Notification

Honeywell
P.O. Box 850
Fostoria, OH 44830
419 435 6655

RECEIVED
DEC 13 1999
OHIO E.P.A.
N.W.D.O.

December 8, 1999

Mr. Larry Moritz
Ohio Environmental Protection Agency (OEPA)
Northwest District Office
Division of Emergency and Remedial Response (DERR)
347 Dunridge Road
Bowling Green, OH 43402

RE: Company Name Change
AlliedSignal Inc. to Honeywell International Inc.

Dear Mr. Moritz:

On December 1, 1999, AlliedSignal Inc. and Honeywell Inc. consummated a business merger. As a result of the merger, Honeywell became a wholly owned subsidiary of AlliedSignal, which has changed its name to Honeywell International Inc.

Therefore, the AlliedSignal Fostoria, Ohio plant is now Honeywell International Inc. This is a name change only. There are no organizational or process changes at the plant, and the location of our corporate headquarters remains the same.

If you have any questions or comments concerning this letter, please contact me at (419) 436-5750.

Respectfully submitted,

Christine R. Knezevich, CIH

Christine R. Knezevich, CIH
Health, Safety, and Environmental Manager

Appendix C
Deeds Records

Data For Parcel P51010858800000

Base Land Valuation Sales Sketch Tax Improvements Permit Residential Agricultural Commercial

Base Data

Parcel: P51010858800000
Owner: BENDIX AUTOLITE CORP
Address: 1600 N UNION

[+] Map this property.

Mailing Address

Mailing Name: BENDIX AUTOLITE CORP C/O EPROPERTY TAX, DEPT 356
Address: PO BOX 4900
City State Zip: SCOTTSDALE AZ 85261

Geographic

City: FOSTORIA CITY
Township: JACKSON TOWNSHIP
School District: FOSTORIA CSD

Legal

Neighborhood: 000P10C1
Legal Description: S 31 PT NW1/4 LESS .868
Map Number: P134-00-002-00
Legal Acres: 53.135
Land Use: (330) I - MANUFACTURING & ASSEMBLY MEDIUM
Property Class: INDUSTRIAL
Range Township Section: 0-0-0

Valuation

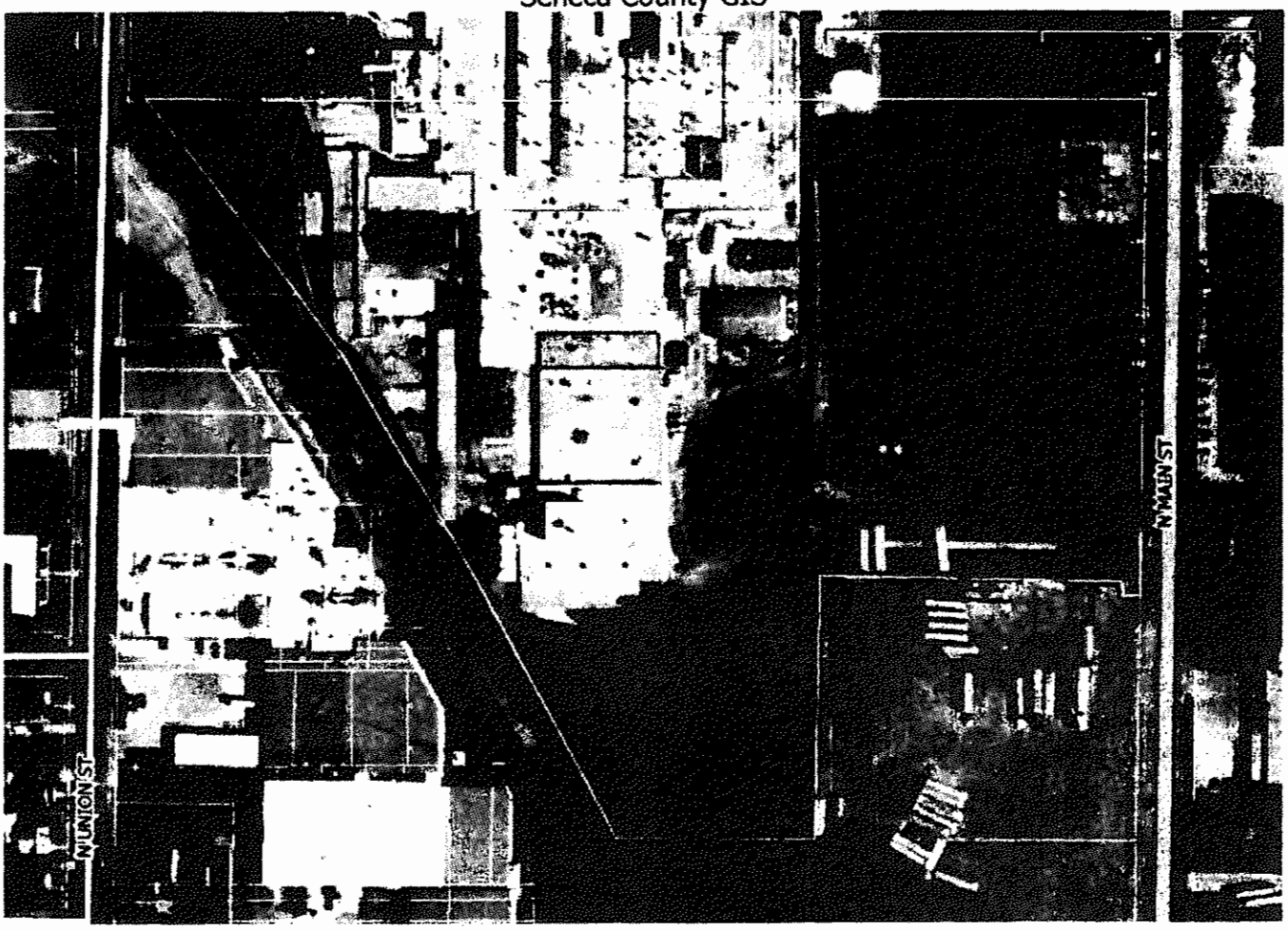
	Appraised	Assessed
Land Value:	$823,720.00	$288,300.00
Building Value:	$1,801,760.00	$630,620.00
Total Value:	$2,625,480.00	$918,920.00
CAUV Value:	$0.00	
Taxable Value:	$918,920.00	

Tax Credits

2.5% Homesite Rollback: NO
Homestead Reduction: NO

Copyright ©2007 Digital Data Technologies, Inc.

Seneca County GIS



Parcel ID P51010858800000

Owner BENDIX AUTOLITE CORP

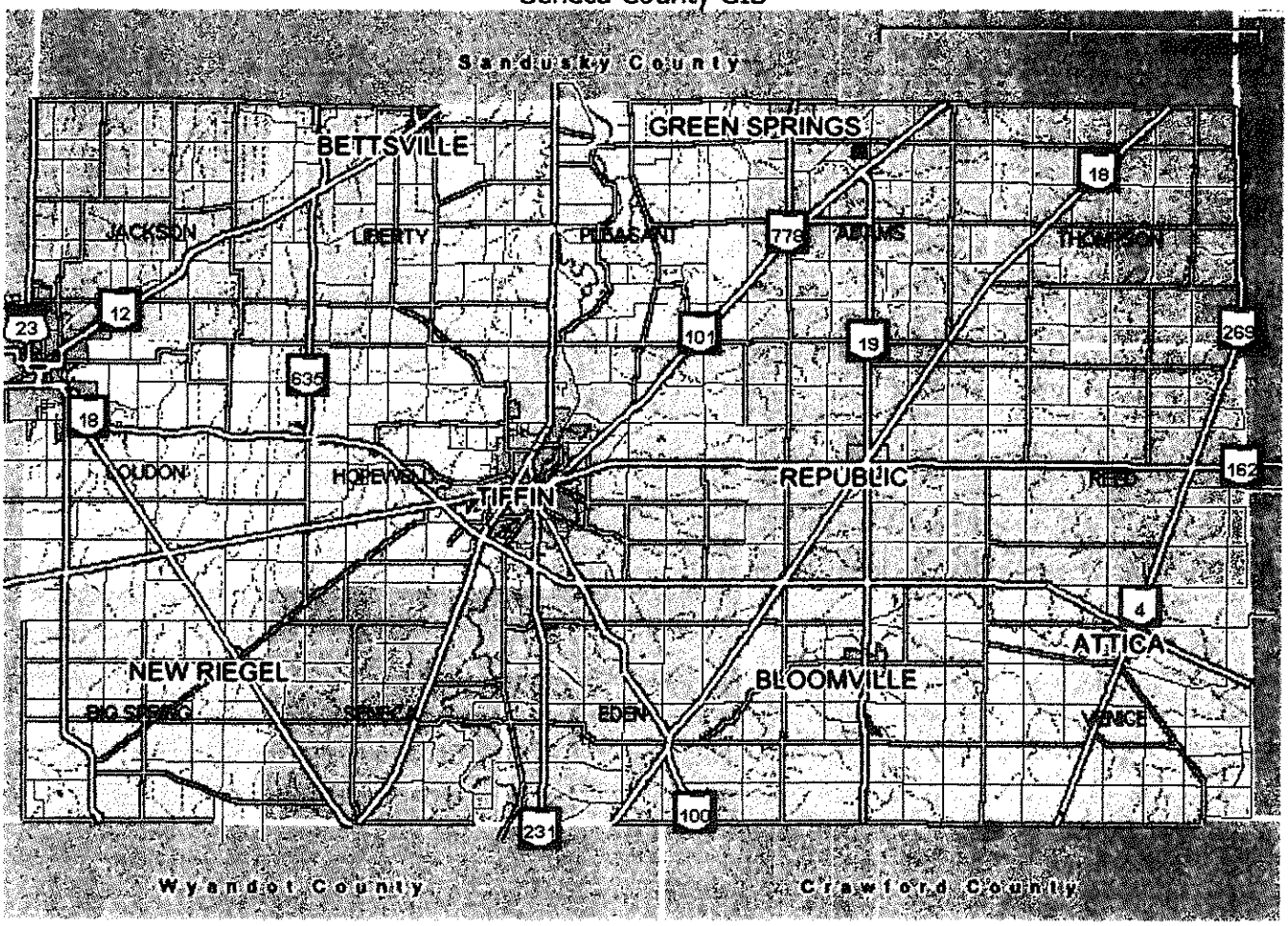
Address 1400 N UNION ST

Acres 53

Notes

Honeywell International Inc.
1600 N. Union Street
Fostria, Ohio 44830

Seneca County GIS



Parcel ID P51010858800000

Owner BENDIX AUTOLITE CORP

Address 1400 N UNION ST

Acres 53

Notes

HONEYWELL FOSTORIA aka BENDIX AUTOLITE CORP
1600 N UNION ST
FOSTORIA, SENECA COUNTY, OHIO

Appendix D
Residential wells Analytical Data

TABLE 4-13

HOWARD LABS ANALYTICAL RESULTS
(Sample Date January 4, 1985)

Well R-7[1] - Harris, James, 1712 Walnut St.
Trichloroethene - 9.8 ppb
Cis-1,2 Dichloroethene - 1.0 ppb

Well R-10 - Peifer, John, 1720 Walnut St.
Trichloroethene - 4.1 ppb

Well R-13 - Steinhart, 1726 Walnut St.
Trichloroethene - 4.3 ppb

Well R-84 - Angles, Greg, 1178 Stearnes
Trichloroethene - 5.2 ppb

Well R-27 - Sheely, Paul, 1705 Walnut St.
Trichloroethene - 4.6 ppb

Well R-26 - Overly, Warren, 1707 Walnut St.
Trichloroethene -2.3 ppb

[1]See Drawing 4 and Figure 4-14 for locations.

TABLE 4-11

HOWARD LABS ANALYTICAL RESULTS
(Sample Date December 10-12, 1984)

Well C-3[1] - Fostoria Industries
Trichloroethene - 20,500 ppb
Trans 1,2-dichloroethene -148 ppb
1,1,1 Trichloroethane - 32.2 ppb
Tetrachloroethene - 28.0 ppb
Chloroform - 16.3 ppb

Well R-97 - Kinn, Mrs. A.D., 1041 Gerlock Dr.
Chloroform - 26.6 ppb
Bromodichloromethane - 17.0 ppb
Dibromochloromethane - 3.9 ppb

Well R-99 - Riggle, C.J., 904 Cory St.
Chloroform - 11.8 ppb

Well C-4 - Roppe Rubber
Trichloroethene - 685 ppb
1.1.1 Trichloroethane - 3.7 ppb
Cis-1,2 Dichloroethene - 190 ppb
Chloroform - 15.4 ppb

[1]See Drawing 4 and Figure 4-13 for sample locations.

Sample Source[1]	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
R-7	11/13/84	Howard[2]	0	0	26.7	0	0	23.4	0	1.5	52
James Harris	11/13/84	Aqua Tech[3]	0	0	5.3	0	0	14.4	0	0	20
1712 Walnut St.											
R-10	11/13/84	Howard	0	0	3.5	0	0	4.7	0	.6	9
John Peifer	11/13/84	Aqua Tech	0	0	1.5	0	0	2.7	0	0	4
1720 Walnut St.											
R-26	11/13/84	Howard	0	0	0	0	0	0	0	0	0
Warren Overly	11/13/84	Aqua Tech	0	0	0	0	0	0	0	0	0
1707 Walnut St.											
R-53	11/13/84	Howard	0	0	0	0	0	4.6	0	0	5
Duane Vogel	11/13/84	Aqua Tech	0	0	0	0	0	1.7	0	0	2
1667 N. Union St											
R-54	11/13/84	Howard	0	0	0	0	0	0	0	0	0
Clyde Strousburg	11/13/84	Aqua Tech	0	0	.5	0	0	1	0	0	2
1665 N. Union St											

1 See Figure 4-14 Sampling and Monitor Well Locations (NW Area)

2 Howard Labs, Dayton, Ohio

3 Aqua Tech, Melmore, Ohio

Table 4-9
(Page 1 of 2)

Sampling of Six Private Residence Wells
(11/13/84)

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
R-55	11/13/84	Howard	0	0	0	0	0	5.8	0	0	6
Ralph McClung	11/13/84	Aqua Tech	0	0	0	0	0	.9	0	0	1
1651 N. Union St											

Table 4-9
(Page 2 of 2)

Sampling of Six Private Residence Wells
(11/13/84)

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CHEMICALS (VOC) - Concentration in micrograms per liter								
Sample Source	Date Sample	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Vinyl Chloride
MURRAY	05/23/84	ETC	-	-	ND1	-	ND1	ND1	-	ND1	ND1
STEINCREST		ALLIED	-	-	ND2	-	ND2	ND2	-	ND2	ND2
R91		AQUA	-	-	-	-	<1	-	-	-	

NOTES:

Laboratories:

Aqua Tech Environmental Consultants, Inc.
Marion, Ohio

Allied Labs
Buffalo, New York

ETC
Edison, New York

- = NOT ANALYZED
ND1 = IS NOT PRESENT AT ANY DETECTABLE CONCENTRATION
ND2 = NOT DETECTED AT THE 10 PPB LIMIT OF DETECTION
BMDL = BELOW MDL WHERE MDL IS 10 PPB

TABLE 4-9A
SAMPLING OF SIX PRIVATE WELLS
(5/23/84)

GROUNDWATER INVESTIGATIONS
AUTOLITE
FOSTORIA, OHIO
PROJECT # 40601

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CHEMICALS (VOC) – Concentration in micrograms per liter								
			1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Vinyl Chloride
Sample Source	Date Sample	Lab									
JOLLY'S	05/23/84	ETC	–	–	ND1	–	ND1	BMDL	–	ND1	ND1
DRIVE IN		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
C11		AQUA	–	–	–	–	–	<1	–	–	–
BRANDEBERRY	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	ND1	ND1
4509 NORTH		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
US 23		AQUA	–	–	–	–	–	<1	–	–	–
11 76											
GREGOR	05/23/84	ETC	–	–	ND1	–	ND1	BMDL	–	ND1	ND1
1702 WALNUT		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	1.1	–	–	–
112											
HAGENMOIER	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	BMDL	ND1
1751 N. UNION		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	<1	–	–	–
1144											
MUNSEY	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	ND1	ND1
225 BACHMAN		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	<1	–	–	–
170											

– = NOT ANALYZED
ND1 = IS NOT PRESENT AT ANY DETECTABLE CONCENTRATION
ND2 = NOT DETECTED AT THE 10 PPB LIMIT OF DETECTION
BMDL = BELOW MDL, WHERE MDL IS 10 PPB

NOTES:

Laboratories:

Aqua Tech Environmental Consultants, Inc.
Marion, Ohio

Allied Labs
Buffalo, New York

ETC
Edison, New Jersey

TABLE 4-9A
SAMPLING OF SIX PRIVATE WELLS
(5/23/84)

GROUNDWATER INVESTIGATIONS
AUTOLITE
FOSTORIA, OHIO
PROJECT # 40801

T A GLEASON ASSOCIATES

Appendix E
Solvent Usage Survey

	Seneca Wire & Mfg. – 319 S. Vine St.	Merrill Milling Co. 125 W. Crocker St.	Union Carbide	200 N. Town St.	[redacted] 1600 N. Union St.	Chrysler Corp. 1300 N. Main St.	Ex-Cello Corp. Court Place	Fostoria Screw Products 262 E. Sixth Ave.	Airco Indus. Gases 405 E. Zeller Rd.	Home Window Co. 1120 Sandusky St.	Filmtec Inc. 702 E. Jones Rd.	Sherwood Plastics Inc. 425 S. Countyline St.	Fostoria Monument Co. 701 Van Buren	Wirco Chem. Corp. 811 McDowell St.	Atlas Crankshaft Corporation 901 S. Union St.	US 23 South	Gray Printing Co. 401 E. North St.	Norton Mfg. Co. 110 W. Jones Rd.	Fostoria Industries 1200 N. Main St.	Buggie Rubber Corp. 1610 N. Union St.	Mr. B's Cleaners & Laundry 113 W. South St.	ADM Fostoria Soybean Mill 208 Findlay Rd.	Fostoria Laundry Mat + Dry Cleaning Kel-Ni Construction Co.	Copeland Corp.
Methylene			X		X														X					
Trichloroethane	X				X				X					⊗		X								X
Petroleum Spirits – Safety Kleen		X			X									X										
Safety Kleen 140															X	X								
Petroleum Chem. Solvent					X																			
Isopropyl Alcohol		X				X																		
Benzene					X															X				
Methyl Ethyl Ketone					X		⊗			X														
Toluene			⊗		⊗					X									X					
Hexane										X									X					X
Methylene Chloride					⊗																	X		
Methyl Alcohol		X																						X
Perchloroethylene																								
Stoddard Solvent		X					X	X	X			X	X				X	X		X	X		X	
Dioctyl Phthalate					X																			
Solvent 1025 – Petroleum Naphtha	X																							
Solvent 390-A (Gray Cleaner)																	X			X				
Solvent 3861-K (Incol)																	X							
Paint Solvents: SC100, XYLOL																	X							
Carbon Tetrachloride														⊗										
Chloroform (trichloromethane)														⊗										

RESULTS OF SOLVENT SURVEY – FOSTORIA

1984 & 1985

Past & Present Use of Solvents

⊗ - from Industrial Waste Survey, 1983

○ - from Inventory Waste Survey – suspected present

Appendix F
Incident Report

Emergency Response Section - Initial Pollution Incident Report (IPIR)

1/23/2008

Spill Id Number: 9401-74-0056//0 **District:** NW

Reported By: JACK GLENN **Reported:** 01/06/1994 14:55
Title: **Discovered:** 01/06/1994 07:15
Telephone: (419) 435-6655 **ext:** **Occurred:** 00/00/0000
Affiliation: COMPANY **Chronic:** N

County: SENECA **City/Township:** FOSTORIA
Did Spiller Report ? Y **Complaint ?** N
Received By: HENDRICKSON, SHARON **Priority:** 3
Local EPC ? Y **Did you tell the Spiller to Call the N.R.C ?** N
Business: N **SARA Report:** Y

Suspected Spiller: ALLIED SIGNAL
Mailing Address: PO BOX 880
FOSTORIA, OH 44830
Telephone: (000) 000-0000 **ext:**

Location: 1600 N UNION ST
Source: FIXED FACILITY - BUSINESS - PIPING (ABOVE GROUND/OVERHEAD)
Cause: LEAK **Reason:** UNKNOWN REASONS
Waterways Affected: SANITARY SEWER **Media Affected 1:** SURFACE WATER/STORM
Media Affected 2: LAND OR LAND SURFACE IMPACT **Media Affected 3:** AIR

Product(s) Spilled

Product	Amount	UOM	RQ	Size	Type	EHS
BENZENE	625.0	GAL	.0	M	C	N

Remark

Appendix H
Well & Boring Logs

DNR 7802 05e

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Division of Water, 2045 Morse Road, Columbus, Ohio 43229-6605
Voice (614) 265-6740 Fax (614) 265-6767

Well Log Number: 2014382

Page 1 of 1 for this record.

WELL LOCATION

County: SENECA Township: JACKSON

Owner/Builder: HONEYWELL INTERNATIONAL INC.

Address of Well Location: 1600 N UNION ST

City: FOSTORIA Zip Code +4: 44830

Permit No. ____ Section: ____ and/or Lot No. ____

Use of Well: MONITOR

Coordinates of Well (Use only one of the below coordinate systems)

State Plane Coordinates

N ☐ X ____ +/- ____ ft.

S ☐ Y ____ +/- ____ ft.

Latitude, Longitude Coordinates

Latitude: 41.18125 Longitude: 83.41656

Elevation of Well in feet: 788 +/- ____ ft.

Datum Plane: ☐ NAD27 ☒ NAD83 Elevation Source: GPS

Source of Coordinates: GPS

Well location written description:

SDC WELL ID: 12-131

Comments on water quality/quantity and well construction:

WELL TEST NOT PERFORMED - MONITORING WELL - CLIENT TO TAKE STATIC WATER LEVEL AT LATER DATE.

TWO WELLS SET IN ONE BOREHOLE @ 37'-47' AND 71'-81'.

WELL TEST *

Pre-Pumping Static Level: 0 ft. Date: ____

Measured from: ____

Pumping test method: ____

Test Rate: ____ gpm Duration of Test: ____ hrs.

Feet of Drawdown: ____ ft. Sustainable Yield: ____ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☒ No Flowing Well? ☐ Yes ☒ No

PUMP/PITLESS

Type of pump: ____ Capacity: ____ gpm

Pump set at: ____ ft. Pitless Type: ____

Pump installed by: ____

I hereby certify the information given is accurate and correct to the best of my knowledge

Drilling Firm: STEARNS DRILLING COMPANY

Address: 6974 HAMMOND

City, State, Zip: DUTTON MI 49316

Signed: JOE STEARNS (Filed Electronically) Date: 12/20/2007

ODH Registration Number: 02349

CONSTRUCTION DETAILS

Drilling Method: ROTARY

BOREHOLE/CASING (Measured from ground surface)

1 Borehole Diameter: 11 inches Depth: 15 ft.
Casing Diameter: 6 in. Length: 15 ft. Thickness: 0.28 in.

2 Borehole Diameter: 5.875 inches Depth: 82 ft.
Casing Diameter: 2 in. Length: 74 ft. Thickness: 0.154 in.

Casing Height Above Ground: 3 ft.

