



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

HRE-8J

September 8, 1993

Mr. Kurt Blizzard
Senior Environmental Engineer
GMC Oldsmobile Division
920 Townsend
Lansing, Michigan 48921

Re: Visual Site Inspection
General Motors Corporation
Buick-Oldsmobile-Cadillac Group
Lansing Automotive Division-Plant 5
Lansing, Michigan
MID 980 700 843

Dear Mr. Blizzard:

As indicated in the letter of introduction sent to you on January 3, 1992, the U.S. Environmental Protection Agency is enclosing a copy of the final Preliminary Assessment/Visual Site Inspection (PA/VSI) report for the referenced facility. The executive summary and conclusions and recommendations sections have been withheld as Enforcement Confidential.

If you have any questions, please call Francene Harris at (312) 886-2884.

Sincerely yours,

A handwritten signature in cursive script that reads "Francene M. Harris for".

Kevin M. Pierard, Chief
Minnesota/Ohio Technical Enforcement Section
RCRA Enforcement Branch

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233 North Michigan Avenue
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**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**GENERAL MOTORS CORPORATION,
BUICK-OLDSMOBILE-CADILLAC GROUP,
LANSING AUTOMOTIVE DIVISION - PLANT 5
LANSING, MICHIGAN
MID 980 700 843**

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

Work Assignment No.	:	C05087
EPA Region	:	5
Site No.	:	MID 980 700 843
Date Prepared	:	May 19, 1992
Contract No.	:	68-W9-0006
PRC No.	:	009-C05087MI2V
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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1
2.0 FACILITY DESCRIPTION	3
2.1 FACILITY LOCATION	3
2.2 FACILITY OPERATIONS	3
2.3 WASTE GENERATING PROCESSES	6
2.4 HISTORY OF DOCUMENTED RELEASES	12
2.5 REGULATORY HISTORY	13
2.6 ENVIRONMENTAL SETTING	14
2.6.1 Climate	15
2.6.2 Flood Plain and Surface Water	15
2.6.3 Geology and Soils	15
2.6.4 Ground Water	16
2.7 RECEPTORS	17
3.0 SOLID WASTE MANAGEMENT UNITS	18
4.0 AREAS OF CONCERN	27
5.0 CONCLUSIONS AND RECOMMENDATIONS	28
REFERENCES	32
<u>Attachment</u>	
A EPA PRELIMINARY ASSESSMENT FORM 2070-12	
B VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS	
C VISUAL SITE INSPECTION FIELD NOTES	

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	SOLID WASTE MANAGEMENT UNITS (SWMU)	7
2	SOLID WASTES	9
3	SWMU AND AOC SUMMARY	29

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	FACILITY LOCATION	4
2	FACILITY LAYOUT	8

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all visible SWMUs, identifying evidence of releases, initially identifying potential sampling parameters and locations, if needed, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the General Motors Corporation (GMC), Buick-Oldsmobile-Cadillac Group, Lansing Automotive Division - Plant 5 (Plant 5) facility in Lansing, Michigan. The PA was completed on February 4, 1992. PRC gathered and reviewed information from the Michigan Department of Natural Resources (MDNR) and from EPA Region 5 RCRA files. The VSI was conducted on February 10, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. Ten SWMUs and one AOC were identified at the facility.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 14 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

The GMC - Plant 5 facility is located at 2901 South Canal Road in Lansing, Eaton County, Michigan (latitude 42°42'10"N and longitude 84°39'22"W), as shown in Figure 1. The facility occupies 281 acres in a mixed use area.