Type: 1: Steel; 2: PVC

Joints: 1: Welded; 2: Threaded

SCREEN

Diameter: 2 in. Slot Size: 0.01 in. Screen Length: 10 ft.

Type: MACHINE SLOTTED Material: PVC

Set Between: 71 ft. and 81 ft.

GRAVEL PACK (Filter Pack)

Material/Size: Global #6 Vol/Wt. Used: 11 50# bags

Method of Installation: Poured (gravity)

Depth: Placed From: 55 ft. To: 81 ft.

GROUT

Material: Bentonite pellets/chunks Vol/Wt. Used: 4 50# bags

Method of Installation: Poured (gravity)

Depth: Placed From: 0 ft. To: 31 ft.

DRILLING LOG*

FORMATIONS INCLUDE DEPTH(S) AT WHICH WATER IS ENCOUNTERED.

Color	Texture	Formation	From	To
		SOIL	0	1
BROWN	SILTY	CLAY	1	3.5
GRAY		LIMESTONE	3.5	38
GRAY-BROWN	THIN-BEDDED	LIMESTONE	38	48
GRAY		LIMESTONE	48	81
		Water Encountered At	6	81

Aquifer Type (Formation producing the most water.): LIMESTONE

Date of Well Completion: 12/4/2007 Total Depth of Well: 81 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.
Distribute copies of this record to Customer, and Local Health Deptartment.

Well Log

Dunbar Drilling and Supply Company

DELTA, OHIO

Customer The Electric Auto-Lite

Address Fostoria, Ohio

Job Name Same (Spark Plug Division)

Location Fostoria, Ohio

Well No. B-1

Strainer: Overall Length None Dia. Ft. of Slot

Slot Size No. Fittings

Mfd. By Material

Pipe: No. Ft. 24½ Size 8 Wt. 29 lb. Type Drive

No. Ft. Size Wt. lb. Type

No. Ft. Size Wt. lb. Type

Drive Shoe: Size 8 Size Size

Static Water Level 14 Ft. Completed depth of well 295 ft.

Surging and Developing: Total Time Hrs.

GPM	PUMPING LEVEL	LENGTH OF TEST	TEMPERATURE
250	55 Ft.	1½ Hrs.	°F.
	Ft.	Hrs.	°F.
	Ft.	Hrs.	°F.
	Ft.	Hrs.	°F.

REMARKS: 7½' to rock 10" hole drilled to 23½'. Pipe 1' above ground

Date Started November 2, 1951 Date Completed November 24, 1951

DRILLER	HELPER	HELPER
Elgon Parsons	Neil Antner	

ELECTRIC AUTO-LITE CO.

MW1

Well Log

From	To	Formation
0'	3½'	Top soil and clay
3½'	20'	Shaly gray limestone
20'	73'	Buff limestone (hard)
73'	75'	Soft layer (water)
75'	95'	Hard buff limestone
95'	165'	Hard white limestone
165'	170'	Soft layer (water)
170'	205'	Hard white limestone
205'	267'	Gray limestone
267'	295'	Hard gray limestone

MARKS:

(MW 2)

Well Log

Dunbar Drilling and Supply Company

DELTA, OHIO

ustomer. The Electric-Auto-Lite Company

ddress Fostoria, Ohio

b Name Spark Plug Division

ocation North Union Street - Fostoria, Ohio

Well No. B-2

ainer: Overall Length None Dia. _____ Ft. of Slot _____

Slot Size No. _____ Fittings _____

Mfd. By _____ Material _____

e: No. Ft. 56 Size 10" Wt. 34.24 lb. Type E.O. (s)

No. Ft. _____ Size _____" Wt. _____ lb. Type _____

No. Ft. _____ Size _____" Wt. _____ lb. Type _____

ve Shoe: Size none" Size _____" Size _____"

ic Water Level 12 Ft. Completed depth of well 300 ft.

ging and Developing: Total Time _____ Hrs.

PH	PUMPING LEVEL	LENGTH OF TEST	TEMPERATURE
0	30 Ft.	1½ Hrs.	_____ °F.
0	52 Ft.	½ Hrs.	_____ °F.
0	22 Ft.	½ Hrs.	_____ °F.
	_____ Ft.	_____ Hrs.	_____ °F.

ARKS: (s) Casing is cemented in.

Started December 27, 1952 Date Completed February 4, 1953

DRILLER	HELPER	HELPER
Fr[illegible]	Maurice Weaks	

ELECTRIC AUTO LITE CO.

MW2

Well Log

From	To	Formation
0'	3½'	Clay
3½'	70'	Cream color limestone
70'	90'	Cream & gray limestone
90'	120'	Brown & gray limestone
120'	160'	Brown & white limestone
160'	185'	White & brown limestone
185'	220'	Yellow & gray limestone
220'	245'	White & gray limestone
245'	255'	Yellow limestone
255'	276'	Gray little white limestone
276'	290'	Gray brown limestone
290'	300'	Dark gray & brown limestone

MARKS:

Environmental and Geotechnical Services

PROJECT	Fostoria, Groundwater Investigations
CLIENT	Allied Automotive — PROJECT No. 40601
DRILLING CONTR.	H.C. Nutting
DATE START	10-9-84
DATE FINISH	10-9-84
TAG REP.	C. Coe

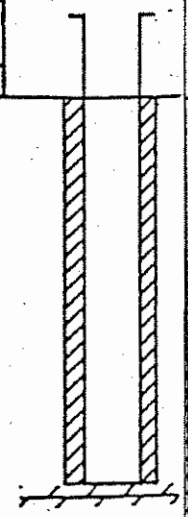
GROUNDWATER LEVELS

REMARKS	DATE	TIME	DEPTH

Completion Diagram

DEPTH (FEET)	SAMPLE TYPE	SAMPLE NUMBER	BLOW COUNT	SYMBOL	DESCRIPTION	REMARKS
2					Limestone fill	Hole advanced with hollow-stem auger, samples were taken with 2" split spoon sampler.
4	Ss	1			Brown sand, fill	
6	Ss	2	100/4"		Limestone fill	Bottom of hole, 6.5'
					Dolomite	

SURFACE ELEVATION



Well Completion: 4" PVC Blank set at Dolomite/limestone fill interface. Seal from interface to surface with Bentonite-cement grout.

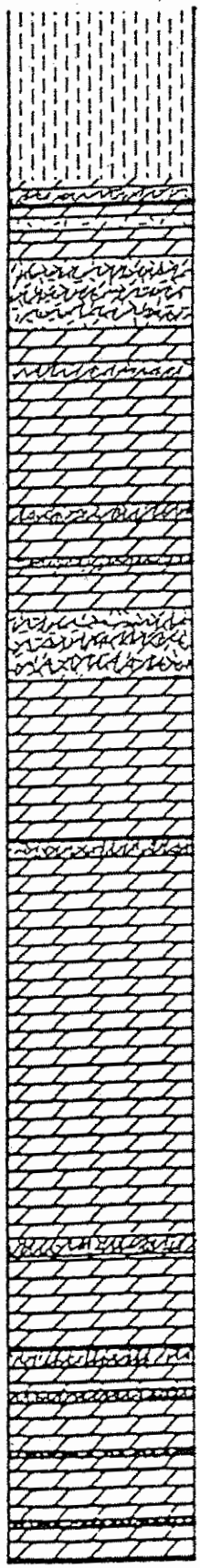
FIGURE A-10 13

FOR INTERPRETATION OF SOIL, ROCK AND GROUNDWATER CONDITIONS, SEE TEXT OF REPORT, OF WHICH THIS LOG IS A PART.

PTH

0

5



LEGEND:

CLAYEY SILT

FRACTURE/SOLUTION CHANNEL ZONE

DOLOMITE

Brown clayey silt, minor sand

Fracture/solution channel zone.
Brown clay in vugs.

Single horizontal fractures spaced 3" apart.
Some fracture faces crystal-lined.
1"-2" vugs along fractures.

Iron stained fracture faces, rounded clasts in fracture zone.

Fracture/solution channel zone, loose friable pieces, iron stained, some crystal coated rock faces.

Single horizontal fractures spaced 2"-6" apart, minor short vertical fractures, 1"-2" vugs associated with fractures.

Fracture /solution channel zone.

Single horizontal fractures spaced 2"-8" apart, some iron stained, some crystal coated 2" irregular solution cavities associated with fractures.

Fracture/solution channel zone, loose rounded clasts.

ALLIED AUTOMOTIVE
FOSTORIA, OHIO

FIGURE A-9

TEST BORING 1

CORE LOG

PROJ. # 41202 MAY 17, 1986

T A GLEASON ASSOCIATES

1 747 300

553 600N

WELL LOG AND DRILLING REPORT

W1 ORIGINAL

State of Ohio
OHIO WATER RESOURCES BOARD
Department of Public Works
553 E. Broad St., Columbus 15, Ohio

№ 71638

County SENECA Township JACKSON Section of Township or Lot Number 30

Owner ROBERT FRY Address FOSTORIA

Location of property N. UNION ST. FOSTORIA, O

CONSTRUCTION DETAILS

g diameter 4 1/4 Length of casing 25

of screen Length of screen

of pump

city of pump

h of pump setting

PUMPING TEST

Pumping rate G.P.M. Duration of test hrs

Drawdown ft. Date

Developed capacity

Static level of completed well 35 ft.

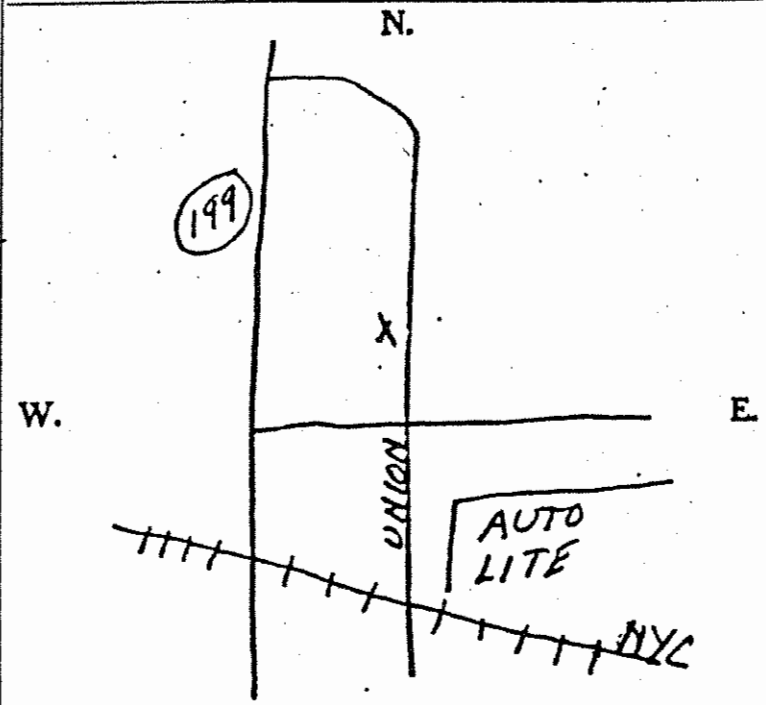
Pump installed by

WELL LOG

Formations indstone, shale, limestone, gravel and clay	From	To
CLAY	0 Feet	6 Ft.
LIMESTONE	6	79

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm PARMENTER DRILLING CO Date 5-3-50

Address FOSTORIA, O Signed

1 171 7-C

553 800 N

State of Ohio
OHIO WATER RESOURCES BOARD
Department of Public Works
553 E. Broad St., Columbus 15, Ohio

№ 30475

County Seneca Township Jackson Section of Township or Lot Number 30

Owner Melvin Baxter Address W. Tiffin St., Fostoria

Location of property East side of North Union Road, just outside north Fostoria corporation limit.

CONSTRUCTION DETAILS

ng diameter 4 1/4 Length of casing 25'

e of screen – Length of screen –

e of pump X

city of pump

h of pump setting

PUMPING TEST

Pumping rate 21 G.P.M. Duration of test 2 hr

Drawdown 5 ft. Date August 25, 1950

Developed capacity 1260 g.p.h.

Static level of completed well 9 ft.

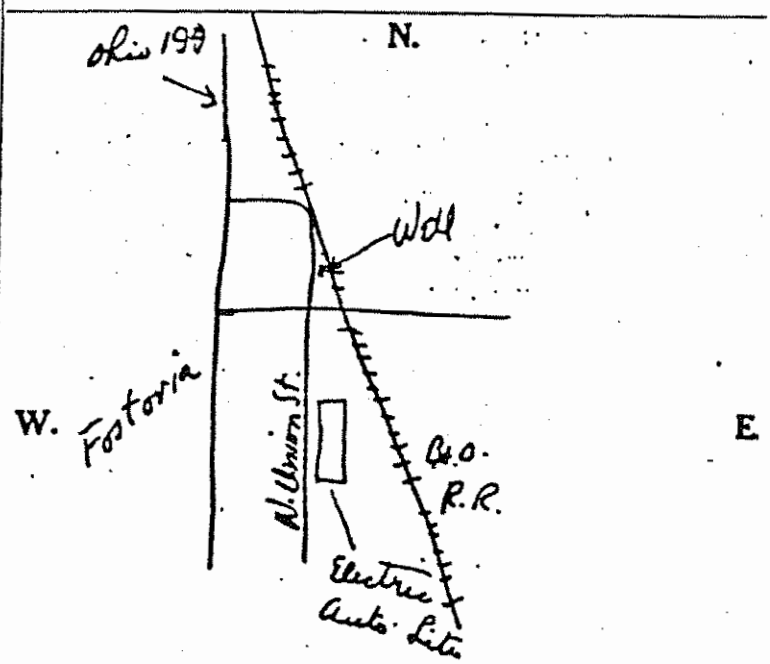
Pump installed by –

WELL LOG

Formations (Sandstone, shale, limestone, gravel and clay)	From (0 Feet)	To (Ft.)
Topsoil	0	5
Limestone	5	59
Total Depth	59 feet	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Melvin Good

Address Fostoria, Ohio

Date August 25, 1950

Signed Melvin Good

553 700N

DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

№ 85703

County SENECA Township JACKSON Section of Township or Lot Number 30

Owner BUD JURRUS Address N. UNION FOSTORIA

Location of property ON N. UNION 500' PAST INTERSECTION N. UNION AND NORTH ROAD BORDING AUTO-LITE

CONSTRUCTION DETAILS

ng diameter 4¼ Length of casing 25

e of screen Length of screen

e of pump

city of pump

h of pump setting

PUMPING TEST

Pumping rate G.P.M. Duration of test hr

Drawdown ft. Date

Developed capacity

Static level—depth to water f

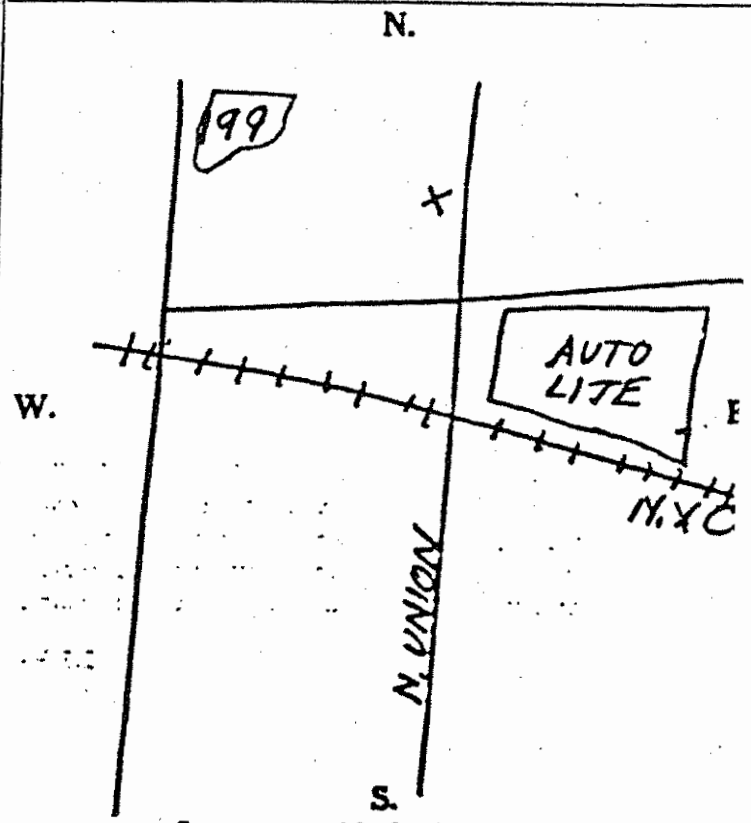
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
CLAY	0 Feet	5 Ft.
LIMESTONE	5	70

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Parmenter Drilling Co Date 7-52

Address Fostoria Signed F. Parmenter

1500 Dublin Road
Columbus, Ohio

No. 194264

County Seneca Township Jackson Section of Township 31

Owner Elden Good Address 957 N. Union Street

Location of property Fifth house south of Culbertson St on Union West side

CONSTRUCTION DETAILS

ing diameter 4 1/4 Length of casing 42

e of screen — Length of screen —

e of pump Pressure pump

acity of pump 260 g.p.h.

th of pump setting 50 feet

e of completion July 19, 1958

BAILING OR PUMPING TEST

Pumping rate 10 1/2 G.P.M. Duration of test 2 1/2 hr

Drawdown 21 ft. Date July 19, 1958

Developed capacity 850 g.p.h.

Static level—depth to water 24 f

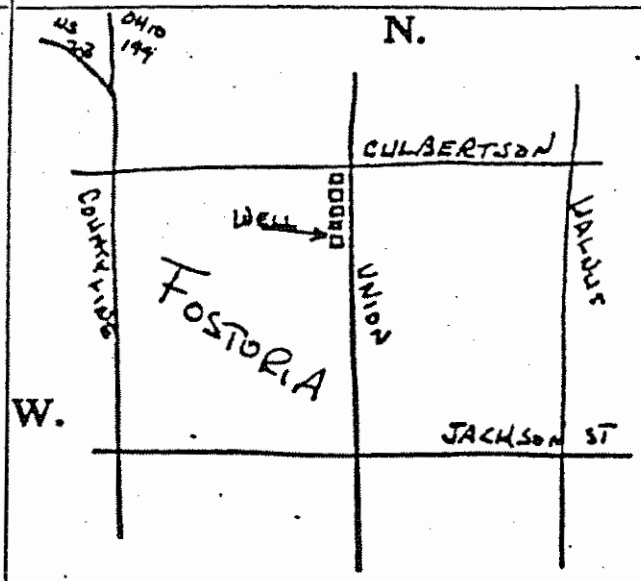
Pump installed by owner

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	Ft.
Topsoil, Clay	0	8
Limestone	8	90
Depth	90 feet	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



S.

See reverse side for instructions

Drilling Firm Melvin Good Date Nov 17, 1958

Address Fostoria, Ohio Signed Melvin Good

Appendix I
Ground Water Data

ATTACHMENT 8

ANALYTICAL DATA

Medium: Ground Water
Site Description: AlliedSignal
Production wells

Date	Contaminant	Location	Result *ug/l*	Comment
9/9/94	TCE	PW 1	5,600	TCLP Method: Exceeds Action Level of 500 *ug/l*
9/9/94	Benzene	PW 1	4700	TCLP Method: Exceeds Action Level of 500 *ug/l*
8/22/90	TCE	PW 1	14,000 DJ	
5/23/84	TCE	PW 1	20,529	
4/26/84	TCE	PW 1	18,300	
9/9/94	TCE	PW 2	680	TCLP Method: Exceeds Action Level of 500 *ug/l*
8/22/90	TCE	PW 2	760 DJ	
3/9/85	TCE	PW 2	751	
5/23/84	TCE	PW 2	800	
5/8/84	TCE	PW 2	510	
4/15/85	TCE	PW 3	10,000	

Additional Constituents:

Trans-1,2 Dichloroethene	447 *ug/l* (MW-1)
1,1,1-Trichloroethane	151 *ug/l* (MW-1)
Cis-1,2 Dichloroethene	29.1 (MW-3)
1,1-Dichloroethene	17.8 (MW-1)

Medium: Ground Water
Site Description: Residential Wells
Chemical Concentrations Above MCL's

Address	Date Sampled	Contaminate	Concentration *ug/l*
1712 Walnut St.	*11/13/84*	*TCE*	*23.5*
1651 N. Union St.	*11/13/84*	*TCE*	*5.8*
1178 Stearns	1/4/85	TCE	5.2
1721 Walnut St.	1/11/85	TCE	6.6
180 Jones Rd.	1/11/85	TCE	17.9
1730 N. Union St.	1/11/85	Tetrachloroethene	12.3
1734 N. Union St.	1/11/85	TCE	21.8
1724 N. County Line	1/11/85	TCE	7.4
1721 N. Union St.	1/12/85	Tetrachloroethene	6.8

MCL for both trichloroethylene (TCE) and tetrachloroethene is 5 *ug/l*.

Medium: Ground Water
Site Description: Roppe Rubber
Production wells

Date	Contaminant	Location	Result *ug/l*	Comment
9/9/94	TCE	PW-2	360	TCLP Method: Below Action Level of 500 *ug/l*
4/6/87	TCE	MW-6	1800	
10/28/86	TCE	PW-1	710	
10/28/86	TCE	PW-2	36	
10/28/86	TCE	PW-3	2400	
12/19/84	TCE	PW-4	685	

Additional Constituents:

1,2 Dichloroethene (cis & trans) 300 *ug/l* (PW-3)
Vinyl Chloride 41 *ug/l* (PW-2)
1,1,1-Trichloroethane 3.7 *ug/l* (MW-1)

Medium: Ground Water
Site Description: Other Commercial Production wells

Location	Date	Contaminant	Result
			ug/l
Fostoria Industries	12/11/84	TCE	20,500
Norton Manufacturing	12/12/84	TCE	1.3
Dollar General Store	1/11/85	TCE	2

Other Constituents:

Tetrachloroethene 162 ug/l (Dollar General Store)
Trans-1,2 Dichloroethene 166 ug/l (Fostoria Industries)

Medium: Surface Water
Site Description: Quarry

Date	Contaminant	Result
		ug/l
1/3/85	TCE	17.5
1/3/85	Cis-1,2 Dichloroethene	6.3

Seneca Co.
Allied Signal
MSL 348-0090
87

Site Name Allied Signal Inc. / Roppe

Sample ID Number: RNW940901-1

Date of Collection: 9/1/94 Time of Collection 9:20 - 10:35

Name(s) of Collector(s) Ralph Baker

Sampling Location Description: Allied Signal: Production Wells 1 and 2
Roppe: Production Wells 1, 2, 3, and 4; see site map.