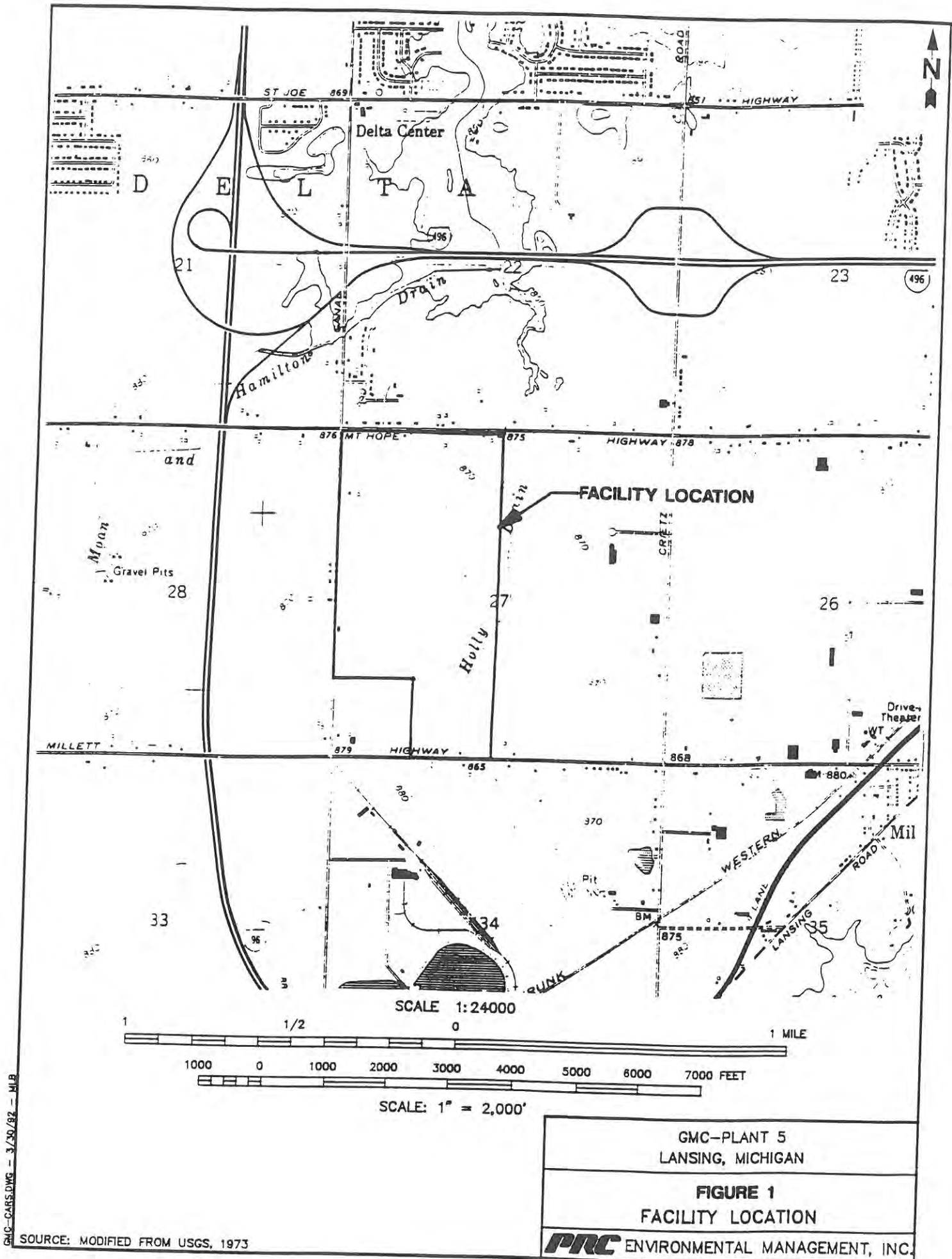
The GMC - Plant 5 facility is bordered on the north by residential and undeveloped areas; on the west by mixed use residential, commercial, and agricultural areas; on the south by an agricultural area and a truck maintenance facility; and on the east by undeveloped areas and Central Transport, a truck transportation facility.

2.2 FACILITY OPERATIONS

The GMC - Plant 5 facility manufactures components for four-cylinder engines. Rough engine blocks are delivered by truck to the facility. Manufacturing processes include engine block, connecting rod, bearing cap, camshaft, crankshaft, and cylinder machining. Four-cylinder engines to be installed in automobiles at other GMC facilities are assembled at the GMC - Plant 5 facility. From 1981 to 1985, 3M mastic was used in valve cover, intake manifold, and water outlet sealant processes. The facility currently uses Loctite™ adhesive instead of 3M mastic.

The facility has operated at its current location since 1981 and employs about 800 people. The facility consists of a 1,076,375-square-foot, main machining, assembly, and office building (the main building); a 2,925-square-foot, flammable liquids storage building; a 20,736-square-foot, wastewater treatment building; and maintenance, equipment storage, and security buildings. A parking lot is located west of the main building. Two retention ponds for storm water collection lie north and east of the main building. Undeveloped land lies north and south of the facility's main building.

The GMC - Plant 5 facility has ten SWMUs. The Hazardous Waste Accumulation Area (SWMU 1) is in the south part of the flammable liquids storage building and stores hazardous waste generated during adhesive application and routine painting operations. Drums containing raw product are stored in the northwest corner of the flammable liquids storage building.



GMC-CARS.DWG - 3/30/82 - MJB

SOURCE: MODIFIED FROM USGS, 1973

The Empty Drum Storage Area (SWMU 2) is outdoors immediately west of the flammable liquids storage building. This SWMU stores empty adhesive drums and other drums containing residual product material.

The Wastewater Treatment System (WWTS) (SWMU 3) is in Building 561 in the eastern part of the facility. The WWTS directs wastewater and oily waste through a series of tanks for physical and chemical treatment. Water is separated from soluble oils and solids and discharged to the Delta Township Wastewater Treatment System. Soluble oils in the form of waste oily sludges are extracted and reclaimed by General Oil of Redford, Michigan. Solids in the form of filter cake are stored in a 20-cubic-yard WWTS Filter Cake Roll-Off Box (SWMU 4) in the south end of Building 561. Waste filter cake is manifested as nonhazardous waste and is disposed of at Granger Landfill in Lansing, Michigan.

Fifty-three 1-cubic-yard gondolas collect machining residue generated during machining of rough engine blocks and other engine components. Machining Residue Satellite Accumulation Areas (SAAs) (SWMU 5) are located at various points along the engine block and component machining lines in the north half of the main building. SAAs in this area consist of gondolas. Machined parts are steam cleaned to remove dirt and lubricant oil. Waste residue and filter paper are collected in gondolas directly underneath steam-cleaning dragout units. Full gondolas are transported to a 20-cubic-yard machining residue dumpster in the Salvage Dock (SWMU 6) at the north end of the main building.

Forty-seven Pump Back Reservoirs (SWMU 7) collect waste coolant and lubricating oil from concrete trenches under engine block and component machining lines in the north half of the main building. Waste coolant and lubricating oil is then directed to the WWTS (SWMU 3).

A total of 166 Drip Pans (SWMU 8) are located under hydraulic units in the main building. Drip pans collect minor drips and leaks from hydraulic units. A vacuum truck transfers waste hydraulic oil to the WWTS (SWMU 3).

An Adhesive Applicator Drip Pan and Box (SWMU 9) is under the Loctite™ adhesive application unit in the valve cover, intake manifold, and water outlet adhesive application area in the main building. Waste Loctite™ adhesive is transferred to general refuse containers and disposed of at a nonhazardous waste landfill.

A Waste Paint Thinner SAA (SWMU 10) is in the maintenance spray paint room in the northwest corner of the main building. The Waste Paint Thinner SAA consists of a covered

55-gallon drum. When full, the 55-gallon drum is transferred to the Hazardous Waste Accumulation Area (SWMU 1) for storage.

Scrap metal and other miscellaneous machining wastes are stored in 12- by 12- by 10-foot wooden scrap metal bins in the Salvage Dock (SWMU 6). GMC - Plant 5 sells scrap metal to scrap recycling facilities.

Routine machine maintenance occurs in the WWTS maintenance room. A parts cleaner consisting of a pan draining into a 55-gallon drum is managed by Everclean, Inc.

Facility SWMUs are identified in Table 1. The facility layout, including SWMUs and the AOC, is shown in Figure 2. GMC - Plant 5 began operation in 1981. From 1981 to 1985, the facility manufactured six-cylinder diesel engines. In April 1985, the facility ceased six-cylinder diesel engine production and retooled production lines. In January 1987, GMC - Plant 5 began production of four-cylinder gasoline engines. Before 1981, the current facility property consisted of undeveloped farmland. GMC has owned and operated the GMC - Plant 5 facility since facility operations began.

2.3 WASTE GENERATING PROCESSES

The GMC - Plant 5 facility currently generates two hazardous and 11 nonhazardous waste streams (see Table 2). The hazardous waste streams generated at the facility consists of waste paint thinner and spent paint filters (D001, D007, and D008). Nonhazardous waste streams generated at the facility include machining residue, oily rags and used filter paper, waste lubricating and coolant oil, waste hydraulic oil, waste filter cake, waste Loctite™ drum liners, random Loctite™ drips, waste paint thinner-contaminated rags, scrap metal, floor sweepings, and empty drums. From 1981 to 1985, the facility generated two additional waste streams and treated a third on site. These wastes include: 3M mastic (D001), used as a sealant in the adhesive application process; waste 1,1,1-trichloroethane (F001), used as in parts degreasing and precision measuring operations on a one-time basis; waste oily sludge (D002, D007, D008, and D009), which was generated at GMC - Plants 1 and 3. The sludge was transported to GMC - Plant 5 for treatment.

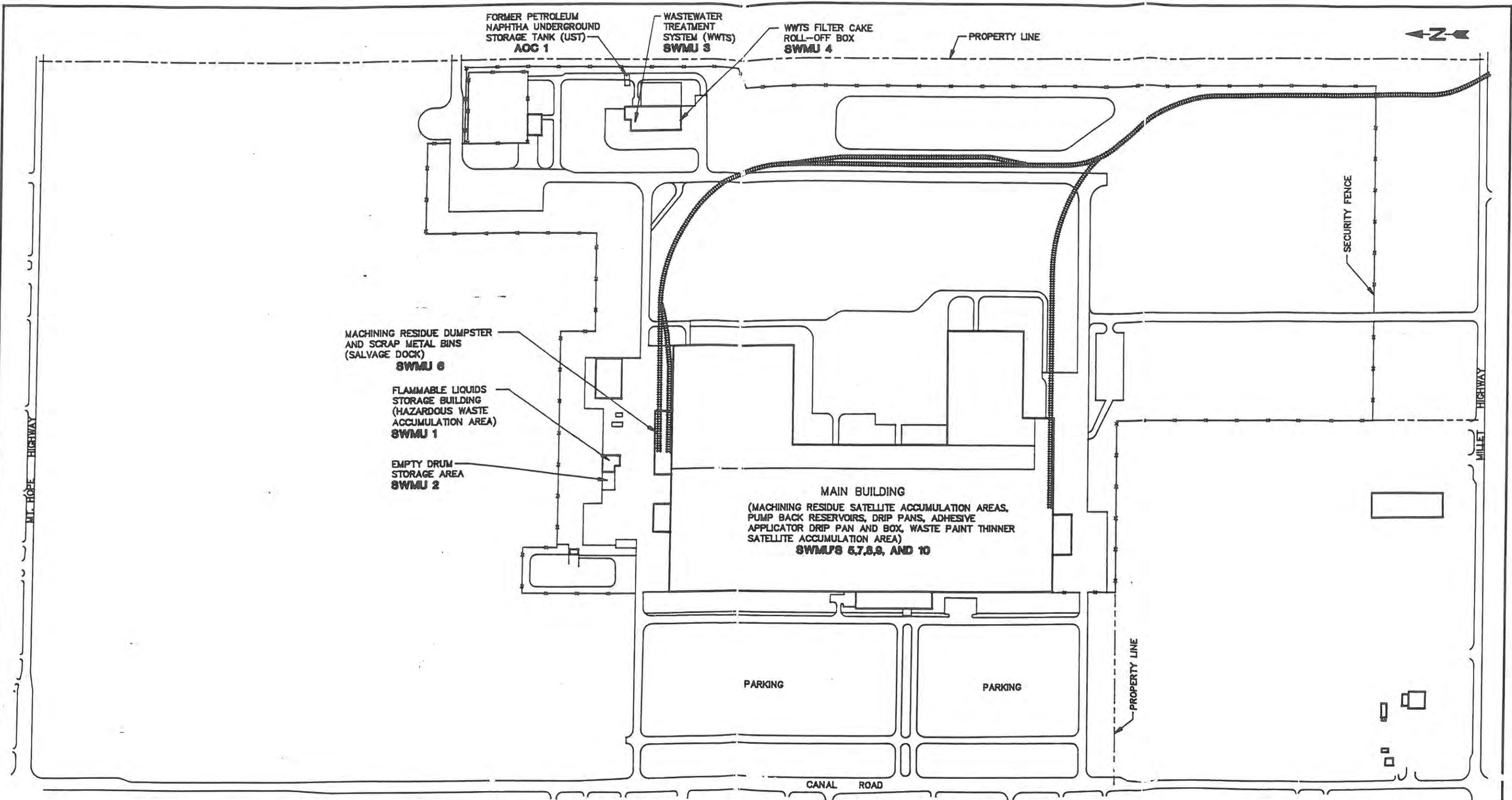
Painting of sheet metal and other engine components, as well as miscellaneous maintenance painting, occurs in a spray paint booth in the northwest corner of the main building. Waste paint thinner (D001, D007, and D008) generated from cleaning paint guns and spent paint filters (D001, D007, and D008) are accumulated in the Waste Paint Thinner SAA (SWMU 10). This SWMU consists of a covered 55-gallon drum. Full drums are transferred to the Hazardous