Sample Depth: _____ below surface

Sample Type: ☒ Grab ☐ Composite ☐ Split ☐ Rinsate
☐ Background ☐ Replicate ☐ Trip Blank

Sample Media: ☐ Surface Water ☐ Sediment ☐ Soil ☐ Air
☒ Ground Water ☐ Container ☐ Leachate

Field Observations: None

Photo Frame Number(s): None

Field Measurements:

	Background	Reading	Units	Instrument
Radioactivity:				
Temperature:				
pH:				
Conductivity:				
FID/PID:				
O_2/LEL:				
Screening:				
Screening:				

Was the Sample Plan sampling procedure followed? ☐ No ☒ Yes FSOP: _____

If *no* is checked, specify deviations: _____

Recorded by: Ralph T. Baker 9/1/94

Sample Number		Container Volume	Container Type	Preservative	Analysis
PW-2AS	9:20	250ml	Amber G	None	TCLP Volatile Organics
PW-1AS	9:40	250ml	Amber G	None	TCLP Volatile Organics
PW-2R	10:05	250ml	Amber G	None	TCLP Volatile Organics
PW-1R	10:15	250ml	Amber G	None	TCLP Volatile
PW-4R	10:20	250ml	Amber G	None	TCLP Volatile Organics
PW-3R	10:35	250ml	Amber G	None	TCLP Volatile Organics

Sketch of source location and sampling points: See site map

Recorded by: Ralph T. Baker 9/1/94

Sample Narrative

Sample ID#

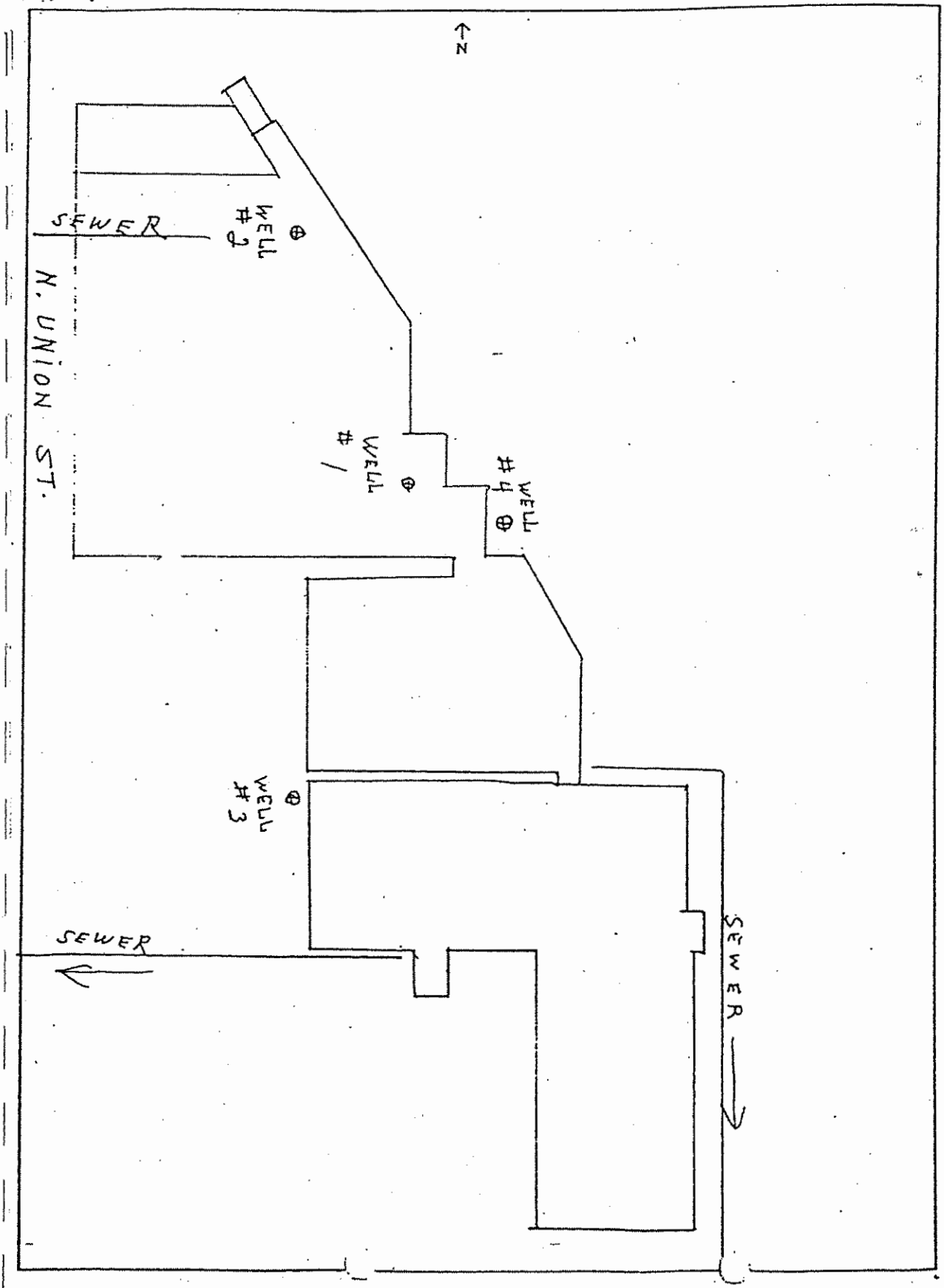
Allied Signal: Two production wells (PW-1AS and PW-2AS) are operational. One well (PW-1AS) is continuously pumping to the city sewer; the other well (PW-2AS) supplies non-contact cooling water and its effluent is also discharged into the city sewer. These samples were obtained from taps near the well. Duplicate samples were obtained by Alloway.

Roppe: Four production wells (PW-1R, PW-2R, PW-3R, PW-4R) are operational; see site map for locations. The wells supply non-contact cooling water and the effluent is discharged into the city sewer. These samples were obtained from taps near the well. Duplicate samples were obtained by Radner Environmental.

Ralph J. Balu 9/1/94

Ralph J. Baker 9/1/94

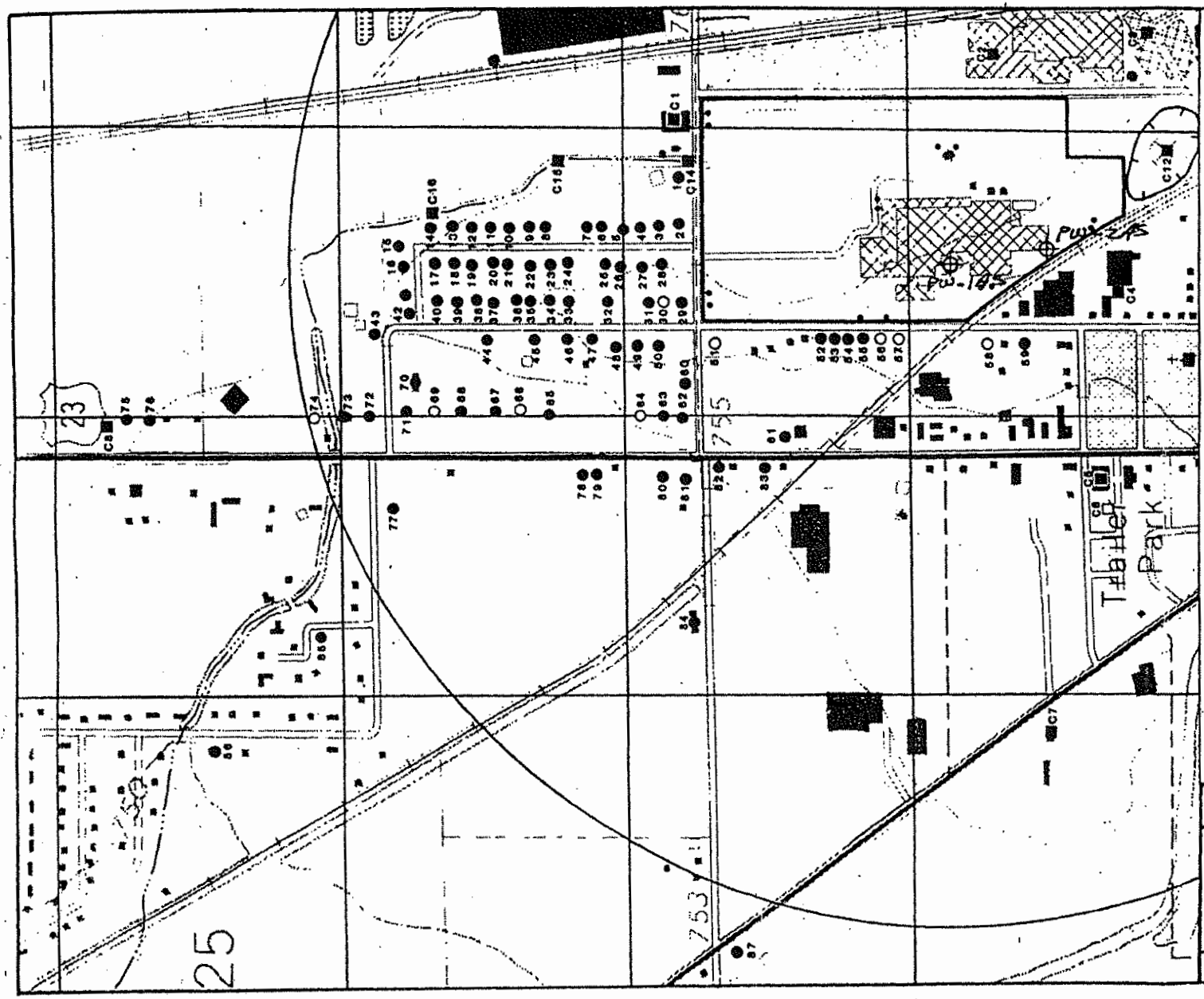
WATER WITHDRAWAL FACILITY LOCATION SKETCH: Locate all wells, intake pipes, places of use, and discharge points with references to water sources, named roads, highways, buildings, or other distinctive landmarks. This section may be divided for additional maps or separate maps may be attached.



FOR OFFICE USE ONLY:

Date of Registration _____ Basin _____ Registration Number _____ Latitude _____ Longitude _____

Roppe



LEGEND:

- ● SAMPLED RESIDENTIAL WELL
- ○ UNSAMPLED RESIDENTIAL WELL
- ■ SAMPLED COMMERCIAL/INDUSTRIAL WELL OR SITE
- □ UNSAMPLED COMMERCIAL/INDUSTRIAL WELL OR SITE
- ⊕ ALLIED PROCESS WELL
- •• ALLIED MONITOR WELL

N

0 500 1000

SCALE IN FEET

ALLIED AUTOMOTIVE
FOSTORIA, OHIO

FIGURE 4-11
SAMPLING AND MONITOR WELLS
NORTHWEST AREA

PROJ. # 41202 JUNE 12, 1985

T A GLEASON ASSOCIATES

ROSS® Ross Analytical Service, Inc.
16433 Foltz Industrial Parkway • Strongsville, Ohio 44136
(216) 572-3200 • Fax (216) 572-7620 • 1-800-325-7737

RECEIVED
SEP 19 1994
OHIO E.P.A.
N.W.D.O.

CERTIFICATE OF ANALYSIS

Client:

Ohio EPA/DERR
347 North Dunbridge Rd.
Bowling Green, OH 43402

Attn: Pat Heider

Work Order #: 94-09-078
Client Code: OEPA_NW_DIS
Report Date: 09/16/94
Work ID: Waters for TCLP volatiles
Date Received: 09/01/94

Purchase Order: Cont. # RNW 940901-1

SAMPLE IDENTIFICATION

Lab Number	Sample Description	Lab Number	Sample Description
01	Water PW-2AS	02	Water PW-1AS
03	Water PW-2R	04	Water PW-1R
05	Water PW-4R	06	Water PW-3R

Data are reported on an as-received basis unless stated otherwise. Estimated Quantitation Limits (EQL's) are listed for most analytes. EQL's are the lowest concentrations that can be reliably measured under routine laboratory conditions. Unless otherwise noted, method blanks had no targets found above their EQL's and results were not corrected for blanks.

Certificate approved by
Craig H. Caldwell

REPORT COMMENTS

These samples contained <0.5% solids as defined in the TCLP method, so their filtrates are the "leachates".

TEST METHODOLOGIES

The Zero Headspace Extraction (ZHE) leaching step of the TCLP (for volatile organics) was performed by EPA Method 1311. Bias adjustment spikes, if any, were added at the time of digestion or extraction for further analyses. Reported results are not bias adjusted.

TCLP target list volatile organics were determined by gas chromatography/mass spectrometry as in EPA Method 8240, using a capillary column.

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-2AS Lab No. 01
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/09/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	<EQL		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	0.68		0.025	0.5
75-01-4	Vinyl chloride	<EQL		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	97	82 - 114
Toluene-d8	101	91 - 115
4-Bromofluorobenzene	97	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-1AS Lab No. 02
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/09/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	4.7		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	5.6		0.025	0.5
75-01-4	Vinyl chloride	<EQL		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	102	82 - 114
Toluene-d8	102	91 - 115
4-Bromofluorobenzene	100	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-2R Lab No. 03
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/09/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	<EQL		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	0.036		0.025	0.5
75-01-4	Vinyl chloride	0.041		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	103	82 - 114
Toluene-d8	105	91 - 115
4-Bromofluorobenzene	101	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-1R Lab No. 04
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/14/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	<EQL		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	<EQL		0.025	0.5
75-01-4	Vinyl chloride	<EQL		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	105	82 - 114
Toluene-d8	107	91 - 115
4-Bromofluorobenzene	98	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-4R Lab No. 05
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/10/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	<EQL		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	0.13		0.025	0.5
75-01-4	Vinyl chloride	<EQL		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	100	82 - 114
Toluene-d8	104	91 - 115
4-Bromofluorobenzene	101	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Water PW-3R Lab No. 06
Test Description TCLP list volatiles Test Code 8240TC

ZHE BEGUN 09/09/94 DATE ANALYZED 09/10/94 DILUTION FACTOR _____ UNITS mg/L

CAS No.	COMPOUND	RAW RESULT	% RECOVERY	EQL	ACTION LIMIT
71-43-2	Benzene	<EQL		0.025	0.5
56-23-5	Carbon tetrachloride	<EQL		0.025	0.5
108-90-7	Chlorobenzene	<EQL		0.025	100.0
67-66-3	Chloroform	<EQL		0.025	6.0
107-06-2	1,2-Dichloroethane	<EQL		0.025	0.5
75-35-4	1,1-Dichloroethylene	<EQL		0.025	0.7
78-93-3	Methyl ethyl ketone	<EQL		0.050	200.0
127-18-4	Tetrachloroethylene	<EQL		0.025	0.7
79-01-6	Trichloroethylene	0.11		0.025	0.5
75-01-4	Vinyl chloride	<EQL		0.025	0.2

SURROGATE	%RECOVERY	LIMITS
1,2-Dichloroethane-d4	99	82 - 114
Toluene-d8	105	91 - 115
4-Bromofluorobenzene	97	83 - 114

==========
ORGANIC BLANKS
==========

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Method 8240 blank
Test Description Volatiles by GC/MS Test Code 8240

DATE ANALYZED 09/09/94 DILUTION FACTOR 1 UNITS ug/L

CAS NO.	COMPOUND	RESULT	EQL	CAS NO.	PARAMETER	RESULT	EQL
74-87-3	Chloromethane	<EQL	10	78-87-5	1,2-Dichloropropane	<EQL	5.0
74-83-9	Bromomethane	<EQL	10	10061-02-6	trans-1,3-Dichloropropene	<EQL	5.0
75-01-4	Vinyl chloride	<EQL	10	79-01-6	Trichloroethene	<EQL	5.0
75-00-3	Chloroethane	<EQL	10	124-48-1	Dibromochloromethane	<EQL	5.0
75-09-2	Methylene chloride	<EQL	5.0	79-00-5	1,1,2-Trichloroethane	<EQL	5.0
67-64-1	Acetone	<EQL	10	71-43-2	Benzene	<EQL	5.0
75-15-0	Carbon disulfide	<EQL	5.0	10061-01-5	cis-1,3-Dichloropropene	<EQL	5.0
75-35-4	1,1-Dichloroethene	<EQL	5.0	110-75-8	2-Chloroethyl vinyl ether	<EQL	200
75-34-3	1,1-Dichloroethane	<EQL	5.0	75-25-2	Bromoform	<EQL	5.0
156-60-5	1,2-Dichloroethene (total)	<EQL	5.0	591-78-6	2-Hexanone	<EQL	10
67-66-3	Chloroform	<EQL	5.0	108-10-1	4-Methyl-2-pentanone	<EQL	10
107-06-2	1,2-Dichloroethane	<EQL	5.0	127-18-4	Tetrachloroethene	<EQL	5.0
78-93-3	2-Butanone	<EQL	10	108-88-3	Toluene	<EQL	5.0
71-55-6	1,1,1-Trichloroethane	<EQL	5.0	108-90-7	Chlorobenzene	<EQL	5.0
56-23-5	Carbon tetrachloride	<EQL	5.0	100-41-4	Ethyl benzene	<EQL	5.0
108-05-4	Vinyl acetate	<EQL	10	100-42-5	Styrene	<EQL	5.0
75-27-4	Bromodichloromethane	<EQL	5.0		Xylenes	<EQL	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<EQL	5.0				

SURROGATE	% RECOVERY	LIMITS
1,2-Dichloroethane-d4	98	82 - 114
Toluene-d8	104	91 - 115
4-Bromofluorobenzene	98	83 - 114

Work Order # 94-09-078 Ross Analytical Services, Inc Reported: 09/16/94

Sample Description Method 8240 blank
Test Description Volatiles by GC/MS Test Code 8240

DATE ANALYZED 09/14/94 DILUTION FACTOR 1 UNITS ug/L

CAS NO.	COMPOUND	RESULT	EQL	CAS NO.	PARAMETER	RESULT	EQL
74-87-3	Chloromethane	<EQL	10	78-87-5	1,2-Dichloropropane	<EQL	5.0
74-83-9	Bromomethane	<EQL	10	10061-02-6	trans-1,3-Dichloropropene	<EQL	5.0
75-01-4	Vinyl chloride	<EQL	10	79-01-6	Trichloroethene	<EQL	5.0
75-00-3	Chloroethane	<EQL	10	124-48-1	Dibromochloromethane	<EQL	5.0
75-09-2	Methylene chloride	<EQL	5.0	79-00-5	1,1,2-Trichloroethane	<EQL	5.0
67-64-1	Acetone	<EQL	10	71-43-2	Benzene	<EQL	5.0
75-15-0	Carbon disulfide	<EQL	5.0	10061-01-5	cis-1,3-Dichloropropene	<EQL	5.0
75-35-4	1,1-Dichloroethene	<EQL	5.0	110-75-8	2-Chloroethyl vinyl ether	<EQL	200
75-34-3	1,1-Dichloroethane	<EQL	5.0	75-25-2	Bromoform	<EQL	5.0
156-60-5	1,2-Dichloroethene (total)	<EQL	5.0	591-78-6	2-Hexanone	<EQL	10
67-66-3	Chloroform	<EQL	5.0	108-10-1	4-Methyl-2-pentanone	<EQL	10
107-06-2	1,2-Dichloroethane	<EQL	5.0	127-18-4	Tetrachloroethene	<EQL	5.0
78-93-3	2-Butanone	<EQL	10	108-88-3	Toluene	<EQL	5.0
71-55-6	1,1,1-Trichloroethane	<EQL	5.0	108-90-7	Chlorobenzene	<EQL	5.0
56-23-5	Carbon tetrachloride	<EQL	5.0	100-41-4	Ethyl benzene	<EQL	5.0
108-05-4	Vinyl acetate	<EQL	10	100-42-5	Styrene	<EQL	5.0
75-27-4	Bromodichloromethane	<EQL	5.0		Xylenes	<EQL	5.0
79-34-5	1,1,2,2-Tetrachloroethane	<EQL	5.0				

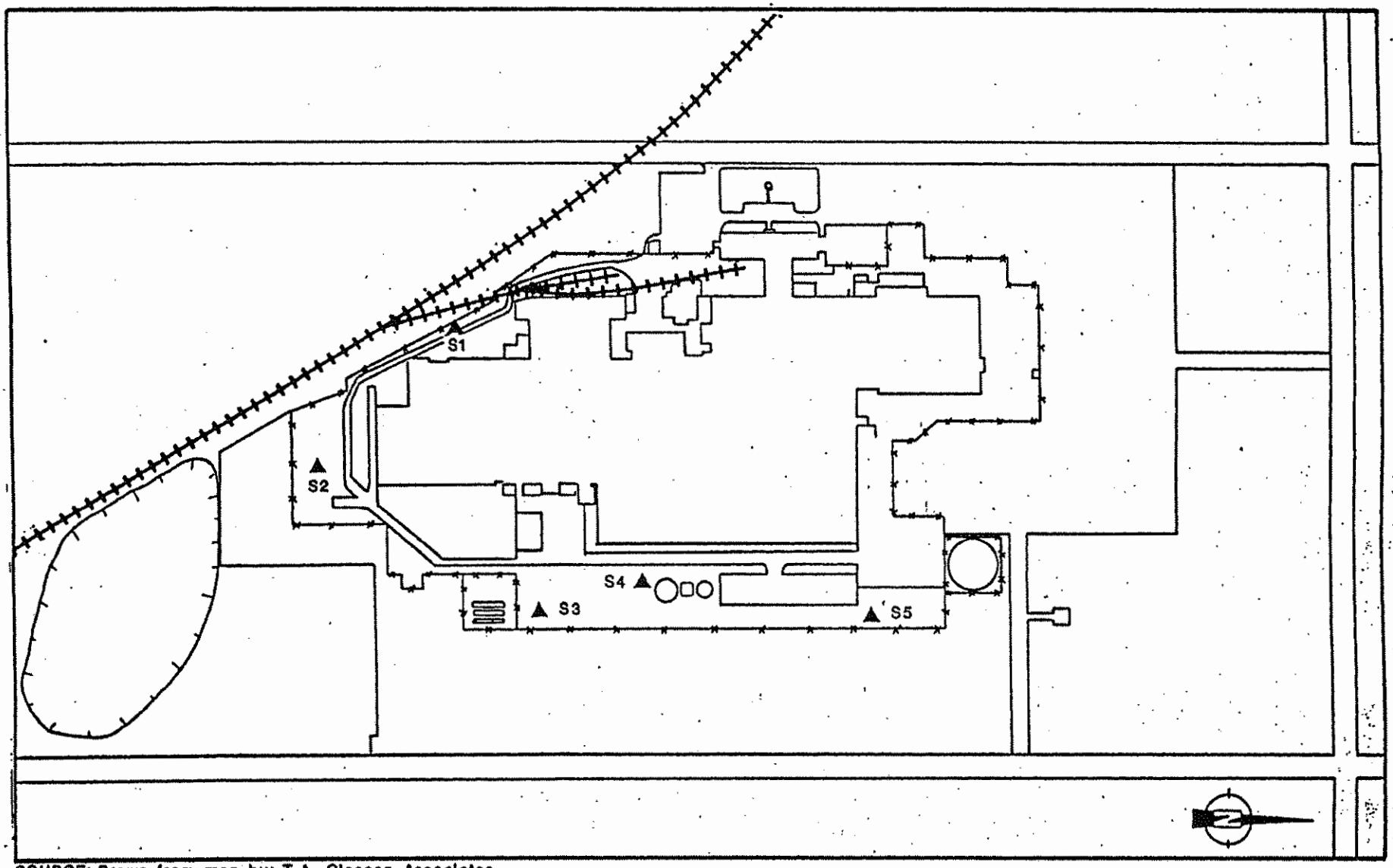
SURROGATE	% RECOVERY	LIMITS
1,2-Dichloroethane-d4	100	82 - 114
Toluene-d8	104	91 - 115
4-Bromofluorobenzene	97	83 - 114

SIGNATURE PAGE
FOR
SCREENING SITE INSPECTION REPORT
FOR
BENDIX AUTOLITE CORP
FOSTORIA, OHIO
U.S. EPA ID: OHD066046228
SS ID: NONE
TDD: F05-9003-039
PAN: FOH0620SA

Prepared by: Santosh for Date: 8/15/91
Mathew Joseph
FIT Team Leader
C.C. Johnson and Malhotra, P.C.