TABLE 1
SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Hazardous Waste Accumulation Area	Yes	Closed - less than 90-day accumulation
2	Empty Drum Storage Area	No	Active
3	Wastewater Treatment System (WWTS)	No	Active
4	WWTS Filter Cake Roll-Off Box	No	Active
5	Machining Residue Satellite Accumulation Areas (Machining Residue SAAs)	No	Active
6	Salvage Dock	No	Active
7	Pump Back Reservoirs	No	Active
8	Drip Pans	No	Active
9	Adhesive Applicator Drip Pan and Box	No	Active
10	Waste Paint Thinner SAA	No	Active

Note:

* A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.



GMC-PLANT 5
LANSING, MICHIGAN

FIGURE 2
FACILITY LAYOUT

SCALE: 1 inch = 352 feet

PMC ENVIRONMENTAL MANAGEMENT, INC.

TABLE 2
SOLID WASTES

<u>Waste/EPA Waste Code</u>	<u>Source</u>	<u>Primary Management Unit*</u>
Waste Paint Thinner and Spent Paint Filters / D001, D007, and D008	Painting operations	SWMUs 1 and 10
Machining Residue / Not applicable (NA)**	Machining operations	SWMUs 5 and 6
Oily Rags and Used Filter Paper / NA	Machining operations	SWMUs 5 and 6
Waste Lubricating and Coolant Oil/NA	Machining operations	SWMUs 3 and 7
Waste Hydraulic Oil / NA	Machining operations	SWMUs 3 and 8
Waste Filter Cake / NA	WWTS filter press	SWMU 4
Waste Loctite™ Drum Liners / NA	Loctite™ adhesive application unit	SWMU 1
Random Loctite™ Drips / NA	Loctite™ adhesive application unit	SWMU 9
Waste Paint Thinner-Contaminated Rags / NA	Painting operations	SWMU 1
Scrap Metal / NA	Machining operations	SWMU 6
Floor Sweepings / NA	Routine housekeeping	SWMU 6
Empty Drums / NA	Machining operations and Loctite™ adhesive application	SWMU 2
Waste 3M Mastic / D001	Adhesive application	SWMU 9
Waste 1,1,1-trichloroethane / F001	Parts degreasing operations	SWMU 1
Waste Oily Sludge / D002, D007, D008, and D009	GMC - Plants 1 and 3	SWMU 3

Notes:

- * Primary management unit refers to a SWMU that currently manages or formerly managed the waste.
- ** Not applicable (NA) designates nonhazardous waste

Waste Accumulation Area (SWMU 1). GMC - Plant 5 generated approximately three 55-gallon drums of waste paint thinner and spent paint filters each month. Waste paint thinner and spent paint filters are manifested to Petrochem of Detroit, Michigan, for fuel blending and disposal.

Rough engine blocks and other engine components are machined before final engine assembly. Machining is a process that consists of steam cleaning engine components to remove dirt, oil, and other debris, then filing the rough edges off and polishing the components for final assembly. Machining residue consists of metal filings, residual oil, and oily water, which are gathered in a dragout unit and filtered. Machining residue and oily rags and used filter paper, which are also generated from machining operations, are collected in 1-cubic-yard Machining Residue SAAs (SWMU 5) known as gondolas. Fifty-three gondolas are located directly under the dragout units. Full gondolas are transported to the Salvage Dock (SWMU 6) and emptied into a plastic-lined, 20-cubic-yard roll-off box for disposal at the Granger Landfill in Lansing, Michigan.

Machining lines are lubricated and cooled by a lubricating and coolant oil on a continual basis in a closed-loop system. Waste lubricating and coolant oil is deposited in a trench under each machining line and directed to Pump Back Reservoirs (SWMU 7) and pumped in above and underground pipelines to the WWTS (SWMU 3) for treatment. Treated lubricating and coolant oil is reclaimed by General Oil in Redford, Michigan.

Waste hydraulic oil from hydraulic units in the main building accumulate in Drip Pans (SWMU 8). One-hundred-sixty-six Drip Pans are located directly underneath hydraulic units. Waste hydraulic oil is removed by a vacuum truck and transferred to the WWTS (SWMU 3) for treatment.