Reviewed by: Date: 19 August 1991
Sidney Paige
FIT Associate Firm Project Manager
C.C. Johnson and Malhotra, P.C.

Approved by: Date: 8/22/91
Jerome D. Oskvarek
FIT Office Manager
Ecology and Environment, Inc.



SOURCE: Drawn from map by: T.A. Gleason Associates.

SCALE

0 200 400 600 800 1,000 FEET

FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6
Date	8/21/90	8/21/90	8/21/90	8/21/90	8/21/90	8/21/90
Time	1145	1200	1215	1250	1315	1420
CLP Organic Traffic Report Number	ELY74	ELY75	ELY76	ELY77	ELY78	ELY79
CLP Inorganic Traffic Report Number	MELF70	MELF71	MELF72	MELF73	MELF74	MELF75
Compound Detected (values in ug/kg)						
Volatile Organics						
methylene chloride	—	—	75 B	—	—	—
Semivolatile Organics						
1,2,4-trichlorobenzene	—	—	—	—	—	59 J
naphthalene	150 J	—	—	—	—	—
2-methylnaphthalene	250 J	—	—	—	—	180 J
acenaphthylene	280 J	—	—	—	—	150 J
acenaphthene	130 J	—	—	—	—	—
dibenzofuran	180 J	—	—	—	—	89 J
fluorene	220 J	—	—	—	—	—
phenanthrene	2,100	160 J	100 J	110 J	86 J	260 J
anthracene	300 J	—	—	—	—	82 J
fluoranthene	3,100	300 J	190 J	180 J	160 J	580 J
pyrene	3,100	230 J	130 J	130 J	110 J	490 J
benzo[a]anthracene	1,300	120 J	74 J	63 J	62 J	330 J
chrysene	1,900	160 J	120 J	97 J	88 J	470 J
benzo[b]fluoranthene	2,100 J	130 J	120 J	76 J	93 J	660
benzo[k]fluoranthene	2,000 J	170 J	110 J	62 J	78 J	390 J
benzo[a]pyrene	1,600 J	130 J	85 J	65 J	60 J	380 J
indeno[1,2,3-cd]pyrene	1,200 J	78 J	58 J	50 J	42 J	240 J
dibenzo[a,h]anthracene	120 J	—	—	—	—	67 J
benzo[g,h,i]perylene	1,500 J	98 J	66 J	54 J	44 J	270 J
TIC						
Hexadecane (544-76-3)	—	—	700 J	—	—	—

— Not detected.

Table 4-1 (cont.)

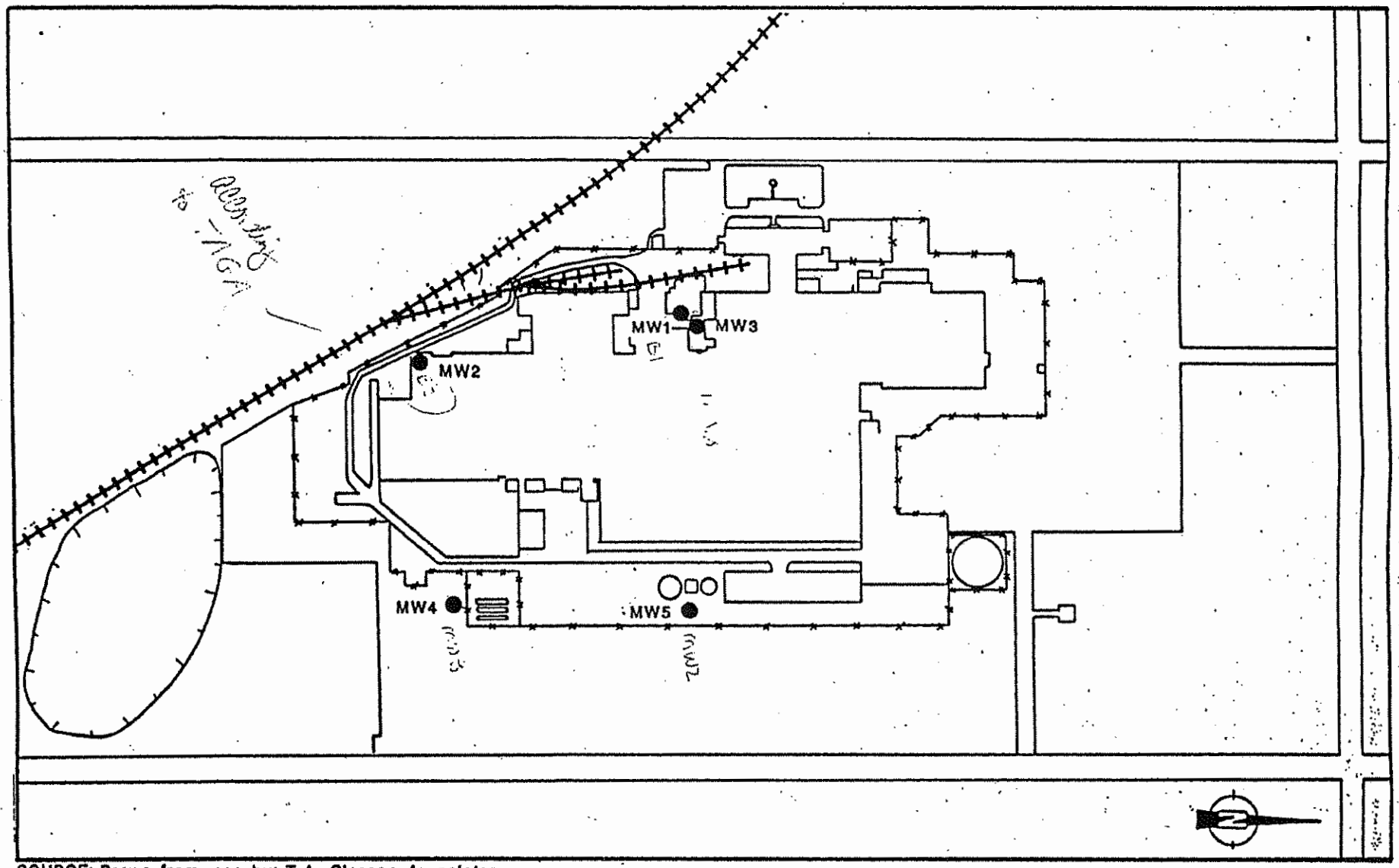
Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6
Pesticides/PCBs						
4,4'-DDT	38 J	57	80	—	57	—
Analyte Detected (values in mg/kg)						
aluminum	12,400	10,300	14,100	18,100	18,100	12,400
antimony	—	5.6 BNJ	5.3 BNJ	—	—	—
arsenic	8	6.6	4.9	5.8	5.3	7.7
barium	151	75.4	89.7	111	122	162
beryllium	1.3	0.52 B	1 B	1.2 B	0.79 B	0.84 B
cadmium	0.93 B	0.34 B	0.88 B	0.57 B	0.7 B	0.47 B
calcium	17,000	42,900	5,360	6,570	6,540	41,700
chromium	21.1	14.7	21.1	24.7	24.6	20.9
cobalt	9.6 B	6.9 B	7.6 B	8.9 B	12.9	11.4 B
copper	53.7	25.6	34.8	29.5	33.4	40.3
iron	21,700	16,400	19,700	23,600	26,200	27,500
lead	103	466	54.9	32.7	39.4	33.2
magnesium	10,200	26,700	4,190	5,410	5,130	13,300
manganese	397 *J	411 *J	292 *J	236 *J	400 *J	1,150 *J
mercury	0.12	—	—	—	—	0.09
nickel	22.1	13.6	22.7	28.8	26.5	28.2
potassium	1,650	1,060 B	1,930	2,860	2,520	2,040
selenium	0.8 B	—	0.85 BWJ	0.61 BWJ	0.79 B	—
sodium	565 B	308 BJ	269 BJ	301 BJ	338 BJ	375 BJ
vanadium	27.3 EJ	23.7 EJ	27.8 EJ	30.8 EJ	33.9 EJ	22.6 EJ
zinc	309	94.9	167	168	129	110
cyanide	0.8	—	—	—	—	0.65

— Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
B	This flag is used when the compound is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semiquantitative if it is <5x the blank concentration (<10x the blank concentrations for common laboratory artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semiquantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semiquantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.



SOURCE: Drawn from map by: T.A. Gleason Associates.

SCALE

0 200 400 600 800 1,000 FEET

FIGURE 3-4 GROUND WATER SAMPLING LOCATIONS

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED GROUNDWATER SAMPLES

Sample Collection Information and Parameters	MW1	MW2	Duplicate	MW3	MW4	MW5	Blank
Date	08/22/90	08/22/90	08/22/90	08/22/90	08/22/90	08/22/90	08/22/90
Time	0945	0955	0955	1115	1230	1240	1145
CLP Organic Traffic Report Number	ELY83	ELY84	ELY90	ELY85	ELY86	ELY87	ELY89
CLP Inorganic Traffic Report Number	MELF79	MELF80	MELF86	MELF81	MELF82	MELF83	MELF86
Temperature (°C)	12	13	13	12	15	15	15
Specific Conductivity (umhos/cm)	620	650	650	350	350	400	NA
pH	6.63	6.05	6.05	9.03	9.5	9.24	6.07
Compound Detected (values in ug/L)							
Volatile Organics							
vinyl chloride	7 J	—	—	89	—	—	—
methylene chloride	—	—	—	—	6 J	8 J	5 J
1,1-dichloroethene	22	18	14 J	6	21 J	—	—
1,1-dichloroethane	5 J	2 J	2J	—	—	—	—
1,2-dichloroethene (total)	360 DJ	72	66 J	160 D	4 J	—	—
chloroform	2 J	5	4 J	—	2 J	—	—
1,1,1-trichloroethane	2 J	25 J	25 J	—	33	—	—
trichloroethene	14,000 DJ	760 D	61 DJ	77	70	—	—
tetrachloroethene	21	3 J	2 J	—	—	—	—
toluene	5 J	—	—	—	—	—	—
Analyte Detected (values in ug/L)							
aluminum	115 BJ	—	131 BJ	213 J	148 BJ	158 BJ	124 B
antimony	23.2 B	—	—	—	—	—	—
arsenic	3.9 B	—	—	—	—	—	—
barium	170 B	78.1 B	76 B	134 B	38 B	41.5 B	2.1 B
cadmium	1.1 BJ	1.2 BJ	1.1 BJ	—	—	—	—
calcium	120,000	95,400	94,500	113,000	89,200	104,000	114 BJ
cobalt	2.6 B	—	—	—	—	—	—
copper	—	7.2 BJ	17.1 BJ	14.7 BJ	—	—	46.6
iron	1,040	106	87.7 B	2,060	111	91 B	—
lead	1.2 B	—	1.7 B	5.5	1.5 B	1.9 B	—
magnesium	41,900	38,300	37,880	35,400	34,500	30,400	32 BJ
manganese	58.3	10.4 B	10.6 B	133	4.5 B	2.1 B	—
nickel	—	—	—	15.3 BJ	—	—	5.5 B
potassium	3,180 B	3,040 B	3,280 B	3,240 B	1,490	1,440 B	—
selenium	—	—	—	—	3.2 B	5.1	—
sodium	60,000	48,400	48,200	57,000	27,000	7,210	798 BJ
vanadium	—	—	—	—	2.2 B	—	—
zinc	265	38.6	24.7	61.7	14.9 B	14.1 B	—

— Not detected.
NA Not available.

Table 4-2 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
D	This flag identifies all compounds identified in the analysis at secondary dilution factor.	Alerts data user to a possible change in the CRQL. Data is quantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
B	Value is real, but is above instrument DL and below CRQL.	Value may be quantitative or semi-quantitative.
J	Value is above CRQL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

AQUA TECH ENVIRONMENTAL CONSULTANTS INC.
RESULT SHEET

Customer Name: ERM - Midwest
Sample Type: Water
Analysis Performed: Purgeable Organics
Analyst: RES
Client Sample No.: B-2

Date Received: 08/23/90
Date Analyzed: 08/24/90
Method No.: SW-846; 8240
ATEC Sample No.: ,12744

Acrolein	< 1000
Acrylonitrile	< 1000
Benzene	< 50
Bromoform	< 100
Carbon Tetrachloride	< 50
Chlorobenzene	< 50
Chlorodibromomethane	< 50
Chloroethane	< 100
2-Chloroethyl Vinyl Ether	< 100
Chloroform	< 50
Dichlorobromomethane	< 50
Dichlorodifluoromethane	< 100
1,1-Dichloroethane	< 50
1,2-Dichloroethane	< 50
1,1-Dichloroethene	< 50
1,2-Dichloropropane	< 50
cis-1,3-Dichloropropene	< 50
trans-1,3-Dichloropropene	< 50
Ethyl Benzene	< 50
Methyl Bromide	< 100
Methyl Chloride	< 100
Methylene Chloride	< 100
1,1,2,2-Tetrachloroethane	< 50
Tetrachloroethene	< 50
Toluene	< 50
cis-1,2-Dichloroethene	77.9
trans-1,2-Dichloroethene	< 50
1,1,1-Trichloroethane	44.2
1,1,2-Trichloroethane	< 50
Trichloroethene	919
Trichlorofluoromethane	< 100
Vinyl Chloride	< 100
Total Xylenes	< 50

All results reported as ug/l (PPB)

AQUA TECH ENVIRONMENTAL CONSULTANTS INC.
RESULT SHEET

Customer Name: ERM - Midwest
Sample Type: Water
Analysis Performed: Purgeable Organics
Analyst: REB
Client Sample No.: MW-2-50

Date Received: 08/23/90
Date Analyzed: 08/24/90
Method No.: SW-846; 8240
ATEC Sample No.: 12745

Acrolein	< 100
Acrylonitrile	< 100
Benzene	< 5.0
Bromoform	< 10.0
Carbon Tetrachloride	< 5.0
Chlorobenzene	< 5.0
Chlorodibromomethane	< 5.0
Chloroethane	< 10.0
2-Chloroethyl Vinyl Ether	< 10.0
Chloroform	< 5.0
Dichlorobromomethane	< 5.0
Dichlorodifluoromethane	< 10.0
1,1-Dichloroethane	< 5.0
1,2-Dichloroethane	< 5.0
1,1-Dichloroethene	< 5.0
1,2-Dichloropropane	< 5.0
cis-1,3-Dichloropropene	< 5.0
trans-1,3-Dichloropropene	< 5.0
Ethyl Benzene	< 5.0
Methyl Bromide	< 10.0
Methyl Chloride	< 10.0
Methylene Chloride	< 10.0
1,1,2,2-Tetrachloroethane	< 5.0
Tetrachloroethene	< 5.0
Toluene	< 5.0
cis-1,2-Dichloroethene	< 5.0
trans-1,2-Dichloroethene	< 5.0
1,1,1-Trichloroethane	< 5.0
1,1,2-Trichloroethane	< 5.0
Trichloroethene	< 5.0
Trichlorofluoromethane	< 10.0
Vinyl Chloride	< 10.0
Total Xylenes	< 5.0

All results reported as ug/l (PPB)

AQUA TECH ENVIRONMENTAL CONSULTANTS INC.
RESULT SHEET

Customer Name: ERM - Midwest
Sample Type: Water
Analysis Performed: Purgeable Organics
Analyst: REB
Client Sample No.: MW-8-50

Date Received: 08/23/90
Date Analyzed: 08/24/90
Method No.: SW-846; 8240
ATEC Sample No.: ,12747

Acrolein	< 100
Acrylonitrile	< 100
Benzene	< 5.0
Bromoform	< 10.0
Carbon Tetrachloride	< 5.0
Chlorobenzene	< 5.0
Chlorodibromomethane	< 5.0
Chloroethane	< 10.0
2-Chloroethyl Vinyl Ether	< 10.0
Chloroform	< 5.0
Dichlorobromomethane	< 5.0
Dichlorodifluoromethane	< 10.0
1,1-Dichloroethane	< 5.0
1,2-Dichloroethane	< 5.0
1,1-Dichloroethene	< 5.0
1,2-Dichloropropane	< 5.0
cis-1,3-Dichloropropene	< 5.0
trans-1,3-Dichloropropene	< 5.0
Ethyl Benzene	< 5.0
Methyl Bromide	< 10.0
Methyl Chloride	< 10.0
Methylene Chloride	< 10.0
1,1,2,2-Tetrachloroethane	< 5.0
Tetrachloroethene	< 5.0
Toluene	< 5.0
cis-1,2-Dichloroethene	< 5.0
trans-1,2-Dichloroethene	< 5.0
1,1,1-Trichloroethane	63.3
1,1,2-Trichloroethane	< 5.0
Trichloroethene	81.2
Trichlorofluoromethane	< 10.0
Vinyl Chloride	< 10.0
Total Xylenes	< 5.0

All results reported as ug/l (PPB)

AQUA TECH ENVIRONMENTAL CONSULTANTS INC.
RESULT SHEET

Customer Name: ERM - Midwest
Sample Type: Water
Analysis Performed: Purgeable Organics
Analyst: REB
Client Sample No.: MW-10-63

Date Received: 08/23/90
Date Analyzed: 08/24/90
Method No.: SW-846; 8240
ATEC Sample No.: ,12746

Acrolein	<	100
Acrylonitrile	<	100
Benzene	<	5.0
Bromoform	<	10.0
Carbon Tetrachloride	<	5.0
Chlorobenzene	<	5.0
Chlorodibromomethane	<	5.0
Chloroethane	<	10.0
2-Chloroethyl Vinyl Ether	<	10.0
Chloroform	<	5.0
Dichlorobromomethane	<	5.0
Dichlorodifluoromethane	<	10.0
1,1-Dichloroethane		6.0
1,2-Dichloroethane	<	5.0
1,1-Dichloroethene	<	5.0
1,2-Dichloropropane	<	5.0
cis-1,3-Dichloropropene	<	5.0
trans-1,3-Dichloropropene	<	5.0
Ethyl Benzene	<	5.0
Methyl Bromide	<	10.0
Methyl Chloride	<	10.0
Methylene Chloride	<	10.0
1,1,2,2-Tetrachloroethane	<	5.0
Tetrachloroethene	<	5.0
Toluene	<	5.0
cis-1,2-Dichloroethene		211
trans-1,2-Dichloroethene	<	5.0
1,1,1-Trichloroethane	<	5.0
1,1,2-Trichloroethane	<	5.0
Trichloroethene		93.4
Trichlorofluoromethane	<	10.0
Vinyl Chloride		72.8
Total Xylenes	<	5.0

All results reported as ug/l (PPB)

ERM-Midwest, inc.
450 W Wilson Bridge Road • Worthington, OH 43085 • (614) 433-7900 • Telefax (614) 433-0886

CHAIN OF CUSTODY RECORD

Project No./I.D. 017-34 Sheet 1 of 1
Sampled By TJS Bottles Supplied By Aqua Tech
NOTE: When analyses are complete return this form to:
Name: Tiro Sanney @ ERM-Midwest, Inc., Columbus, Ohio

Sample I.D.	Sample Description	Collection Date/Time	No. of bottles	Analysis Requested	Remarks
B-1	Water	8/22/90 0950	3	VOA 8240	
B-2	"	8/22/90 1000	3	VOA 8240	
MW2-50	"	8/22/90 1255	3	VOA 8240	
MW10-63	"	8/22/90 1118	3	VOA 8240	
MW-8-50	"	8/22/90 1215	3	VOA 8240	

Shipping package opened by: TJS Date: 8/20/90 Time: 0[illegible]
Employer: ERM Midwest Containers intact (Y/N)

Samples packaged & sealed by: TJS Date: 8/22/90 Time: 13[illegible]
Employer: ERM Midwest Method of Shipment: Hand Carry

Received in laboratory by: Kit Rudel Date: 8-23-90 Time:
Employer: Kathy Strong Aqua Tech Seals intact (Y/N)
Containers intact (Y/N) If not, describe in Comments section

NOTE: Laboratory's Chain of Custody shall be in effect from receipt through analysis.

Relinquished By		Received By		Samples Intact	Date	Time	Initials	
Name	Employer	Name	Employer				Sender	Rec'r
Tiro Sanney	ERM Midwest	Jeff Martin	ATEC		8/22	16:45		

COMMENTS:

Copies: White - Project file: Yellow - Client; Pink - Sampler

AQUA TECH ENVIRONMENTAL CONSULTANTS, INC.