Waste filter cake is generated in a WWTS filter press and deposited into a plastic-lined, 20 cubic-yard WWTS Filter Cake Roll-Off Box (SWMU 4) in the south end of the WWTS building.

Engine components, including valve covers, intake manifolds, and water outlets, are sealed with Loctite™ sealant at the Loctite™ adhesive application unit in the main building. A plastic-lined, 55-gallon drum containing Loctite™ product is next to this unit. Tubing connects the adhesive applicator with a pressure pump fitted inside the drum. The downward movement of the pressure pump directs Loctite™ adhesive to the adhesive application unit. When the drum is empty, the liner containing residual Loctite™ adhesive is removed and transferred to the Hazardous Waste Accumulation Area (SWMU 1) for storage in 55-gallon drums. Random Loctite™ drips are generated in very small amounts and are directed to the Adhesive Applicator

Drip Pan and Box (SWMU 9) directly under the Loctite™ adhesive application unit. The box is periodically transferred to general refuse containers for disposal at a nonhazardous waste landfill.

Rags are used to clean minor spills of paint thinner during paint equipment cleaning operations. Waste paint thinner-contaminated rags are stored in the Hazardous Waste Accumulation Area (SWMU 1).

Varying amounts of scrap metal are generated during engine block and component machining in the main building. Scrap metal deemed unusable by the facility is stored in open 12- by 12- by 10-foot wooden storage pits in the Salvage Dock (SWMU 6). Scrap metal is sold to scrap metal recycling facilities on a regular basis. Floor sweepings generated during routine housekeeping activities are also stored in wooden storage pits in SWMU 6 before disposal at the Granger Landfill in Lansing, Michigan.

Empty drums are generated during machining operations and from Loctite™ adhesive application. Empty drums are transferred to the Empty Drum Storage Area (SWMU 2) and are reclaimed by DeWitt Barrel in Grand Rapids, Michigan.

From 1981 to 1985, the GMC - Plant 5 generated two hazardous waste streams and treated a third on site. These waste streams include waste 3M mastic, waste 1,1,1-trichloroethane, and waste oily sludge. The facility formerly used 3M mastic (D001) as a sealant on valve covers, intake manifolds, and water outlets. Random 3M mastic drips were directed to the Adhesive Applicator Drip Pan and Box (SWMU 9). Raw 3M mastic was contained in unlined 55-gallon drums next to the adhesive application unit. Empty drums containing residual 3M mastic were transferred to the Empty Drum Storage Area (SWMU 2). The box was periodically transferred to general refuse containers and disposed of at a nonhazardous waste landfill.

Engine parts were cleaned in a parts degreasing operation before precision measuring with 1,1,1-trichloroethane (F001). Waste 1,1,1-trichloroethane was generated in small amounts and stored in the Hazardous Waste Accumulation Area (SWMU 1).

GMC - Plant 5 formerly treated waste oily sludge (D002, D007, D008, and D009) in the WWTS (SWMU 3) generated at GMC - Plants 1 and 3 in Lansing, Michigan. Waste oil arrived at the facility in tanker trucks and was stored in two 30,000-gallon, 20- by 20-foot concrete underground storage tanks (UST) called waste oily sludge holding tanks. The waste oily sludge holding tanks were constructed of 2-foot-thick reinforced concrete and were located under the WWTS building. The facility received approximately 8,500 tons of waste oily sludge per year for

treatment. The sludge was heated in three 7,000-gallon cookers, then directed to two 5,000-gallon tanks for acidification to a pH of three and transferred to two 5,000-gallon caustic oil tanks for pH adjustment and centrifuge. Separated oil was either used at the facility for fuel or was sold to oil reclaiming facilities. Oil deemed unfit for reuse was retreated and sold to oil reclaimers. Solids generated from retreated oil were sent to the Granger Landfill in Lansing, Michigan. Water generated during waste oily sludge treatment was treated in three 7,000-gallon cookers, then transferred to two 10,000-gallon storage tanks before reuse or discharge into the Delta Township Wastewater Treatment System.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the GMC - Plant 5 facility.

The GMC - Plant 5 facility installed a 5,000-gallon steel UST (Tank 13) in 1981 for the storage of a product containing 54 percent petroleum naphtha. Tank 13 was in the eastern part of the facility, northeast of the WWTS (SWMU 3). The tank was removed on September 12, 1990, and the facility conducted a phased facility investigation in the vicinity of the tank. One composite soil sample collected from the UST's four excavation walls and one water sample collected from the UST's excavation floor were analyzed for purgeable hydrocarbons. The result of the analyses indicated the presence of toluene (1.8 micrograms per kilogram - $\mu\text{g/kg}$) and xylene (3.7 $\mu\text{g/kg}$) in the soil sample and xylene (100 micrograms per liter - $\mu\text{g/L}$) and ethylbenzene (4.1 $\mu\text{g/L}$) in the water sample. A soil boring was advanced in the vicinity of Former Petroleum Naphtha UST (AOC 1) and stained soil was observed 9 to 10 feet below ground surface (bgs). The soil was sampled and analytical results indicated the presence of xylene (2.0 $\mu\text{g/kg}$) and total petroleum hydrocarbons (TPH) (2,000 milligrams per kilogram - mg/kg). Ground-water monitoring wells were installed in spring 1991 to define the nature and extent of ground water contamination. Results of ground-water sample analysis indicated the presence of methylene chloride (0.0067 mg/L).

GMC - Plant 5 decided that no additional corrective action was necessary at the facility. The Michigan Department of Natural Resources (MDNR) stated that further investigation is necessary to determine the full horizontal and vertical extent of soil and ground-water contamination at the facility. MDNR requested that additional monitoring wells be installed to determine ground-water flow direction and contamination in shallow ground water under the facility. MDNR also stated that additional ground-water samples should be collected to verify methylene chloride contamination in ground water (MDNR, 1991b). To date, no further corrective action has been taken at the facility.

On May 16, 1991, an unknown quantity of diesel gasoline was released from a 4,000-gallon steel fuel tank in the tank farm. The release was contained in a bermed area and released diesel fuel was drummed and transferred to the Hazardous Waste Accumulation Area (SWMU 1).

2.5 REGULATORY HISTORY

The GMC - Plant 5 facility submitted a Notification of Hazardous Waste Activity to EPA on August 7, 1980 (GMC - Plant 5, 1980a). The facility submitted a RCRA Part A permit application on November 14, 1980 (GMC - Plant 5, 1980b). This application listed the following process codes and capacities: 11,000 gallons container storage (S01); 6,000 gallons of tank storage associated with the WWTS (SWMU 3) (S02); 576,000 gallons per day of wastewater treatment. The application listed the following wastes: F001 (6 tons per year), D001 (10 tons per year), F017 (270 tons per year), and F018 (300 tons per year).

In spring 1983, waste oily sludge generated at GMC - Plants 1 and 3 and treated by GMC - Plant 5 was found to be hazardous. The facility submitted a revised Part A permit application on June 2, 1983. This application listed process codes for container storage, tank storage, and waste oil treatment (S01, S02, and T04) for F001, D001, D007, and D008 wastes (GMC - Plant 5, 1983a). GMC - Plant 5 submitted a Part B permit application on November 4, 1983 (GMC - Plant 5, 1983b). The Part B permit application listed one hazardous waste container storage area for sixteen 55-gallon drums of 3M mastic waste (D001); paint thinner waste (D001, D007, and D008); waste 1,1,1-trichloroethane (F001); and two 30,000-gallon USTs used to store waste oily sludge (D002, D007, D008, and D009) generated in wastewater treatment processes.

The facility submitted a closure plan for the Hazardous Waste Accumulation Area (SWMU 1) and its WWTS waste oily sludge holding tanks to MDNR on July 5, 1983 (GMC - Plant 5, 1983c). On December 18, 1987, the facility submitted a second closure plan instead of a hazardous waste operating license application to MDNR (GMC - Plant 5, 1987). At this time, the facility stated that the Hazardous Waste Accumulation Area (SWMU 1) was to be used for less than 90-day accumulation of hazardous waste upon completion of closure activities. The facility also stated that the WWTS waste oily sludge holding tanks were to be used for the accumulation of nonhazardous waste oil upon completion of closure activities (GMC - Plant 5, 1987). MDNR approved the GMC - Plant 5 closure plan on August 22, 1988. The facility submitted a 30-day, notification-before-starting-work letter to MDNR on July 13, 1990 (GMC - Plant 5, 1990a). At this time, the facility stated that closure activities would begin on August 9, 1990, and would be completed before the end of September, 1990. On February 19, 1991, MDNR released GMC -

Plant 5 from financial capability requirements for closure of the WWTS waste oily sludge holding tanks and the Hazardous Waste Accumulation Area (SWMU 1) and approved closure of these units (MDNR, 1991a).

The facility is currently regulated as a large-quantity generator accumulating hazardous wastes for less than 90 days.

In the past, GMC - Plant 5 had several RCRA compliance problems. The violations, observed during a series of MDNR inspections that took place from 1982 through 1989, mainly consisted of deficiencies in paperwork, including inspection logs, training records, contingency plans, and land disposal restriction notifications. All violations were resolved and no orders were issued as a result of the inspections (MDNR, 1982; 1983; 1984; 1985; 1986; 1987b; 1988; and 1989).

The GMC - Plant 5 facility currently operates seven units regulated by air permits. These units include the following: 15 oil mist collectors serving wet machining operations (permit number 806-81AI); a cup plug sealant (permit number 516-89); a cam carrier cover (permit number 842-89) used in cylinder head and cam carrier sealant operations; paint spray booth filters (permit number 1037-80) used in routine painting operations; oil mist collectors (permit number 799-85) serving crankshaft machining operations; various boilers (permit number 1038-80) burning either natural gas or formerly burning reclaimed waste oil; and waste oil reclamation exhausts (permit number 1039-80) serving various waste oil reclamation processes involving cookers and a fume scrubber (GMC - Plant 5, 1990b). The facility does not have a history of air permit compliance problems.

On September 2, 1987, an area resident contacted MDNR to complain of an odor and possible discharge of paint and oil from the facility into Holly Drain, which is east of the facility (MDNR, 1987a). It is not known if MDNR investigated this complaint.

The facility is not required to have a National Pollutant Discharge Elimination System (NPDES) permit. There is no history of Superfund (CERCLA) activity.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the GMC - Plant 5 facility.