P.O. Box 76
Melmore, Ohio 44845
(419) 397-2659

Client: ERM-MIDWEST INC.	
Address: 450 WILSON BRIDGE ROAD WORTHINGTON OH 43085 ATTN: TIM SAINEY	
Project No:	Date(s) of Receipt at Laboratory:
Purchase Order:	8/23/90
Comments:	

Sample Inventory

Atec No.	Client No.	Method(s)
12743	B-1	8240
12744	B-2	8240
12745	MW-2-50	8240
12746	MW-10-63	8240
12747	MW-8-50	8240

Comments:

Authorized Signature: Robert S. Glowacky/WS

Title: Melmore Laboratory Manager
Date Released: AUGUST 29, 1990

Allied Automotive
Volatile Fraction
Method Number: 624
Date Received: April 28, 1989

Both Vacuum

ATEC Sample No.	4341	4342	4343
Client Sample No.	B-1	B-2	Trip Blank
Analyst	REB	REB	REB
Date Analyzed	5/04/89	5/04/89	5/04/89
Acrolein	< 5000	< 1000	< 100
Acrylonitrile	< 5000	< 1000	< 100
Benzene	< 250	< 50	< 5.0
Bromoform	< 500	< 100	< 10.0
Carbon Tetrachloride	< 250	< 50	< 5.0
Chlorobenzene	< 250	< 50	< 5.0
Chlorodibromomethane	< 250	< 50	< 5.0
Chloroethane	< 500	< 100	< 10.0
2-Chloroethyl Vinyl Ether	< 500	< 100	< 10.0
Chloroform	< 250	< 50	< 5.0
Dichlorobromomethane	< 250	< 50	< 5.0
Dichlorodifluoromethane	< 500	< 100	< 10.0
1,1-Dichloroethane	< 250	< 50	< 5.0
1,2-Dichloroethane	< 250	< 50	< 5.0
1,1-Dichloroethene	< 250	< 50	< 5.0
1,2-Dichloropropane	< 250	< 50	< 5.0
cis-1,3-Dichloropropene	< 250	< 50	< 5.0
trans-1,3-Dichloropropene	< 250	< 50	< 5.0
Ethyl Benzene	< 250	< 50	< 5.0
Methyl Bromide	< 500	< 100	< 10.0
Methyl Chloride	< 500	< 100	< 10.0
Methylene Chloride	< 500	< 100	< 10.0
1,1,2,2-Tetrachloroethane	< 250	< 50	< 5.0
Tetrachloroethene	< 250	< 50	< 5.0
Toluene	< 250	< 50	< 5.0
cis-1,2-Dichloroethene	430	87.1	< 5.0
trans-1,2-Dichloroethene	< 250	< 50	< 5.0
1,1,1-Trichloroethane	< 250	171	< 5.0
1,1,2-Trichloroethane	< 250	< 50	< 5.0
Trichloroethene	17,200	2,000	< 5.0
Trichlorofluoromethane	< 500	< 100	< 10.0
Vinyl Chloride	< 500	< 100	< 10.0
Total Xylenes	< 250	< 50	< 5.0

All results reported as ug/l (PPB)

Autolite
Volatile Fraction
Method Number: 624
Date Received: May 18, 1989

ATEC Sample No.	5273	5274	5275
Client Sample No.	B1	B2	Blank
Analyst	REB	REB	REB
Date Analyzed	5/19/89	5/19/89	5/19/89
Acrolein	<10000	< 2000	< 100
Acrylonitrile	<10000	< 2000	< 100
Benzene	< 500	< 100	< 5.0
Bromoform	< 1000	< 200	< 10.0
Carbon Tetrachloride	< 500	< 100	< 5.0
Chlorobenzene	< 500	< 100	< 5.0
Chlorodibromomethane	< 500	< 100	< 5.0
Chloroethane	< 1000	< 200	< 10.0
2-Chloroethyl Vinyl Ether	< 1000	< 200	< 10.0
Chloroform	< 500	< 100	< 5.0
Dichlorobromomethane	< 500	< 100	< 5.0
Dichlorodifluoromethane	< 1000	< 200	< 10.0
1,1-Dichloroethane	< 500	< 100	< 5.0
1,2-Dichloroethane	< 500	< 100	< 5.0
1,1-Dichloroethene	< 500	< 100	< 5.0
1,2-Dichloropropane	< 500	< 100	< 5.0
cis-1,3-Dichloropropene	< 500	< 100	< 5.0
trans-1,3-Dichloropropene	< 500	< 100	< 5.0
Ethyl Benzene	< 500	< 100	< 5.0
Methyl Bromide	< 1000	< 200	< 10.0
Methyl Chloride	< 1000	< 200	< 10.0
Methylene Chloride	< 1000	< 200	< 10.0
1,1,2,2-Tetrachloroethane	< 500	< 100	< 5.0
Tetrachloroethene	< 500	< 100	< 5.0
Toluene	< 500	< 100	< 5.0
cis-1,2-Dichloroethene	< 500	< 100	< 5.0
trans-1,2-Dichloroethene	< 500	< 100	< 5.0
1,1,1-Trichloroethane	< 500	< 100	< 5.0
1,1,2-Trichloroethane	< 500	< 100	< 5.0
Trichloroethene	17400	890	< 5.0
Trichlorofluoromethane	< 1000	< 200	< 10.0
Vinyl Chloride	< 1000	< 200	< 10.0
Total Xylenes	< 500	< 100	< 5.0

All results reported as ug/l (PPB)

Autolite
Volatile Fraction
Method Number: 624
Date Received: June 13, 1989

ATEC Sample No.	6277	6278	6279
Client Sample No.	B-1	B-2	Blank
Analyst	REB	REB	REB
Date Analyzed	6/14/89	6/14/89	6/14/89
Acrolein	<10000	< 500	< 100
Acrylonitrile	<10000	< 500	< 100
Benzene	< 500	< 25	< 5.0
Bromoform	< 1000	< 50	< 10.0
Carbon Tetrachloride	< 500	< 25	< 5.0
Chlorobenzene	< 500	< 25	< 5.0
Chlorodibromomethane	< 500	< 25	< 5.0
Chloroethane	< 1000	< 50	< 10.0
2-Chloroethyl Vinyl Ether	< 1000	< 50	< 10.0
Chloroform	< 500	< 25	< 5.0
Dichlorobromomethane	< 500	< 25	< 5.0
Dichlorodifluoromethane	< 1000	< 50	< 10.0
1,1-Dichloroethane	< 500	< 25	< 5.0
1,2-Dichloroethane	< 500	< 25	< 5.0
1,1-Dichloroethene	< 500	< 25	< 5.0
1,2-Dichloropropane	< 500	< 25	< 5.0
cis-1,3-Dichloropropene	< 500	< 25	< 5.0
trans-1,3-Dichloropropene	< 500	< 25	< 5.0
Ethyl Benzene	< 500	< 25	< 5.0
Methyl Bromide	< 1000	< 50	< 10.0
Methyl Chloride	< 1000	< 50	< 10.0
Methylene Chloride	< 1000	< 50	23.8
1,1,2,2-Tetrachloroethane	< 500	< 25	< 5.0
Tetrachloroethene	< 500	< 25	< 5.0
Toluene	< 500	< 25	< 5.0
cis-1,2-Dichloroethene	< 500	52.1	< 5.0
trans-1,2-Dichloroethene	< 500	< 25	< 5.0
1,1,1-Trichloroethane	< 500	55.3	< 5.0
1,1,2-Trichloroethane	< 500	< 25	< 5.0
Trichloroethene	14300	790	< 5.0
Trichlorofluoromethane	< 1000	< 50	< 10.0
Vinyl Chloride	< 1000	< 50	< 10.0
Total Xylenes	< 500	< 25	< 5.0

All results reported as ug/l (PPB)

AQUA TECH ENVIRONMENTAL CONSULTANTS, INC.

P.O. Box 76
Melmore, Ohio 44845
(419) 397-2659

Client: AUTOLITE	
Address: 1600 N. UNION FOSTORIA, OH 44830	
Project No:	Date(s) of Receipt at Laboratory:
Purchase Order: 548694	JUNE 13, 1989
Comments:	

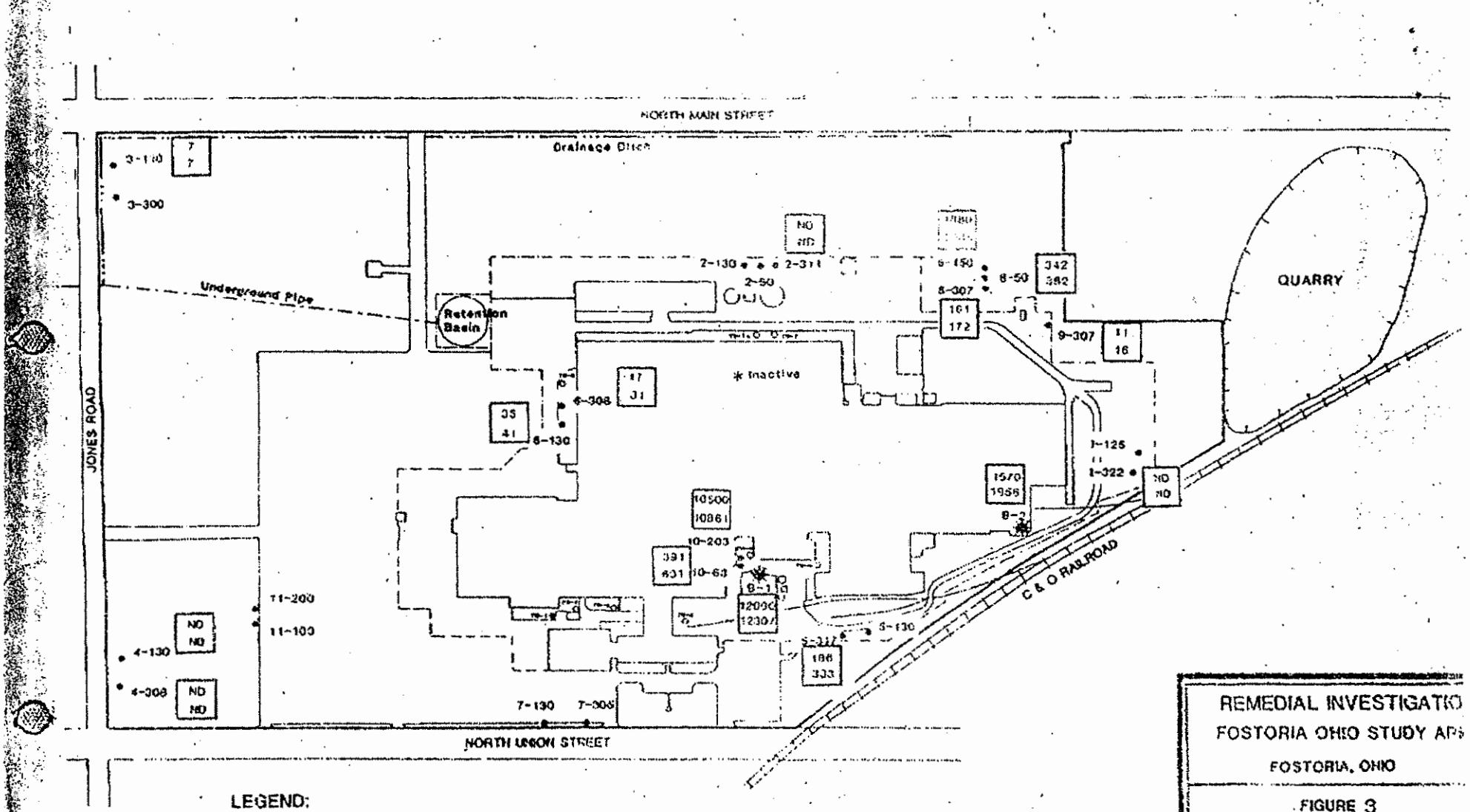
Sample Inventory

Atec No.	Client No.	Method(s)
6277	B-1	624
6278	B-2	624
6279	BLANK	624

Comments:

Authorized Signature: Robert L. Howarth

Title: Melmore Laboratory Manager
Date Released: 06-15-89



REMEDIAL INVESTIGATIO
FOSTORIA OHIO STUDY AR
FOSTORIA, OHIO

FIGURE 3

WATER QUALITY APRIL
ALLIED AUTOLITE PLAN

r.o. gleason associates
Environmental and Geotechnical Se

LIST OF TABLES

Number		Page No.
4-1	Construction Data for Wells B-1 and B-2	34
4-2	Soil Depth and Classification	35
4-3	Autolite Water Supply Well Sampling Episodes	36
4-4	Monitor Well Sampling Episodes	37
4-5	Process Supply Wells	39
4-6	On-Site Monitor Wells	40
4-7	Aquifer Characteristics Calculated from Time-Drawdown Data	46
4-8	Aquifer Characteristics Calculated from Distance-Drawdown Data	47
4-9A	Sampling Private Wells by Autolite	47a
4-9	Sampling of Six Private Residential Wells	48
4-10	Off-Site Location for Water Quality Sampling (Sample Date December 10-19, 1984)	50
4-11	Howard Labs Analytical Results (Sample Date December 10-12, 1984)	52
4-12	Off-Site Location for Water Quality Sampling (January 4, 1985)	53
4-13	Howard Labs Anaytical Results (Sample Date January 4, 1985)	54
4-14	Northwest Area Locations Sampled on January 10-12, 1985	55
4-15	Analytical Results, Howard Labs (January 10-12, 1985)	57
4-16	Residental Wells	58
4-17	Commercial/Industrial Wells	65
4-18	Surface Water Samples	66

4-19 Groundwater Reference Elevations (Residential Wells) 67

4-20 Groundwater Reference Elevations (Commercial/Industrial Wells) 68

4-21 Water Reference Elevations (Surface Waters) 69

TABLE 4-1

CONSTRUCTION DATA FOR WELLS B-1 AND B-2

Item	Well B1	Well B2
Well Driller	Dunbar Drilling & Supply Co.	Dunbar Drilling & Supply Co.
Date Completed	November 24, 1951	February 4, 1953
Well Number on Well Log	No. 2	No. 3
Casing Depth	23.5 feet	56 feet
Well Diameter	8-inch*	10-inch
Well Depth	295 feet	300 feet
Pump Type	Submersible	Vertical turbine
Approximate Pump Intake Depth	211 feet	150 feet

*7-inch diameter by 60-foot long casing installed in 1976.

TABLE 4-2

SOIL DEPTH AND CLASSIFICATION

Test Boring	Depth to Rock (ft)	Soil Type(s)
TB-1	5.0	Silt w/sand & clay
TB-2	6.5	Limestone fill
TB-3	7.8	Sand & weathered limestone
TB-4	12.5	4.5 ft of silt & clay fill over 8 ft of limestone fill
TB-5	10.0	6.5 ft of silty fill overlying 2 ft of limestone fill overlying 1.5 ft of sand fill
TB-6	5.5	5 ft of sandy till overlying .5 ft weathered dolomite
TB-7	9.0	9 ft of clay till with silt & sand
TB-8	6.1	4.5 ft of silt overlying 1.6 ft sand

TABLE 4-3

AUTOLITE WATER SUPPLY WELL SAMPLING EPISODES

Date	Sampled By	B-1	B-2	B-3
04/26/84	Autolite	*	*	
05/08/84	Autolite	*	*	
05/23/84	Autolite	*	*	
10/30/84	T A Gleason	*	*	
12/01/84	T A Gleason	*	*	
02/01/85	T A Gleason		*	
03/09/85	T A Gleason	*	*	
04/15/85	T A Gleason			*
04/16/85	T A Gleason			*
04/17/85	T A Gleason			*

*Sample obtained

TABLE 4-4

Monitor Well Sampling Episodes

Monitor Well	10-31 to 11-1-84	11-30 to 12-1-84	1-12-85	2-1-85	3-9-85	4-6-85
1-125	*					
1-125(40)				*		
1-322	*					
1-322(208)		*				
1-322(315)		*				
2-50(38)						
2-130	*					
2-130(123)		*		*		
2-311	*					
2-311(208)		*				
2-311(304)		*		*		
3-130	*					
3-130(40)				*		
3-292	*					
3-292(178)		*				
3-292(288)		*		*		
4-130	*					
4-130(123)			*			
4-308	*					
4-308(208)		*	*			
4-308(301)		*	*			
5-130	*		*			
5-317	*					
5-317(208)		*	*			
5-317(310)		*	*			
6-130	*					
6-130(123)		*		*		
6-308	*					
6-308(208)		*				
6-308(301)		*		*		
7-130	*					
7-130(123)			*			
7-305	*					
7-305(208)		*	*			
7-305(298)		*	*			

*Samples Obtained

TABLE 4-4 (Continued)

Monitor Well	10-31 to 11-1-85	11-30 to 12-1-85	1-12-85	2-1-85	3-9-85	4-6-85
8-50					*	*
8-150(100)					*	*
8-307(100)					*	*
9-307(226)					*	*
10-63(60)					*	
10-203(196)					*	
TB-1	*		*			
11-100(45)						
11-100(90)						
11-200(145)						
11-200(180)						

*Samples Obtained

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter ppb								
B-1	04/26/84	OHM	0	0	0	0	0	18300	0	0	18300
	05/08/84	OHM	0	0	0	0	0	12100	0	0	12100
	05/08/84	Canton	0	0	0	0	0	11000	0	0	11000
	05/23/84	Allied	0	0	375	0	84	17000	0	21	17480
	05/23/84	ETC	0	0	378	0	119	20529	0	23	21049
	10/30/84	Howard	17.8	12.3	447	0	151	558	12.8	36.9	1236
	12/01/84	Howard	0	0	71	0	36.7	10300	0	0	10408
	03/09/85	Howard	0	0	263	23	44	1960	0	25.9	2316
B-2	04/26/84	OHM	0	0	0	0	0	355	0	0	355
	05/08/84	OHM	0	0	0	0	0	455	0	0	455
	05/08/84	Canton	0	0	0	0	0	510	0	0	510
	05/23/84	Allied	0	0	58	0	46	800	0	0	904
	05/23/84	ETC	0	0	55	0	40	682	0	0	777
	10/30/84	Howard	3.7	2.6	63.8	0	31.2	515	0	0	616
	12/01/84	Howard	0	0	9.5	0	14	405	0	0	428
	02/01/85	Howard	0	Trace	0	16.2	24.9	499	0	0	540
	02/01/85	Aqua Tech	0	0	10.3	0	12.9	148	0	0	171
	03/09/85	Howard	0	0	41.3	16	20.3	751	0	13.8	842
B-3	04/15/85	Howard	0	0	22.7	29.1	33.4	10000	0	18.4	10094
	04/16/85	Howard	0	0	22.1	18.5	28.9	10000	0	23.9	10093
	04/16/85	Howard	0	0	23	15.3	27.2	10000	0	21.5	10087
	04/17/85	Howard	0	0	23.9	27.1	31.6	10000	0	23.3	10106

Notes:

Laboratories:

- Aqua Tech Environmental Consultants, Inc., Marion, Ohio
- Howard Labs, Inc., Dayton, Ohio
- OH Materials Findlay, Ohio
- Canton Labs Canton, Ohio
- Allied Labs Buffalo, New York
- ETC Edison, New Jersey

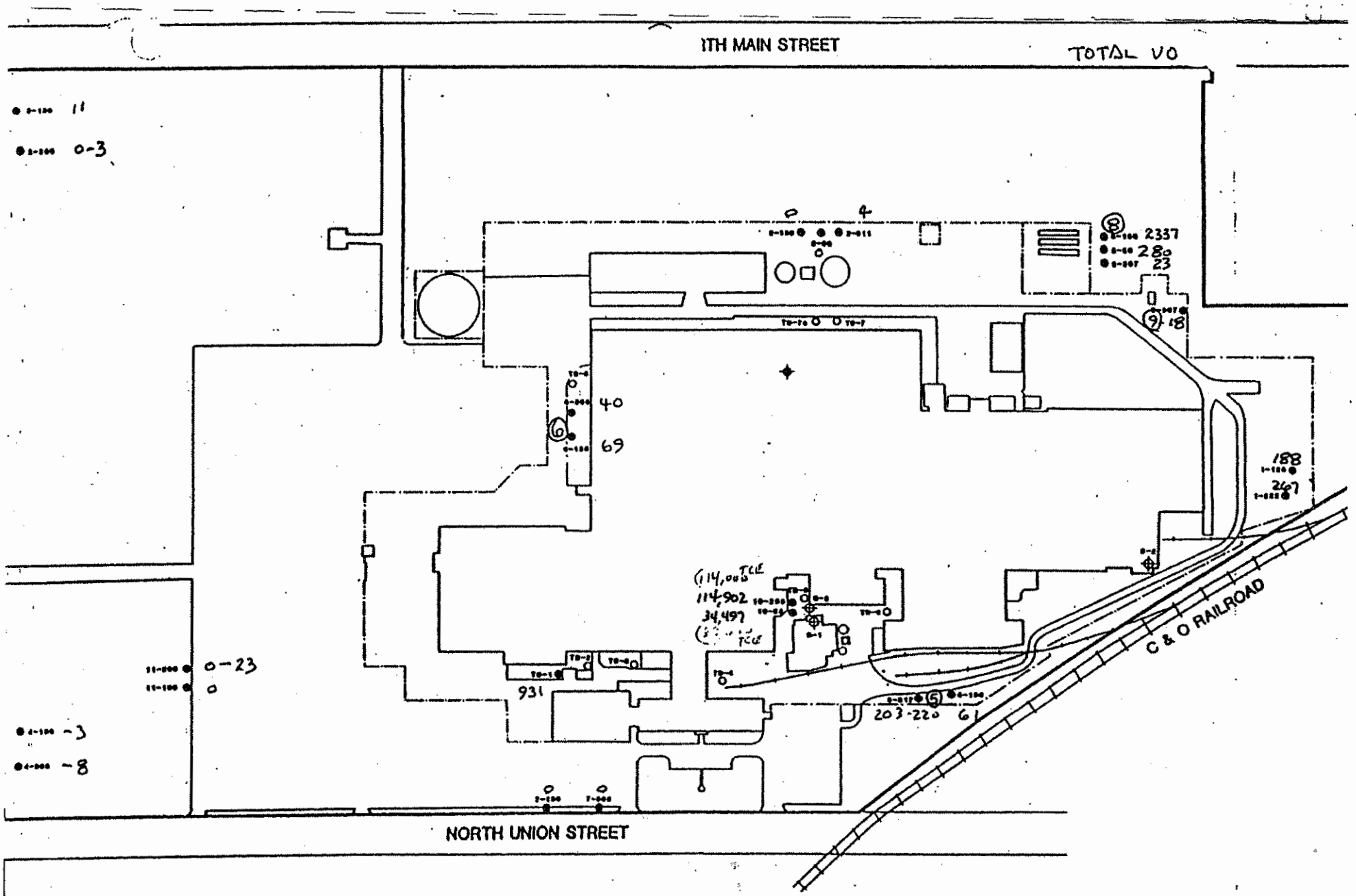
TABLE 4-5
(Page 1 of 1)

PROCESS SUPPLY WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

G



DRAWING

ALLIED AUTOMOTIVE

Fostoria, Ohio

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
1-125 (40)	11/01/84	Howard	0	0	12.2	0	0	22.3	0	0	34
	02/01/85	Howard	0	0	0	6.3	0	9	0	0	15
	02/01/85	Aqua Tech	0	0	0	0	0	0	0	0	0
	07/10/85	Howard	0	0	0	16.8	0	171.0	0	0	188
1-322 (208)	12/01/84	Howard	0	0	16.5	0	0	75.3	0	0	92
	07/10/85	Howard	0	0	0	16.8	0	250.0	0	0	267
1-322 (315)	11/01/84	Howard	0	0	12.3	0	0	13.3	0	0	26
	12/01/84	Howard	0	0	11	0	0	36.7	0	0	48
	02/01/85	Howard	0	0	0	16.6	0	95.9	0	0	112
	02/01/85	Howard	0	0	0	27.9	0	153	0	0	181
	07/10/85	Howard	0	0	0	15.3	3.6	245.0	0	0	264
2-50 (38)	07/10/85	Howard	0	0	0	0	0	0	0	0	0
2-130 (123)	10/31/84	Howard	0	0	0	0	0	2.6	0	0	3
	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	02/01/85	Howard	0	0	0	0	0	Trace	0	0	0
	02/01/85	Aqua Tech	0	0	0	0	0	0	0	0	0
	07/10/85	Howard	0	0	0	0	0	0	0	0	0

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 1 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
2-311 (208)	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	07/10/85	Howard	0	Trace	0	0	0	4.0	0	0	4
2-311 (304)	10/30/84	Howard	0	0	.3	0	0	46.4	0	0	47
	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	02/01/85	Howard	0	0	0	0	0	4.7	0	0	5
	02/01/85	Howard	0	0	0	0	0	4.9	0	0	5
	07/10/85	Howard	0	0	0	0	0	1.9	0	0	2
3-130 (40)	10/30/84	Howard	0	1.6	12	0	0	8.7	0	0	22
	02/01/85	Howard	0	0	0	8.5	0	7.4	0	0	16
	02/01/85	Aqua Tech	0	0	0	0	0	5.3	0	0	5
	07/11/85	Howard	0	0	0	7.6	0	3.3	0	0	11
3-292 (178)	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	07/11/85	Howard	0	0	0	0	0	0	0	0	0
3-292 (288)	10/30/84	Howard	0	2.7	20.7	0	5.4	11.2	0	0	40
	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	02/01/85	Howard	0	0	0	4.6	0	3.9	0	0	8
	02/01/85	Howard	0	0	0	5.8	0	4.3	0	0	10
	07/11/85	Howard	0	0	0	3.3	0	0	0	0	3