2.6.1 Climate

The climate of Eaton County is characterized by mild continental conditions. Weather conditions of the Lansing area are monitored at the Capital City Airport, located northeast of the facility. The annual average low temperature of the area is 37.2°F in February, and the annual average high temperature is 57.1°F in July. The annual average precipitation (rainfall and snowfall) is 29.58 inches and is moderately distributed over the year, with peak rainfall occurring in June. The annual average net precipitation is 3.3 inches. The 1-year, 24-hour maximum rainfall is 2.0 inches. The prevailing wind is from the southwest. Average wind speed is 10 miles per hour (National Weather Service, 1990).

2.6.2 Flood Plain and Surface Water

The eastern portion of the GMC - Plant 5 facility is in the Holly Drain 100-year flood plain. The rest of the facility is in a zone of minimal flooding (Federal Emergency Management Agency, 1981). The nearest surface water body is Holly Drain, along the eastern boundary of the facility. This drain was constructed in the 1930s to drain surrounding farmland. Holly Drain contains water year-round and flows north, discharging to Carrier Creek and Grand River, about 4.5 miles north of the facility (Texter, 1992).

Surface water drainage at the facility is east-northeast, toward Holly Drain. The facility is generally level and drainage is probably minimal. Storm water runoff is directed to storm sewers, which discharge to the Delta Township Wastewater Treatment System (USGS, 1973).

The dominant surface water body in the area is Grand River, which is about 1.5 miles southeast of the facility at its nearest point. The Grand River flows north and west in the vicinity of the facility and is used for industrial water supply and recreation.

Small wetland areas of more than 2 acres in area lie about 0.5 and 0.25 miles west and southeast of the facility, respectively. These areas are classified as palustrine, emergent/forested, and palustrine, scrub/shrub/emergent. Numerous smaller wetland areas are near the facility boundary, including palustrine emergent, excavated, forested, well-drained, and open-water (semipermanent and semi-exposed) areas (United States Department of the Interior, 1981).

2.6.3 Geology and Soils

Eaton County is in the lower peninsula of Michigan in the Central Lowland physiographic province. The province is characterized by glacial deposits underlain by sedimentary bedrock of

Paleozoic and Mesozoic age. The glacial deposits of the area consist of sand, silt, gravel, and clay.

The topography of the area is composed of glacial features with discontinuous areas of exposed bedrock present throughout Eaton County. Glacial features were produced by a series of advances and retreats of Wisconsinan aged glaciers. Glacial features include outwash plains and channels, and lake and till plains at a low elevation. Recessional and interlobate moraines are situated at higher elevations. Surficial deposits in Eaton County are predominantly composed of glacial outwash plains.

The Pennsylvanian aged bedrock of the area consists of the Saginaw and Grand River Formations. The Saginaw Formation consists of sandstone and shale interbedded with limestone and coal. The Saginaw formation ranges from 10 feet to several hundred feet thick. The Grand River Formation lies below the Saginaw Formation and is composed of sandstone and varies in thickness. The Grand River formation is eroded in Eaton County. The two formations are hydraulically connected (Texter, 1992)

Surface soils near the facility generally consist of sandy to silty clay loams. As part of a phased facility investigation in the vicinity of the Former Petroleum Naphtha UST (AOC 1), soil borings were conducted at GMC - Plant 5 to a depth of about 10 feet bgs. Surficial deposits at the facility consist of grey silty clay. Loose sand is also present as fill material [ABB Environmental Services, Inc. (ABB), 1991].

2.6.4 Ground Water

Eaton County obtains drinking water from two principal aquifer systems: (1) a glacial outwash and lacustrine aquifer, and (2) a bedrock aquifer system. These systems are discussed in the following paragraphs.

The glacial outwash and lacustrine aquifer system ranges in thickness from 10 to several hundred feet thick and produces up to 1,000 gallons per minute (gal./min.) of water. Organic soil and glacial fill material are found from 0 to 23 feet bgs. The glacial aquifer system is composed of outwash and glaciofluvial deposits of sand and gravel. Most of northeastern Eaton County does not have abundant water resources. The valley outwash and buried outwash aquifers along the Grand River and Thornapple River are potential sources of water [United States Department of Agriculture (USDA) Soil Conservation Service, 1978].

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 10 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC observations.

SWMU 1

Hazardous Waste Accumulation Area

Unit Description:

The Hazardous Waste Accumulation Area is a 427-square-foot concrete-floored room in the south end of the flammable liquids storage building. Hazardous wastes stored in the Hazardous Waste Accumulation Area include waste paint thinner. Nonhazardous waste stored in the Hazardous Waste Accumulation Area include waste Loctite™ drum liners and waste paint thinner-contaminated rags (see Photograph No. 1).

Date of Startup:

This unit began operation in 1981.

Date of Closure:

This unit was RCRA closed in 1991. This unit currently accumulates waste for less than 90 days.

Wastes Managed:

This unit manages waste paint thinner and spent filters (D001, D007, and D008), nonhazardous waste paint thinner-contaminated rags, and nonhazardous waste Loctite™ drum liners. Waste paint thinner and waste paint thinner-contaminated rags are retrieved by Petrochem of Detroit, Michigan, for fuel blending operations. This unit formerly managed waste 1,1,1-trichloroethane (F001).

Release Controls:

Secondary containment at this unit consists of a 9-inch-thick concrete floor with 4-inch curbs. Spills are directed to grated concrete trenches and sumps with no external drainage. No floor drains are present in the Hazardous Waste Accumulation Area. The total volume capacity of the secondary containment system is 1,570 gallons.

History of Documented Releases:

No releases from this unit have been documented.