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 2 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethane	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
4-130 (123)	10/30/84	Howard	0	2.5	177	0	4.8	54.7	0	0	239
	01/12/85	Howard	0	0	1	0	0	2.5	0	0	3
	07/11/85	Howard	0	0	0	1.5	0	1.5	0	0	3
4-308 (208)	12/01/84	Howard	0	0	81.5	0	0	15.1	0	0	97
	01/12/85	Howard	0	0	0	42.6	Trace	10.5	5.4	0	58
	07/11/85	Howard	0	0	0	4.7	0	2.9	0	0	8
4-308 (301)	10/30/84	Howard	0	1.1	173	0	4	26.2	0	0	204
	12/01/84	Howard	0	0	27.8	0	0	19.6	0	0	47
	01/12/85	Howard	0	0	Trace	0	0	.7	0	0	1
	07/11/85	Howard	0	0	0	3.6	0	3.0	0	0	7
5-130	10/31/84	Howard	0	0	3.5	0	3.3	23	0	2.7	32
	01/12/85	Howard	0	0	0	0	0	11.8	0	1.6	13
	07/10/85	Howard	0	0	0	16.6	0	14.8	0	0	61
5-317 (208)	12/01/84	Howard	0	0	0	0	0	18.9	0	1.1	20
	01/12/85	Howard	0	0	0	0	0	45.2	0	2.4	48
	07/10/85	Howard	0	0	0	30.3	1.9	188.0	0	0	220

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 3 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) ~ Concentration in micrograms per liter								
5-317 (310)	10/31/84	Howard	0	0	1.7	0	1.8	25.6	0	4.9	34
	01/12/85	Howard	0	0	0	Trace	Trace	35.7	10.8	7.2	54
	07/10/85	Howard	0	0	0	25.0	8.7	169.0	0	0	203
6-130 (123)	10/31/84	Howard	0	3.1	28.8	0	4.8	213	0	0	250
	12/01/84	Howard	0	0	11.5	0	0	126	0	0	137
	02/01/85	Howard	0	1.5	1.7	15.4	Trace	113	0	0	132
	02/01/85	Aqua Tech	0	0	7.3	0	0	59.1	0	0	66
	07/11/85	Howard	0	Trace	0	12.8	0	55.6	0	0	69
6-308 (208)	12/01/84	Howard	0	0	5.6	0	0	11.7	0	0	17
	07/11/85	Howard	0	2.8	0	11.4	0	25.6	0	0	40
6-308 (301)	10/31/84	Howard	0	3.5	17.2	0	3.3	62.1	0	0	86
	11/30/84	Howard	0	0	7.3	0	0	55.1	0	0	62
	02/01/85	Howard	0	2.7	Trace	10.8	Trace	25.8	0	0	39
	02/01/85	Howard	0	2.9	Trace	12.4	0	29.9	0	0	45
	07/11/85	Howard	0	2.8	0	13.2	0	24.8	0	0	41
7-130 (123)	11/01/84	Howard	0	0	0	0	0	0	0	0	0
	01/12/85	Howard	0	0	0	0	0	0	0	0	0
	07/11/85	Howard	0	0	0	0	0	0	0	0	0

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 4 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
7-305 (208)	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	01/12/85	Howard	0	0	0	0	0	0	0	0	0
	07/11/85	Howard	0	0	0	0	0	0	0	0	0
7-305 (298)	11/01/84	Howard	0	0	0	0	0	6.5	0	0	6
	12/01/84	Howard	0	0	0	0	0	0	0	0	0
	01/12/85	Howard	0	0	0	0	0	0	0	0	0
	07/11/85	Howard	0	0	0	0	0	0	0	0	0
8-50 (23)	03/09/85	Howard	0	0	10.6	5.4	7.5	580	0	Trace	603
	04/06/85	Howard	0	0	0	7.2	7.0	380	1.4	0	396
	07/11/85	Howard	0	0	0	6.6	12.1	258	0	3.5	280
8-150 (100)	03/09/85	Howard	0	0	21.3	5.4	8.2	1960	0	Trace	1195
	04/06/85	Howard	0	0	0	22.3	3.1	2500	1.0	0	2526
	07/11/85	Howard	0	Trace	0	36.6	0	2300	0	0	2337
8-307 (250)	03/09/85	Howard	0	0	12.1	4.7	5.6	1000	0	Trace	1032
	04/06/85	Howard	0	0	0	2.6	0	24.7	0	0	27
	07/11/85	Howard	0	0	0	2.9	0	19.8	0	0	23

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 5 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
9-307 (266)	03/09/85	Howard	0	0	14.4	4.1	4.2	2550	0	4.9	2578
	04/06/85	Howard	0	0	0	2.8	0	386	0	0	389
	07/10/85	Howard	0	0	2.4	0	0	15.3	0	0	18
10-63 (60)	03/09/85	Howard	0	17.2	1050	0	18.2	2530	0	8.3	3674
	07/10/85	Howard	0	0	0	897	0	33600	0	0	34497
10-203 (196)	03/09/85	Howard	0	0	580	137	111	20500	0	100	21428
	07/10/85	Howard	0	0	0	902	0	114000	0	0	114902
TB-1	11/01/84	Howard	0	0	12.5	0	3.1	75.3	0	0	91
	01/12/85	Howard	0	0	0	21.1	Trace	50.7	Trace	Trace	72
	07/11/85	Howard	0	0	0	802	0	129	0	0	931
11-100 (45)											

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-6
(Page 6 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

July 30, 1985

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
11-100 (90)	07/11/85*	Howard	0	0	0	0	0	0	0	0	0
11-200 (145)	07/11/85	Howard	0	0	0	14.1	0	8.8	0	0	23
11-200 (180)	07/11/85**	Howard	0	0	0	0	0	0	0	0	0

Notes:

(40) Average Depth (Ft) Of Opening/Screen

Sampling Tubes Were Installed Subsequent to 10/30/84-11/1/84 Sampling Episode

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

*Also found:

MEK	577
Tetrahydrofuran	2200

**Also found:

MEK	966
Tetrahydrofuran	3700

TABLE 4-6
(Page 7 of 7)

ON-SITE MONITOR WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES
Environmental and Geotechnical Services

TABLE 4-7

AQUIFER CHARACTERISTICS CALCULATED FROM TIME-DRAWNDOWN DATA

Well	Transmissivity (T)	Storage Coefficient (S)
2-311	17,740	.030
3-294	27,720	.009
4-308	47,948	.019
5-317	6,822	.030
6-308	13,647	.091
7-305	12,320	.025
10-203	6,336	.361
11-200	25,711	.016

TABLE 4-8

AQUIFER CHARACTERISTICS CALCULATED
FROM DISTANCE-DRAWDOWN DATA

Time After Pumping Began	Transmissivity (T)	Storage Coefficient (S)
1,000 minutes	19,283	.022
2,000 minutes	17,058	.026
3,000 minutes	19,283	.031
5,000 minutes	15,035	.019

Sample Source[1]	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
R-7	11/13/84	Howard[2]	0	0	26.7	0	0	23.4	0	1.5	52
James Harris	11/13/84	Aqua Tech[3]	0	0	5.3	0	0	14.4	0	0	20
1712 Walnut St.											
R-10	11/13/84	Howard	0	0	3.5	0	0	4.7	0	.6	9
John Peifer	11/13/84	Aqua Tech	0	0	1.5	0	0	2.7	0	0	4
1720 Walnut St.											
R-26	11/13/84	Howard	0	0	0	0	0	0	0	0	0
Warren Overly	11/13/84	Aqua Tech	0	0	0	0	0	0	0	0	0
1707 Walnut St.											
R-53	11/13/84	Howard	0	0	0	0	0	4.6	0	0	5
Duane Vogel	11/13/84	Aqua Tech	0	0	0	0	0	1.7	0	0	2
1667 N. Union St											
R-54	11/13/84	Howard	0	0	0	0	0	0	0	0	0
Clyde Strousburg	11/13/84	Aqua Tech	0	0	.5	0	0	1	0	0	2
1665 N. Union St											

1 See Figure 4-14 Sampling and Monitor Well Locations (NW Area)

2 Howard Labs, Dayton, Ohio

3 Aqua Tech, Melmore, Ohio

Table 4-9
(Page 1 of 2)

Sampling of Six Private Residence Wells
(11/13/84)

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
			1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethane	Total VOC
Sample Source	Date Sampled	Lab									
R-55	11/13/84	Howard	0	0	0	0	0	5.8	0	0	6
Ralph McClung	11/13/84	Aqua Tech	0	0	0	0	0	.9	0	0	1
1651 N. Union St											

Table 4-9
(Page 2 of 2)

Sampling of Six Private Residence Wells
(11/13/84)

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CHEMICALS (VOC) - Concentration in micrograms per liter								
			1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Vinyl Chloride
Sample Source	Date Sample	Lab									
MURRAY	05/23/84	ETC	-	-	ND1	-	ND1	ND1	-	ND1	ND1
STEINCREST		ALLIED	-	-	ND2	-	ND2	ND2	-	ND2	ND2
191		AQUA	-	-	-	-	<1	-	-	-	

NOTES:

Laboratories:

Aqua Tech Environmental Consultants, Inc, Marion, Ohio

Allied Labs Buffalo, New York

ETC Edison, New York

- = NOT ANALYZED
ND1 = IS NOT PRESENT AT ANY DETECTABLE CONCENTRATION
ND2 = NOT DETECTED AT THE 10 PPB LIMIT OF DETECTION
BMDL = BELOW MDL WHERE MDL IS 10 PPB

TABLE 4-9A
SAMPLING OF SIX PRIVATE WELLS
(5/23/84)

GROUNDWATER INVESTIGATIONS
AUTOLITE
FOSTORIA, OHIO
PROJECT # 40601

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CHEMICALS (VOC) – Concentration in micrograms per liter								
			1,1-Dichloro-ethane	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethane	Cis-1,2 Dichloro-ethane	1,1,1-Tri-chloroethane	Trichloro-ethane	1,2-Dichloro-ethane	Tetra-chloroethane	Vinyl Chloride
Sample Source	Date Sample	Lab									
JOLLY'S	05/23/84	ETC	–	–	ND1	–	ND1	BMDL	–	ND1	ND1
DRIVE IN		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
C11		AQUA	–	–	–	–	–	<1	–	–	–
BRANDEBERRY	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	ND1	ND1
4509 NORTH		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
US 23		AQUA	–	–	–	–	–	<1	–	–	–
11 76											
GREGOR	05/23/84	ETC	–	–	ND1	–	ND1	BMDL	–	ND1	ND1
1702 WALNUT		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	1.1	–	–	–
11 2											
HAGENMOIER	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	BMDL	ND1
1751 N. UNION		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	<1	–	–	–
11 44											
MUNSEY	05/23/84	ETC	–	–	ND1	–	ND1	ND1	–	ND1	ND1
225 BACHMAN		ALLIED	–	–	ND2	–	ND2	ND2	–	ND2	ND2
		AQUA	–	–	–	–	–	<1	–	–	–
K 70											

– = NOT ANALYZED
ND1 = IS NOT PRESENT AT ANY DETECTABLE CONCENTRATION
ND2 = NOT DETECTED AT THE 10 PPB LIMIT OF DETECTION
BMDL = BELOW MDL, WHERE MDL IS 10 PPB

NOTES:

Laboratories:

Aqua Tech Environmental Consultants, Inc.
Marion, Ohio

Allied Labs
Buffalo, New York

ETC
Edison, New Jersey

TABLE 4-9A
SAMPLING OF SIX PRIVATE WELLS
(5/23/84)

GROUNDWATER INVESTIGATIONS
AUTOLITE
FOSTORIA, OHIO
PROJECT # 40601

T A GLEASON ASSOCIATES

TABLE 4-10

OFF-SITE LOCATION FOR WATER QUALITY SAMPLING
(Sample Date December 10-19, 1984)

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-3 ✓	Sparks, Nancy	1704 Walnut St.	12/11/84
R-13 ✓	Steinhart	1726 Walnut St.	12/10/84
R-16 ✓	Bringman, Dean	202 Bittersweet Ln.	12/10/84
R-27 ✓	Sheely, Paul	1705 Walnut St.	12/10/84
R-60 ✓	Miller, Richard	418 W. Jones Road	12/10/84
R-65 ✓	Daley, David G.	1716 N. Countyline St.	12/11/84
R-72 ✓	Walters, Tom	1802 N. Countyline St.	12/10/84
R-75 ✓	Hitchcock, H.L.	4549 Fostoria Road	12/10/84
R-82 ✓	Krauss, Dale	1735 N. Countyline St.	12/11/84
R-84 ✓	GONZALES ~~Angles, Greg~~	1178 Stearns	12/10/84
R-85 ✓	Cadwallder, Ira	2387 Hawthorne	12/10/84
R-86 ✓	Loeffler, Hans	2511 Courtly	12/10/84
R-87 ✓	Ray, John	1989 McCutchinville Rd.	12/10/84
R-88 ✓	Seiler, Richard J.	3058 Stuart	12/11/84
R-89 ✓	Clark, J.D.	1563 Pelton Rd.	12/11/84
R-90 ✓	Strite, G.H.	1312 Morningside	12/10/84
R-92 ✓	Yost, Katherine	4350 N. Seneca Co. Rd. 25	12/10/84
R-93 ✓	Souder, Kenneth	11473 W. Township Rd. 41 (Co. Road 592)	12/10/84
R-94 ✓	Waltermeyer, Howard	1402 N. County Line	12/12/84
R-95 ✓	Tallow	440 Union Ct.	12/12/84
R-96 ✓	Huber, Mrs. John	1322 N. Union St.	12/10/84
R-97 ✓	Kinn, Mrs. A.D.	1041 Gerlock Dr.	12/10/84*
R-98 ✓	Kuhn, Mr. C.J.	1040 Gerlock Dr.	12/10/84
R-99 ✓	Riggle, C.J.	904 Cory St.	12/12/84*
R-100 ✓	Eiserman, Mrs. Steve	1018 Lincoln	12/12/84
R-101 ✓	Dauterman, Jim	625 Park Ave.	12/10/84
R-102 ✓	Rowe, Mrs. Kenneth S.	715 Natlin	12/11/84

TABLE 4-10

OFF-SITE LOCATION FOR WATER QUALITY SAMPLING
(Sample Date December 10-19, 1984)

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-3	Sparks, Nancy	1704 Walnut St.	12/11/84
R-13	Steinhart	1726 Walnut St.	12/10/84
R-16	Bringman, Dean	202 Bittersweet Ln.	12/10/84
R-27	Sheely, Paul	1705 Walnut St.	12/10/84
R-60	Miller, Richard	418 W. Jones Road	12/10/84
R-65	Daley, David G.	1716 N. Countyline St.	12/11/84
R-72	Walters, Tom	1802 N. Countyline St.	12/10/84
R-75	Hitchcock, H.L.	4549 Fostoria Road	12/10/84
R-82	Krauss, Dale	1735 N. Countyline St.	12/11/84
R-84	Angles, Greg	1178 Stearns	12/10/84
R-85	Cadwallder, Ira	2387 Hawthorne	12/10/84
R-86	Loeffler, Hans	2511 Courtly	12/10/84
R-87	Ray, John	1989 McCutchinville Rd.	12/10/84
R-88	Seiler, Richard J.	3058 Stuart	12/11/84
R-89	Clark, J.D.	1563 Pelton Rd.	12/11/84
R-90	Strite, G.H.	1312 Morningside	12/10/84
R-92	Yost, Katherine	4350 N. Seneca Co. Rd. 25	12/10/84
R-93	Souder, Kenneth	11473 W. Township Rd. 41 (Co. Road 592)	12/10/84
R-94	Waltermeyer, Howard	1402 N. County Line	12/12/84
R-95		440 Union Ct.	12/12/84
R-96	Huber, Mrs. John	1322 N. Union St.	12/10/84
R-97	Kinn, Mrs. A.D.	1041 Gerlock Dr.	12/10/84*
R-98	Kuhn, Mr. C.J.	1040 Gerlock Dr.	12/10/84
R-99	Riggle, C.J.	904 Cory St.	12/12/84*
R-100	Eiserman, Mrs. Steve	1018 Lincoln	12/12/84
R-101	Dauterman, Jim	625 Park Ave.	12/10/84
R-102	Rowe, Mrs. Kenneth S.	715 Natlin	12/11/84

TABLE 4-10 (Continued)

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-103 ✓	Vance, Harry	12001 Stoner Rd.	12/10/84
R-104 ✓	Nominee, Bill	727 N. Poplar	12/10/84
R-105 ✓	Kuhn, Daniel	717 N. Poplar	12/10/84
R-106 ✓	Hiser, Doris	753 Maple St.	12/10/84
C-1 ✓	Norton Mfg. Co.	112 W. Jones	12/11/84
C-3 ✓	Fostoria Industries	–	12/11/84*
C-4 ✓	Roppe Rubber		12/19/84*
C-7 ✓	Rupp/ Gary L. Hagen	1321 Perrysburg Rd.	12/12/84
C-8 ✓	Tri Cty Vet Clinic	4579 N. St., Rt. 23	12/12/84
C-9 ✓	Beam, Ruth	4589 N. County Rd. 25	12/12/84
C-10 ✓	East Co. Buckeye (Name change)	930 Sandusky	12/12/84
C-13 ✓	Tri Lane Car Wash	625 N. Cty. Line Rd.	12/13/84

[1]See Drawing 4, Water Quality Sampling Locations and Figure 4-13.

*See Table 4-11, Water Quality Sampling Results, Howard Labs, Inc.

TABLE 4-11

HOWARD LABS ANALYTICAL RESULTS
(Sample Date December 10-12, 1984)

Well C-3[1] - Fostoria Industries
Trichloroethene - 20,500 ppb
Trans 1,2-dichloroethene -148 ppb
1,1,1 Trichloroethane - 32.2 ppb
Tetrachloroethene - 28.0 ppb
Chloroform - 16.3 ppb

Well R-97 - Kinn, Mrs. A.D., 1041 Gerlock Dr.
Chloroform - 26.6 ppb
Bromodichloromethane - 17.0 ppb
Dibromochloromethane - 3.9 ppb

Well R-99 - Riggle, C.J., 904 Cory St.
Chloroform - 11.8 ppb

Well C-4 - Roppe Rubber
Trichloroethene - 685 ppb
1.1.1 Trichloroethane - 3.7 ppb
Cis-1,2 Dichloroethene - 190 ppb
Chloroform - 15.4 ppb

[1]See Drawing 4 and Figure 4-13 for sample locations.

TABLE 4-12

OFF-SITE LOCATION FOR WATER QUALITY SAMPLING
(January 4, 1985)

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-7 ✓	Harris, James	1712 Walnut St.	01/04/85*
R-10 ✓	Peifer, John	1720 Walnut St.	01/04/85*
R-13 ✓	Steinhart	1726 Walnut St.	01/04/85*
R-26 ✓	Overly, Warren	1707 Walnut St.	01/04/85*
R-27 ✓	Sheely, Paul	1705 Walnut St.	01/04/85
R-53 ✓	Vogel, Duane	1667 No. Union St.	01/04/85
R-54 ✓	Strausburg, Clyde	1665 No. Union St.	01/04/85
R-84	~~Angles, Greg~~ Gowdalin	1178 Stearns	01/04/85*
C-2	Chrysler Foundry		01/04/85
C-12	Quarry		01/04/85*
C-14	Drainage Ditch	No. of Jones Rd.	01/04/85*
C-15	Drainage Ditch	No. of Jones Rd.	01/04/85
C-16	Drainage Ditch	No. of Jones Rd.	01/04/85

[1]See Drawing 4, Water Quality Sampling Locations and Figure 4-14.

*See Table 4-13, Water Quality Sampling Results, Howard Labs, Inc.

TABLE 4-13

HOWARD LABS ANALYTICAL RESULTS
(Sample Date January 4, 1985)

Well R-7[1] - Harris, James, 1712 Walnut St.
Trichloroethene - 9.8 ppb
Cis-1,2 Dichloroethene - 1.0 ppb

Well R-10 - Peifer, John, 1720 Walnut St.
Trichloroethene - 4.1 ppb

Well R-13 - Steinhart, 1726 Walnut St.
Trichloroethene - 4.3 ppb

Well R-84 - Angles, Greg, 1178 Stearnes
Trichloroethene - 5.2 ppb

Well R-27 - Sheely, Paul, 1705 Walnut St.
Trichloroethene - 4.6 ppb

Well R-26 - Overly, Warren, 1707 Walnut St.
Trichloroethene -2.3 ppb

[1]See Drawing 4 and Figure 4-14 for locations.

TABLE 4-14

NORTHWEST AREA LOCATIONS SAMPLED
ON JANUARY 10-12, 1985

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-1*	Williams, Duane	180 Jones Rd.	01/11/85
R-2	Creeger, Clifford	1702 Walnut St.	01/10/85
R-4	Wolfe, Robert	1706 Walnut St.	01/10/85
R-5	~~Wunderlin, Mike~~ Price	1708 Walnut St.	01/12/85
R-6*	Kauffman, Robert	1710 Walnut St.	01/10/85
R-8	Wines, Mark	1716 Walnut St.	01/10/85
R-9	Visgak, Greg	1718 Walnut St.	01/10/85
R-11*	Dell, Stephen C.	1722 Walnut St.	01/10/85
R-12*	Tyson, Lowell	1724 Walnut St.	01/10/85
R-14*	Souder, Dennis	1728 Walnut St.	01/10/85
R-15*	Fleetwood, Robert	200 Bittersweet Ln.	01/10/85
R-16	Bringman, Dean	202 Bittersweet Ln.	01/10/85
R-17	Lewis, Mike	1727 Walnut St.	01/10/85
R-18	Donaldson, Paul	1725 Walnut St.	01/10/85
R-19	Thornton, Dan	1723 Walnut St.	01/10/85
R-20	Weddle, Tom	1721 Walnut St.	01/10/85
R-21	Heckathorn, Craig	1719 Walnut St.	01/12/85
R-22	Luckey, Helen	1717 Walnut St.	01/10/85
R-23	Gwyn, Martha	1715 Walnut St.	01/10/85
R-24	Heckathorn, Charles	1713 Walnut St.	01/10/85
R-25	Pelton, Jim	1709 Walnut St.	01/10/85
R-28	Graham, Earl	1703 Walnut St.	01/10/85
R-29	Riser, Wm. D.	1700 No. Union St.	01/11/85
R-31	Yingling, Wm.	1704 No. Union St.	01/11/85
R-32	Bolen, Norman	1720 No. Union St.	01/11/85
R-33*	Edwards, Cecil K.	1730 No. Union St.	01/11/85
R-34*	Darr, Sue	1734 No. Union St.	01/11/85
R-35	Smitley, Morris	1744 No. Union St.	01/11/85
R-36	Baker, Robert	1748 No. Union St.	01/11/85
R-37	King, Jim	1750 No. Union St.	01/12/85
R-38	Young, Dwight	1752 No. Union St.	01/11/85
R-39	Hipsher, Dr. Michael	1754 No. Union St.	01/11/85
R-40	Ryman, Mary	1756 No. Union St.	01/11/85
R-41	Pierce, Jim	204 Bittersweet Ln	01/10/85
R-42	Cummings, Robert	1798 No. Union St.	01/12/85
R-43	Zirger, Richard	202 Bachman Rd.	01/10/85
R-44	Haggenmaier, Pat	1751 No. Union St.	01/11/85
R-45	Basinger, Wayne	1745 No. Union St.	01/11/85
R-46	Henry, Lawrence	1733 No. Union St.	01/11/85
R-47*	Myers, John	1721 No. Union St.	01/12/85
R-48	Miller, Kenny	1717 No. Union St.	01/11/85
R-49	Stevens, Clayton	1705 No. Union St.	01/12/85
R-50	Fields, Dr. Phillip	1703 No. Union St.	01/11/85
R-52	Greenlee, Robert	1669 No. Union St.	01/10/85
R-53*	Vogel, Duane	1667 No. Union St.	01/12/85
R-55	McClung, Ralph	1651 No. Union St.	01/12/85

TABLE 4-14 (Contined)

I.D. No.[1]	Owner/Occupant	Address	Sample Date
R-59*	Moyer, William	1515 N. Union St.	01/11/85
R-61	Lewis, I.G.	1724 N. Countyline St.	01/11/85
R-62	Mohr, Robert K.	1700 N. Countyline St.	01/11/85
R-63	Burdett, Arthur	1702 N. Countyline St.	01/11/85
R-65	Daley, David G.	1716 N. Countyline St.	01/11/85
R-67	Luman, Richard	1720 N. Countyline St.	01/11/85
R-68	Smith, Dean	1730 N. Countyline St.	01/11/85
R-70	Munsey, William	225 Bachman Road	01/10/85
R-71	Chalfin, Loren	1798 N. Countyline St.	01/11/85
R-72	Walters, Tom	1802 N. Countyline St.	01/11/85
R-73	Shaw, Herbert	1804 N. Countyline St.	01/11/85
R-77	Burger	1051 Courtly	01/11/85
R-78	Thallman, David	1713 N. Countyline St.	01/11/85
R-79	Ratcliff, Dale	1711 N. Countyline St.	01/11/85
R-80	Butzier, Tom	1705 N. Countyline St.	01/11/85
R-81	Meyers, Tim	1701 N. Countyline St.	01/11/85
R-83	Wentz, Paul	1733 N. Countyline St.	01/11/85
C-5*	Dollar General Store	1515 N. Countyline St.	01/11/85

[1]See Figure 4-15.

*See Table 4-15, Analytical Results, Howard Labs, Inc. (January 10-12, 1985).

TABLE 4-15

ANALYTICAL RESULTS, HOWARD LABS
(January 10-12, 1985)

Dollar General Store, 1515 N. Countyline
etrachloroethene

R-1 Williams, Duane, 180 Jones Road
11.2 ppb Trichloroethene
10.8 ppb Trans 1,2-Dichloroethene
4.0 ppb Tetrachloroethene

R-34 Darr, Sue, 1734 Union
11.4 ppb Tetrachlorethene

R-14 Souder, Dennis, 1728 Walnut
8.4 ppb Trans 1,2-Dichloroethene

R-47 Myers, John, 1721 No. Union
4.7 ppb Tetrachloroethene

R-33 Edwards, Cecil K., 1730 N. Union
3.7 ppb Tetrachloroethene

R-11 Dell, Stephen C., 1722 Walnut
2.1 ppb Trichloroethene

R-12 Tyson, Lowell, 1724 Walnut
1.4 ppb Trichloroethene
1.6 ppb Trans 1,2-Dichloroethene

R-6 Kauffman, 1710 Walnut
1.6 ppb Trichloroethene

R-53 Vogel, Duane, 1667 N. Union
1.3 ppb Tetrachloroethene
1.4 ppb Trichloroethene

R-15 Fleetwood, Robert, 200 Bittersweet
1.2 ppb Trans 1,2-Dichloroethene

R-59 Moyer, William, 1515 N. Union
1.1 ppb 1,2-Dichloroethane
.9 Chloroform

			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
R-1	01/11/85	Aqua Tech	0	0	22.4	0	0	17.9	0	0	40
	01/11/85	Howard	0	0	10.8	0	0	11.2	0	4	26
R-2	05/23/84	Aqua Tech	0	0	0	0	0	1.1	0	0	1
	01/10/85	Aqua Tech	0	0	0	0	0	0	0	0	0
	01/10/85	Howard	0	0	0	0	0	0	0	0	0
R-5	01/12/85	Aqua Tech	0	0	0	0	0	.8	0	0	1
	01/12/85	Howard	0	0	0	0	0	0	0	0	0
R-6	01/10/85	Aqua Tech	0	0	1.0	0	0	3.2	0	0	4
	01/10/85	Howard	0	0	0	0	0	1.6	0	0	2
R-7	11/13/84	Howard	0	0	26.7	0	0	23.4	0	1.5	52
	11/13/84	Aqua Tech	0	0	5.3	0	0	14.4	0	0	20
	01/04/85	Howard	0	0	0	1	0	9.8	0	0	11
		Aqua Tech									

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 1 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
R-8	01/10/85	Howard	0	0	0	0	0	0	0	0	0
	01/10/85	Aqua Tech	0	0	0	0	0	1.9	0	0	2
R-9	01/10/85	Howard	0	0	0	0	0	0	0	0	0
	01/10/85	Aqua Tech	0	0	1.3	0	0	2.1	0	0	3
R-10	11/13/84	Howard	0	0	3.5	0	0	4.7	0	.6	9
	11/13/84	Aqua Tech	0	0	1.5	0	0	2.7	0	0	4
	01/04/85	Howard	0	0	0	0	0	4.1	0	0	4
		Aqua Tech									
R-11	01/10/85	Howard	0	0	0	0	0	2.1	0	0	2
	01/10/85	Aqua Tech	0	0	0	.7	0	1.7	0	0	2
R-12	01/10/85	Howard	0	0	1.6	0	0	1.4	0	0	3
	01/10/85	Aqua Tech	0	0	3.5	0	0	3.8	0	0	7

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 2 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
R-13	12/11/84	Aqua Tech	0	0	8.8	0	0	4.1	0	0	13
	12/10/84	Howard	0	0	0	0	0	0	0	0	0
	01/04/85	Howard	0	0	0	Trace	0	4.3	0	0	4
	01/04/85	Aqua Tech									
R-14	01/10/85	Howard	0	0	8.4	0	0	0	0	0	8
	01/10/85	Aqua Tech	0	0	25.9	0	0	0	0	0	26
R-15	01/10/85	Howard	0	0	1.2	0	0	0	0	0	1
	01/10/85	Aqua Tech	0	0	19.1	0	0	1.7	0	0	21
R-20	01/10/85	Aqua Tech	0	0	7.6	0	0	6.6	0	0	14
	01/10/85	Howard	0	0	0	0	0	0	0	0	0
R-21	01/12/85	Aqua Tech	0	0	0	0	0	1.2	0	0	1
	01/12/85	Howard	0	0	0	0	0	0	0	0	0

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 3 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
R-23	01/10/85	Aqua Tech	0	0	0	0	0	1.7	0	0	2
	01/10/85	Howard	0	0	0	0	0	0	0	0	0
R-24	01/10/85	Aqua Tech	0	0	0	0	0	1.3	0	0	1
	01/10/85	Howard	0	0	0	0	0	0	0	0	0
R-25	01/10/85	Aqua Tech	0	0	0	0	0	1.1	0	0	1
	01/10/85	Howard	0	0	0	0	0	0	0	0	0
R-26	01/04/85	Howard	0	0	0	0	0	2.3	0	0	2
	01/04/85	Aqua Tech			.8			4.1			5
R-27	12/10/84	Howard	0	0	0	0	0	0	0	0	0
	12/10/84	Aqua Tech	0	0	0	0	2.1	0	0	0	2
	01/04/85	Howard	0	0	0	0	0	4.6	0	0	5
	01/04/85	Aqua Tech						2.2			2

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 4 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
R-33	01/11/85	Aqua Tech	0	0	0	0	0	0	0	12.3	12
	01/11/85	Howard	0	0	0	0	0	0	0	3.7	4
R-34	01/11/85	Aqua Tech	0	0	1.7	0	1.1	.7	0	21.8	25
	01/11/85	Howard	0	0	0	0	0	0	0	11.4	11
R-35	01/10/85	Howard	0	0	0	0	0	0	0	0	0
	01/10/85	Aqua Tech	0	0	0	0	1.5	0	0	2.6	4
R-36	01/11/85	Aqua Tech	0	0	0	0	0	0	0	1.3	1
	01/11/85	Howard	0	0	0	0	0	0	0	0	0
R-45	01/11/85	Aqua Tech	0	0	0	0	0	0	0	3.5	4
	01/11/85	Howard	0	0	0	0	0	0	0	0	0

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 5 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) – Concentration in micrograms per liter								
R-46	01/11/85	Aqua Tech	0	0	0	0	0	0	0	1.3	1
	01/11/85	Howard	0	0	0	0	0	0	0	0	0
R-47	01/12/85	Aqua Tech	0	0	0	0	0	0	0	6.8	7
	01/12/85	Howard	0	0	0	0	0	0	0	4.7	5
R-53	11/13/84	Howard	0	0	0	0	0	4.6	0	0	5
	11/13/84	Aqua Tech	0	0	0	0	0	1.7	0	0	2
	01/04/85	Howard	0	0	0	0	0	0	0	0	0
	01/12/85	Aqua Tech	0	0	1.2	0	0	2.4	0	0	4
	01/12/85	Howard	0	0	0	0	0	1.4	0	1.3	3
	01/04/85	Aqua Tech									
R-54	11/13/84	Howard	0	0	0	0	0	0	0	0	0
	11/13/84	Aqua Tech	0	0	.5	0	0	1	0	0	2
	01/04/85	Howard	0	0	0	0	0	0	0	0	0
	01/04/85	Aqua Tech									
R-55	11/13/84	Howard	0	0	0	0	0	5.8	0	0	6
	11/13/84	Aqua Tech	0	0	0	0	0	.9	0	0	1
	01/12/85	Aqua Tech	0	0	0	0	0	1.4	0	0	1
	01/12/85	Howard	0	0	0	0	0	0	0	0	0

Notes:

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 6 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
R-59	01/11/85	Aqua Tech	0	0	0	0	0	0	0	2.8	3
	01/11/85	Howard	0	0	0	0	0	0	1.1	0	1
R-61	01/11/85	Aqua Tech	0	0	0	0	0	7.4	0	0	7
	01/11/85	Howard	0	0	0	0	0	0	0	0	0
R-84	12/10/84	Aqua Tech	0	0	.8	0	2.2	0	0	0	3
	12/10/84	Howard	0	0	0	0	0	0	0	0	0
	01/04/85	Howard	0	0	0	0	0	5.2	0	0	5
	01/04/85	Aqua Tech									
R-97	12/10/84	Howard	0	0	0	0	0	0	0	0	0
	12/10/84	Aqua Tech	0	0	0	0	0	0	0	0	0
R-99	12/12/84	Howard	0	0	0	0	0	0	0	0	0
	12/12/84	Aqua Tech									

Notes:

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-16
(Page 7 of 7)

RESIDENTIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
Sample Source	Date Sampled	Lab	1,1-Dichloro-ethene	1,1-Dichloro-ethane	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
C-1	12/12/84	Aqua Tech	0	0	4.1	0	0	1.3	0	0	5
Norton	12/12/84	Howard	0	0	0	0	0	0	0	0	0
C-3	12/11/84	Howard	0	0	148	0	32.2	20500	0	28	20708
Fostoria Industries	12/11/84	Aqua Tech	1.5	0	166	0	37.1	14000	0	45.5	14250
C-4	12/19/84	Howard	0	0	0	190	3.7	685	0	0	879
Roppe Rubber											
C-5	01/11/85	Aqua Tech	0	0	Trace	0	0	2	0	139	141
Dollar General	01/11/85	Howard	0	0	0	0	0	0	0	162	162

Notes:

Laboratories:

Aqua Tech Environmental Consultants, Inc., Marion, Ohio

Howard Labs, Inc., Dayton, Ohio

TABLE 4-17
(Page 1 of 1)

COMMERCIAL/INDUSTRIAL WELLS

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

Sample Source	Date Sampled	Lab	1,1-Dichloro-ethane	1,1-Dichloro-ethene	Trans-1,2 Dichloro-ethene	Cis-1,2 Dichloro-ethene	1,1,1-Tri-chloroethane	Trichloro-ethene	1,2-Dichloro-ethane	Tetra-chloroethene	Total VOC
			VOLATILE ORGANIC CONSTITUENT (VOC) - Concentration in micrograms per liter								
C-12 (Surface)	01/03/85	Howard	0	0	1.3	0	0	11.2	0	0	12
(Surface)	01/03/85	Howard	0	0	1	0	0	9.3	0	0	10
(10')	01/03/85	Howard	0	1	1.2	0	0	17.5	0	0	20
(10')	01/03/85	Howard	0	0	0	5.2	0	15.1	0	0	20
(18')	01/03/85	Howard	0	0	0	6.3	0	16.2	0	0	22
(21')	01/03/85	Howard	0	0	0	0	0	0	0	0	0
(22')	01/03/85	Howard	0	0	1.5	0	0	10.5	0	0	12
(23')	01/03/85	Howard	0	0	0	0	0	0	0	0	0
(25')	01/03/85	Howard	0	0	0	0	0	0	0	0	0
C-14 (No. of Jones Rd. in ditch)	01/04/85	Howard	0	0	0	0	17.4	0	0	0	17

Notes:
Laboratories:
Aqua Tech Environmental Consultants, Inc., Marion, Ohio
Howard Labs, Inc., Dayton, Ohio

TABLE 4-18
(Page 1 of 1)

SURFACE WATER SAMPLES

GROUNDWATER INVESTIGATIONS
ALLIED AUTOMOTIVE
FOSTORIA, OHIO

T A GLEASON ASSOCIATES

TABLE 4-19

GROUNDWATER REFERENCE ELEVATIONS
(RESIDENTIAL WELLS)

Well ID	Owner/Occupant	Address	Reference Elevation
R-3	Sparks, Nancy	1704 Walnut	761.71
R-16	Bringman, Dean C.	202 Bittersweet	756.25
R-27	Sheely, Paul	1705 Walnut	762.75
R-32	Bolen	1720 N. Union	762.88
R-44 SE	Hagenmaier	1751 N. Union	758.57 SE
R-44 NW	Hagenmaier	1751 N. Union	757.71 NW
R-58	Pitts	1525 N. Union	765.38
R-60	Miller, Richard	418 W. Jones Rd.	760.41
R-65	Daly, Dave	1716 Fostoria Rd.	757.58
R-72	Walters, Jodi	1802 Bachman	755.09
R-75	Hitchcock, M.L.	4549 Fostoria Rd.	758.05
R-86	Loeffler, Hans	2511 Courtly	752.16
R-87	Ray, John	1989 McCutchenville Rd.	756.28
R-92	Yost, Katherine	4350 N. Seneca Cty Rd 25	761.08
R-103	Vance, Harry	1201 Stoner Rd.	758.85
R-104	Nominee, Bill	727 N. Poplar St.	768.73
R-107	Holt, Mel	440 Ash St.	770.35
R-109	Unknown	915 Main St.	775.03
R-110	Leonard, Terry	838 Walnut St.	772.23
R-111	Rosier, Larry	824 Walnut St.	771.41
R-112	Lawless, Floyd	329 Summit Rd.	777.20
R-113	Hooper, Jeff	617 N. Poplar St.	769.48
R-114	Senn, Paul J.	241 Rock St.	769.96
R-115	Carpenter, David	4917 Fostoria Rd.	763.50
R-116	Mennel	NE corner of SR 199 at Stearns Rd.	754.02
R-117	Across Rd. from NW 10	McCutchenville Rd.	754.02
R-118	James	430 Beech St.	762.99
R-119	Rife, Timothy	258 Thomas St.	767.83
R-120	Dauterman	Across street from 933 Ebersole Blvd.	763.67

TABLE 4-20

GROUNDWATER REFERENCE ELEVATIONS
(COMMERCIAL/INDUSTRIAL WELLS)

Well ID	Owner/Occupant	Address	Reference Elevation
C-1	Norton Manufacturing	112 W. Jones Rd.	758.85
C-2	Chrysler Foundry	N. Main St.	761.20
C-3	Fostoria Industries	N. Main St.	764.59
C-4	Roppe Rubber Co.	N. Union St.	763.49
C-6	Nye Trailer Courts	Fostoria Rd.	759.89
C-9	Beam Electric	4589 N. County Rd. 25	755.72
C-10	Easco Aluminum	Sandusky St.	760.42
C-17	City of Fostoria	City Swimming Pool	772.73
C-18	City of Fostoria	End of Fremont St.	767.01
C-19	City of Fostoria	Reservoir No. 3	781.67
C-20	City of Fostoria	Francis St.	Not Measured
C-21	Ohio Farmer	Findlay St.	Not Measured
C-22	Fostoria Country Club	Independence Ave.	Not Measured
C-23	Atlas Crankshaft	901 S. County Line	780.03
C-24	Union Carbide	Town St.	765.76
C-25	Union Carbide	Town St.	766.30
C-26	Whiteco Chemical		Not Measured
C-28	Seneca Wire		Not Measured

TABLE 4-21

WATER REFERENCE ELEVATIONS
(SURFACE WATERS)

Well ID	Owner/Occupant	Address	Reference Elevation
C-12	Quarry	Reference Elevation	754.91
C-27	Quarry	Surface Elevation	751.66

Appendix J
Chemical Analysis of Soil Samples

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6
Date	8/21/90	8/21/90	8/21/90	8/21/90	8/21/90	8/21/90
Time	1145	1200	1215	1250	1315	1420
CLP Organic Traffic Report Number	ELY74	ELY75	ELY76	ELY77	ELY78	ELY79
CLP Inorganic Traffic Report Number	MELF70	MELF71	MELF72	MELF73	MELF74	MELF75
Compound Detected (values in ug/kg)						
Volatile Organics						
methylene chloride	—	—	75 B	—	—	—
Semivolatile Organics						
1,2,4-trichlorobenzene	—	—	—	—	—	59 J
naphthalene	150 J	—	—	—	—	—
2-methylnaphthalene	250 J	—	—	—	—	180 J
acenaphthylene	280 J	—	—	—	—	150 J
acenaphthene	130 J	—	—	—	—	—
dibenzofuran	180 J	—	—	—	—	89 J
fluorene	220 J	—	—	—	—	—
phenanthrene	2,100	160 J	100 J	110 J	86 J	260 J
anthracene	300 J	—	—	—	—	82 J
fluoranthene	3,100	300 J	190 J	180 J	160 J	580 J
pyrene	3,100	230 J	130 J	130 J	110 J	490 J
benzo[a]anthracene	1,300	120 J	74 J	63 J	62 J	330 J
chrysene	1,900	160 J	120 J	97 J	88 J	470 J
benzo[b]fluoranthene	2,100 J	130 J	120 J	76 J	93 J	650
benzo[k]fluoranthene	2,000 J	170 J	110 J	62 J	78 J	390 J
benzo[a]pyrene	1,600 J	130 J	85 J	65 J	60 J	380 J
indeno[1,2,3-cd]pyrene	1,200 J	78 J	58 J	50 J	42 J	240 J
dibenzo[a,h]anthracene	120 J	—	—	—	—	67 J
benzo[g,h,i]perylene	1,500 J	98 J	66 J	54 J	44 J	270 J
TIC						
Hexadecane (544-76-3)	—	—	700 J	—	—	—

— Not detected.

Table 4-1 (cont.)

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	
Pesticides/PCBs						
4,4'-DDT	38 J	57	80	—	57	
Analyte Detected (values in mg/kg)						
aluminum	12,400	10,300	14,100	18,100	18,100	12
antimony	—	5.6 BNJ	5.3 BNJ	—	—	
arsenic	8	6.6	4.9	5.8	5.3	
barium	151	75.4	89.7	111	122	
beryllium	1.3	0.52 B	1 B	1.2 B	0.79 B	0.
cadmium	0.93 B	0.34 B	0.88 B	0.57 B	0.7 B	0.
calcium	17,000	42,900	5,360	6,570	6,540	41
chromium	21.1	14.7	21.1	24.7	24.6	
cobalt	9.6 B	6.9 B	7.6 B	8.9 B	12.9	11
copper	53.7	25.6	34.8	29.5	33.4	
iron	21,700	16,400	19,700	23,600	26,200	2
lead	103	466	54.9	32.7	39.4	
magnesium	10,200	26,700	4,190	5,410	5,130	1
manganese	397 *J	411 *J	292 *J	236 *J	400 *J	1,1
mercury	0.12	—	—	—	—	
nickel	22.1	13.6	22.7	28.8	26.5	
potassium	1,650	1,050 B	1,930	2,850	2,520	
selenium	0.8 B	—	0.85 BWJ	0.61 BWJ	0.79 B	
sodium	565 B	308 BJ	269 BJ	301 BJ	338 BJ	3
vanadium	27.3 EJ	23.7 EJ	27.8 EJ	30.8 EJ	33.9 EJ	22
zinc	309	94.9	167	168	129	
cyanide	0.8	—	—	—	—	

— Not detected.

Appendix K
Honeywell Production Wells VOC Data Summary

A	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Allied Signal / Honeywell Production Wells VOC DATA SUMMARY					WELL B-1										
2																
3	Sample Date	05/23/84	10/30/84	03/09/85	04/87	09/09/94	04/97	07/98	11/98	02/99	09/99	12/99	01/00	12/00	06/01	12/01
4	~~~~~~~~~~~~~~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~
5	Benzene						740	140	120	97		120				31
6	Chloroform						7	9.3	8.6	6						
7	1,1-Dichloroethane		12.3													
8	1,2-Dichloroethane						18									
9	1,1-Dichloroethylene		17.8		14											
10	Trichloroethylene (TCE)	17000	558	1960	12000	5600	5300	3400	2800	1800		4800	3700	4500	4100	3800
11	trans-1,2-Dichloroethyene	375	447	263												
12	cis-1,2-Dichloroethylene		12.8	23			180	120	120	110		180	200	190	160	140
13	1,2 Dichloroethylene (total)											180	200	190		
14	Tetrachloroethylene (PCE)	21	36.9	25.9			6		5.5	5.8						
15	Toluene				19											
16	1,1,1-Trichloroethane	84	151	44	64		5									
17	Vinyl Chloride															
18	All conc. in parts per billion															
19																
20	Allied Signal / Honeywell Production Wells VOC DATA SUMMARY					WELL B-2										
21	Sample Date	05/23/84	10/30/84	03/09/85	04/87	09/09/94	04/97	07/98	11/98	02/99	09/99	12/99	01/00	12/00	06/01	12/01
22	~~~~~~~~~~~~~~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~
23	Benzene															
24	Chloroform															
25	1,1-Dichloroethane		2.6								3.1					
26	1,2-Dichloroethane															
27	1,1-Dichloroethylene		3.7													
28	Trichloroethylene (TCE)	800	515		1570		520				530	840	620	320	390	
29	trans-1,2-Dichloroethylene	58	63.8	41.3												
30	cis-1,2-Dichloroethylene			16			110				200	190	180	110		
31	1,2 Dichloroethylene (total)				320						200	190	180	110	190	
32	Tetrachloroethylene (PCE)															
33	Toluene				17											
34	1,1,1-Trichloroethane (TCA)	46	31.2		49		15				13				10	
35	Vinyl Chloride															
36	All conc. in parts per billion															

Appendix L
US EPA Ozone Implementation Table

U.S. ENVIRONMENTAL PROTECTION AGENCY

Technology Transfer Network
Ozone Implementation

ALLIED SIGNAL, INC.-AUTOLITE DIVISION

Note: EPA no longer updates this information, but it may be useful for historical purposes. See http://www.epa.gov/ttn/chief/eiinformation.html for emission inventory information.

(39/147/0374010117)

SIC:3694 -Engine electrical equipment

	Annual Tons VOC	NOx	CO	SO2	PM10	Daily Tons-> VOC	NOx
Totals:	3	21	24	0	0	0.0	0.0

Source Classification Code Totals

SCC	Annual Tons VOC	NOx	CO	SO2	PM10	Daily Tons-> VOC	NOx	SCC Description
10200206	3	21	24				0.0	Ext Comb Boilers;Industrial;Bituminous Coal;Underfeed Stoker
Plant Totals	3	21	24					

Point Level

Pointid	Stackid	Annual Tons VOC	NOx	CO	SO2	PM10	Daily Tons-> VOC	NOx	Blr.Cap MMBtu/hr	Heatinput MMBtu/hr	hrs/ day	days/ wk	wks/ yr	hrs/ yr	Seasonal Thruput(%)-> Win	Spr	Sum	Fall	ST/CNTY/Plantid/pointid
B003	73780	1	10	11				0.0			24	7	52	8736	35	25	15	25	39/147/0374010117/B003
B009	73781	2	11	13				0.0			24	7	52	8736	35	25	15	25	39/147/0374010117/B009
Plant Totals		3	21	24															

Segment/Process Level

Pointid	Stackid	Seg.	SCC	Annual Tons VOC	NOx	CO	SO2	PM10	Daily tons-> VOC	NOx	Thruput scc/yr	Max.Rate scc/yr	HeatCon MMBtu/scc	Ash %	Sulfur %	HeatInput MMBtu/hr	SCC Description
B003	73780	1	10200206	1	10	11				0.0			27	5.50	0.74		Ext Comb Boilers;Industrial;Bituminous Coal;Underfeed Stoker
B009	73781	1	10200206	2	11	13				0.0			27	5.50	0.74		Ext Comb Boilers;Industrial;Bituminous Coal;Underfeed Stoker
Plant Totals				3	21	24											

Stack Level

Pointid	Stackid	Eff.Hgt (ft)	Height (ft)	Dia (ft)	Temp (°F)	Flow (cfs)	Velocity (ft/s)	Lat.	Long.	Annual tons VOC	NOx	CO	SO2	PM10	Daily tons-> VOC	NOx
B003	73780	232	165	5.50	370	250.65	10.55	41.1764	83.4175	1	10	11				0.0
B009	73781	235	165	5.50	400	250.65	10.55	41.1764	83.4175	2	11	13				0.0
Plant Totals										3	21	24				

Segment Level - Controls*(Not reported for pollutants with no control)*

Pointid	Stackid	Seg.	SCC	Pollutant	Control Eff.	Rule Eff.	Primary Control	Secondary control

SCC Descriptions

SCC	SCC Descriptions	SCC Units
10200206	Ext Comb Boilers;Industrial;Bituminous Coal;Underfeed Stoker	Tons Burned

1996 NET Plant Detail Report 07/13/01
Return to: State/Plant Emission Home Page

Appendix M
Fostoria Population Figures & Maps

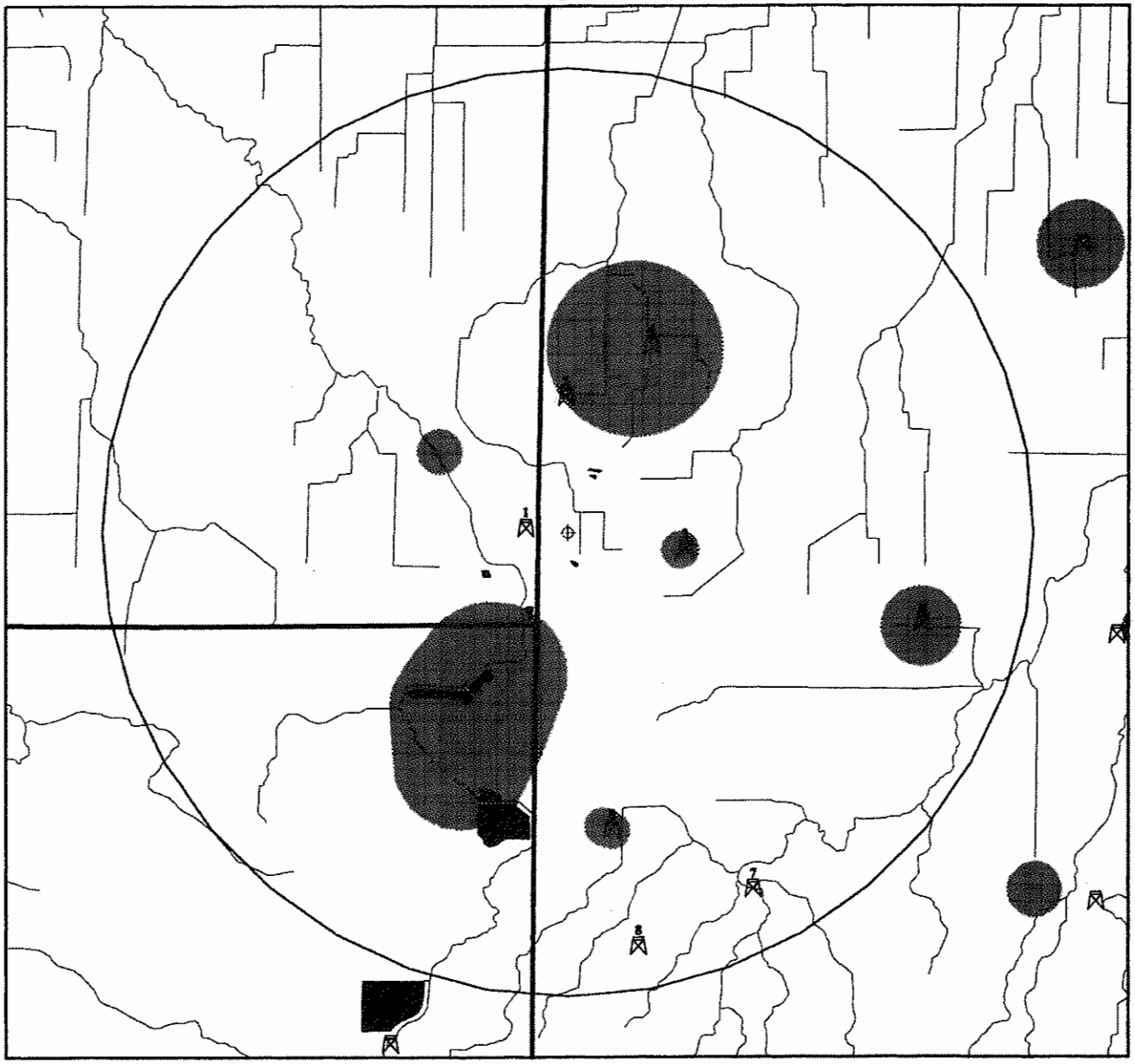
OhioEPA

Division of Emergency & Remedial Response

GEOGRAPHIC INFORMATION SYSTEM 4-MILE RADIUS MAP

PUBLIC GROUND WATER SYSTEMS

Allied Signal-Fostoria



Site

Public Ground Water Systems
- Community
- Non-Community/Transient
- Non-Community/Non-Transient

Rivers & Streams
Wellhead Protection Area
Lakes & Ponds
Limit of Radius From Site
County Boundaries

1 0 1 Miles

N

Allied Signal -- Fostoria: Public Water Supplies -- Ground Water and Surface Water Sources

GROUND WATER SYSTEMS

ID	PWS_ID	SYS_TYPE	NAME	ADDRESS	CITY	STATE	DISTANCE	POPULATION
1	8740712	Non-Community/Transient	WIGWAM RESTAURANT	2491 MCCUTCHENVILLE RD	FOSTORIA	OH	0.3553	38
2	7447712	Non-Community/Transient	WEBER RENTAL HALL	911 LINCOLN AVE	FOSTORIA	OH	1.0178	301
3	7434712	Non-Community/Transient	GRACE UN CH OF CHRIST	P O BOX 1277	FOSTORIA	OH	1.1675	160
4	7400712	Community	FOSTORIA MOBILE ESTATES	5473 N TWP RD 63,P.O.BOX 101	FOSTORIA	OH	1.7558	195
5	7401212	Community	PELTON MOBILE HOME PARK	12400 W AXELINE RD - LOT 1463	FOSTORIA	OH	2.6031	225
6	7448712	Non-Community/Non-Transient	CALIBER AUTOMOTIVE TRANS	3101 NORTH TWP. ROAD 47	FOSTORIA	OH	3.1473	25
7	7435912	Non-Community/Transient	LOUDON MEADOWS GOLF COURSE	11072 COLUMBUS AVE. W SR 18	FOSTORIA	OH	3.4708	154
8	7434012	Non-Community/Transient	FOSTORIA UNITED SPORTSMEN	115 US 23N, P.O.BOX 611	FOSTORIA	OH	3.6249	50

SURFACE WATER SYSTEMS

ID	PWS_ID	SYS_TYPE	NAME	ADDRESS	CITY	STATE	DISTANCE	POPULATION
1	7400411	Community	FOSTORIA, CITY OF	PO BOX 1007	FOSTORIA	OH	2.3482	15062
2	7400614	Community	OH/AM WATER-TIFFIN DISTR	DRAWER T	TIFFIN	OH	12.9716	21000
3	8701611	Community	NORTH BALTIMORE, VLG OF	205 NORTH MAIN STREET	N. BALTIMORE	OH	13.3339	3229
4	3200111	Community	FINDLAY, CITY OF	110 NORTH BLANCHARD STREET	FINDLAY	OH	13.4511	40000

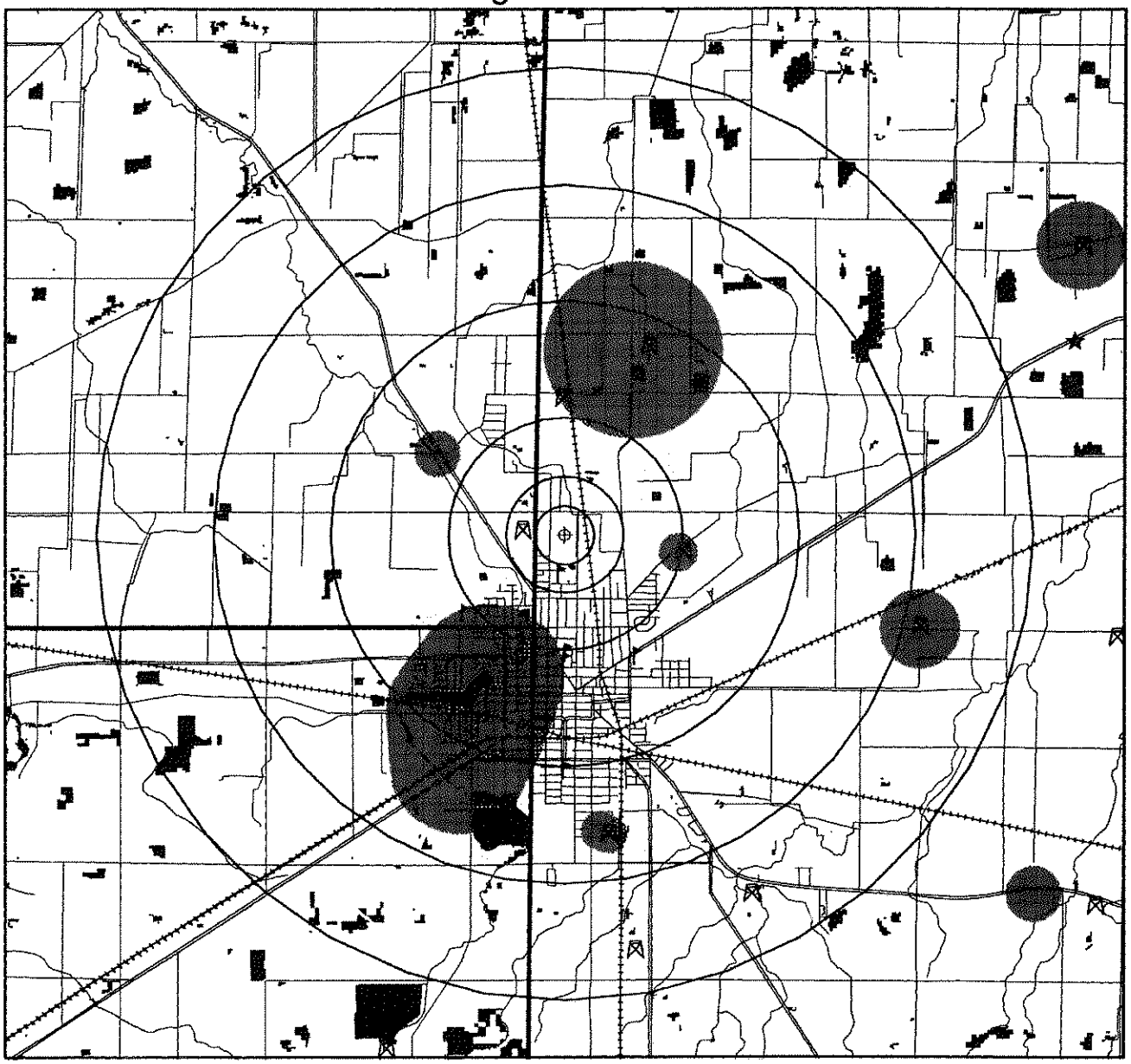
OhioEPA

Division of Emergency & Remedial Response

GEOGRAPHIC INFORMATION SYSTEM 4-MILE RADIUS MAP

Seneca County

Allied Signal -- Fostoria



- Site
- School
- Hospital
- Public Surface Water Systems
- Public Ground Water Systems
- US Endangered/Threatened Species
- Ohio Endangered/Threatened Species
- Wetland Area
- Lakes & Ponds
- Wellhead Protection Area
- Limit of Radius From Site
- County Boundaries
- Rivers & Streams
- Railroad
- State and Federal Highways
- Local Roads
- Municipal Roads

N

2 0 2 Miles

Allied Signal -- Fostoria: Natural Heritage Data

ID	STATUS	DISTANCE	SCI_NAME	COM_NAME
1	State Endangered	4.6578	LANIUS LUDOVICIANUS	LOGGERHEAD SHRIKE
2	State Threatened	7.3052	CAREX CRUS-CORVI	RAVEN-FOOT SEDGE
3	State Threatened	7.7675	HEDEOMA HISPIDA	ROUGH PENNYROYAL
4	State Threatened	7.7752	CELTIS TENUIFOLIA	DWARF HACKBERRY
5	State Threatened	8.4925	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
6	State Endangered	9.2927	CAREX ALOPECOIDEA	NORTHERN FOX SEDGE
7	State Threatened	9.7975	HEDEOMA HISPIDA	ROUGH PENNYROYAL
8	State Threatened	10.0992	CONYZA RAMOSISSIMA	BUSHY HORSEWEED
9	State Threatened	11.9884	CLEMMYS GUTTATA	SPOTTED TURTLE
10	State Threatened	12.0865	BETULA PUMILA	SWAMP BIRCH
11	State Threatened	12.1202	CLEMMYS GUTTATA	SPOTTED TURTLE
12	State Threatened	12.2983	CELTIS TENUIFOLIA	DWARF HACKBERRY
13	State Threatened	12.3040	IXOBRYCHUS EXILIS	LEAST BITTERN
14	State Endangered	12.3040	ELEOCHARIS PAUCIFLORA	FEW-FLOWERED SPIKE-RUSH
15	State Endangered	12.3040	POTAMOGETON GRAMINEUS	GRASS-LIKE PONDWEED
16	State Endangered	12.3156	FUNDULUS DIAPHANUS MENONA	WESTERN BANDED KILLIFISH
17	State Endangered	12.4108	CYPRIPEDIUM CANDIDUM	WHITE LADY'S-SLIPPER
18	State Threatened	12.4364	ARABIS HIRSUTA VAR ADPRESSI	SOUTHERN HAIRY ROCK CRESS
19	State Threatened	12.4364	CELTIS TENUIFOLIA	DWARF HACKBERRY
20	State Threatened	12.4364	ANEMONE CYLINDRICA	PRAIRIE THIMBLEWEED
21	State Threatened	12.5993	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
22	State Endangered	12.8707	FUNDULUS DIAPHANUS MENONA	WESTERN BANDED KILLIFISH
23	State Threatened	12.9851	MOXOSTOMA VALENCIENNESI	GREATER REDHORSE
24	State Endangered	13.0773	FUNDULUS DIAPHANUS MENONA	WESTERN BANDED KILLIFISH
25	State Threatened	13.4956	CELTIS TENUIFOLIA	DWARF HACKBERRY
26	State Endangered	13.5192	GOMPHUS EXTERNUS	PLAINS CLUBTAIL
27	State Threatened	13.5285	CELTIS TENUIFOLIA	DWARF HACKBERRY
28	State Endangered	13.6290	TOXOLASMA LIVIDUS	PURPLE LILLIPUT
29	State Threatened	13.7503	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
30	State Threatened	13.8334	BETULA PUMILA	SWAMP BIRCH
31	State Threatened	13.8655	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER
32	State Threatened	13.9605	DESCURAINIA PINNATA	TANSY MUSTARD
33	Federally Threatened	13.9660	HALIAEETUS LEUCOCEPHALUS	BALD EAGLE
34	State Threatened	13.9973	ANDROSACE OCCIDENTALIS	WESTERN ROCK-JASMINE
35	State Threatened	13.9973	CONYZA RAMOSISSIMA	BUSHY HORSEWEED
36	State Endangered	14.0266	LANIUS LUDOVICIANUS	LOGGERHEAD SHRIKE
37	State Threatened	14.0752	HEDEOMA HISPIDA	ROUGH PENNYROYAL
38	State Threatened	14.0993	CELTIS TENUIFOLIA	DWARF HACKBERRY
39	State Endangered	14.4130	FUNDULUS DIAPHANUS MENONA	WESTERN BANDED KILLIFISH
40	State Threatened	14.4477	ARABIS LYRATA	LYRE-LEAVED ROCK CRESS
41	Federally Threatened	14.4550	HALIAEETUS LEUCOCEPHALUS	BALD EAGLE
42	State Threatened	14.4694	CONYZA RAMOSISSIMA	BUSHY HORSEWEED
43	State Threatened	14.6157	ELEOCHARIS COMPRESSA	FLAT-STEMMED SPIKE-RUSH
44	State Threatened	14.7612	ARABIS HIRSUTA VAR ADPRESSI	SOUTHERN HAIRY ROCK CRESS
45	State Endangered	14.8367	FUNDULUS DIAPHANUS MENONA	WESTERN BANDED KILLIFISH

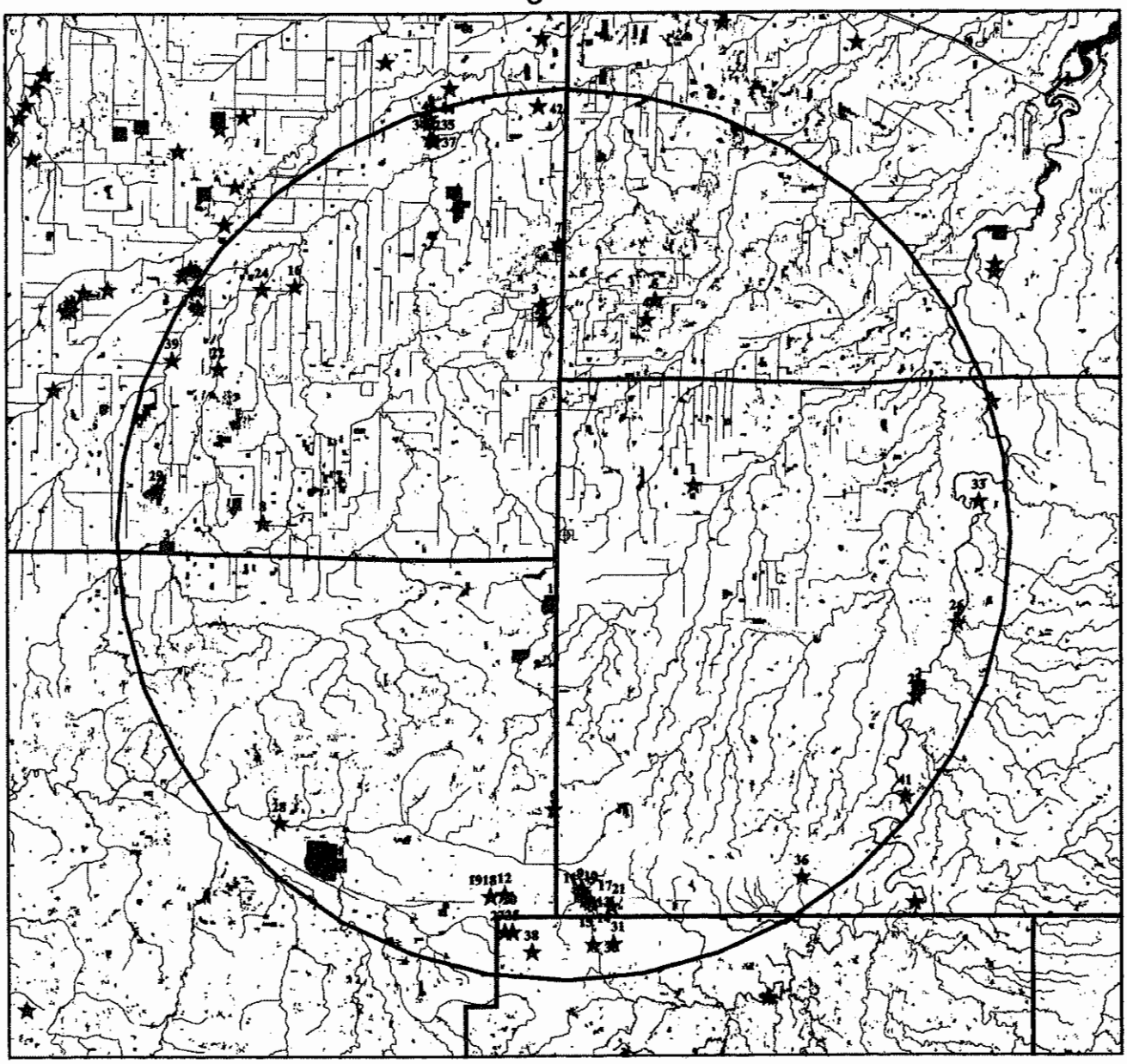
OhioEPA

Division of Emergency & Remedial Response

GEOGRAPHIC INFORMATION SYSTEM 15-MILE RADIUS MAP

NATURAL HERITAGE DATA

Allied Signal-Fostoria



⊕ Site

★ US Endangered/Threatened Species

★ Ohio Endangered/Threatened Species

Public Surface Water Systems

- Community
- Non-Community/Transient
- Non-Community/Non-Transient

Rivers & Streams

Wetland Area

Lakes & Ponds

Limit of Radius From Site

County Boundaries

4 0 4 8 Miles

N

Allied Signal -- Fostoria: Population Map

RADIUS (IN	TOTAL	WHITE	BLACK	INDIAN	ASIAN	HAWAII_PAC	OTHER	HOUSING
3.00 - 4.00	**2593**	2424	61	6	8	0	94	1004
2.00 - 3.00	**4598**	4167	180	14	16	0	221	1807
1.00 - 2.00	**6730**	5907	355	14	33	0	421	2702
0.50 - 1.00	**2458**	2180	128	3	12	0	134	999
0.25 - 0.50	**510**	390	62	0	3	0	54	197
0.00 - 0.25	**247**	168	43	0	1	0	35	93
TOTALS	**17136**	15236	829	37	73	0	959	6802

NOTE: 3,215 people are within a 1-mile radius of the center of the site.