Observations:

During the VSI, PRC observed thirteen 55-gallon drums of hazardous waste and two 55-gallon drums of nonhazardous waste stored on wooden pallets on the floor. PRC observed no evidence of release at this unit.

SWMU 2

Empty Drum Storage Area

Unit Description:

The Empty Drum Storage Area is approximately 2,500 square feet in area and is outdoors on a concrete surface immediately west of the flammable liquids storage building. Some of the drums stored in this unit are stacked four-high. Most drums in the Empty Drum Storage Area are drained out and not washed. Drums formerly containing adhesive have a liner that is removed when the drum is empty. A trench in the eastern part of the Empty Drum Storage Area drains to the WWTS (SWMU 3). No external drains are located in this unit (see Photograph No. 2).

Date of Startup:

This unit began operation in 1981.

Date of Closure:

This unit is currently active.

Wastes Managed:

This unit manages empty drums containing nonhazardous residual adhesive, solvents, polyurethane, and epoxy. Empty drums are retrieved by DeWitt Barrel of Grand Rapids, Michigan, for reconditioning and reuse.

Release Controls:

This unit is outdoors. Secondary containment consists of a concrete pad that slopes to a grated trench. Spills are directed to the trench and routed to the WWTS (SWMU 3).

History of Documented Releases:

No releases from this unit have been documented.

Observations:

The concrete pad at the empty drum storage area was snow-covered during the VSI. Approximately 61 empty 55-gallon steel

drums, formerly containing adhesive and other products, were stored upright on wooden pallets. PRC observed no evidence of release at this unit.

SWMU 3

Wastewater Treatment System (WWTS)

Unit Description:

The WWTS is located in Building 561 and treats nonhazardous wastewater generated throughout the facility. The WWTS consists of 21 tanks ranging in volume from 3,000 gallons to 150,000 gallons, including a 5,000-gallon concrete receiving tank; a 150,000-gallon concrete batch tank; a dissolved air flotation tank; two 70,000- and one 90,000-gallon concrete flotation effluent tanks; two 70,000-gallon and one 90,000-gallon concrete filtered water tanks; and an aerobic bioreactor tank. Waste oil generated in the WWTS is treated in an associated waste oil treatment system consisting of two 30,000-gallon holding tanks; three 7,000-gallon heat treatment tanks; two 5,000-gallon acid treatment and two 5,000-gallon caustic treatment tanks; reheating and pH adjustment tanks; and two 10,000-gallon storage tanks. Water generated during oily waste treatment is treated in the heat treatment tanks and transferred to the two 10,000-gallon storage tanks, before reuse or discharge to the Delta Township WWTS (see Photograph Nos. 3, 4, and 5).

Date of Startup:

This unit began operation in 1981.

Date of Closure:

This unit is currently active.

Wastes Managed:

This unit manages nonhazardous waste lubricating and coolant oil and waste hydraulic oil generated from minor leaks from hydraulic units in the machining and main building. From 1981 to 1985, this unit managed hazardous waste oily sludge (D002, D007, D008, and D009) generated at GMC - Plants 1 and 3 and transported by tanker truck to the GMC - Plant 5 facility.

Release Controls:

This unit is a completely closed system located indoors on concrete floors. Treatment tanks have secondary containment consisting of

concrete pads surrounded by concrete berms. No floor drains are located inside the secondary containment.

History of Documented Releases:

No releases from this unit have been documented.

Observations:

PRC observed no evidence of release at this unit.

SWMU 4

WWTS Filter Cake Roll-Off Box

Unit Description:

The WWTS Filter Cake Roll-Off Box is a plastic-lined, 20-cubic-yard dumpster located indoors directly underneath the WWTS (SWMU 3) filter press in the southwest corner of Building 561. Solids removed during process wastewater and waste oil treatment pass through a treatment filter press that generates a dry filter cake and filtrate. Waste filter cake is directly deposited into the WWTS Filter Cake Roll-Off Box. WWTS filter cake is manifested as nonhazardous waste and full WWTS Filter Cake Roll-Off Boxes as transported to Granger Landfill in Lansing, Michigan, for disposal. Filtrate is returned to the WWTS for further treatment (see Photograph No. 6).

Date of Startup:

This unit began operation in 1981.

Date of Closure:

This unit is currently active.

Wastes Managed:

This unit manages nonhazardous filter cake waste generated in the WWTS filter press.

Release Controls:

This unit is lined with plastic and is indoors on a concrete floor. The unit is uncovered during filter cake waste accumulation.

History of Documented Releases:

No releases from this unit have been documented.

Observations:

PRC observed no evidence of release at this unit.

SWMU 5**Machining Residue SAAs****Unit Description:**

Machining Residue SAAs consist of 1-cubic-yard, open gondolas located directly underneath dragout units at several locations along machining lines in the main building. There are 53 Machining Residue SAAs located adjacent to machining lines in the main building. Full gondolas are emptied into the plastic-lined, 20-cubic-yard roll-off box in the Salvage Dock (SWMU 6). No floor drains are located in the vicinity of Machining Residue SAAs (see Photograph No. 7).

Date of Startup:

This unit began operation in 1981.

Date of Closure:

This unit is currently active.

Wastes Managed:

This unit manages nonhazardous machining residues generated during machining operations. This unit also manages oily rags used to wipe minor lubricating oil leaks and used filter paper from the dragout units.

Release Controls:

This unit is indoors on a concrete floor. No floor drains are in the vicinity of Machining Residue SAAs; however, the units are about 3 feet from Pump Back Reservoirs (SWMU 7).

History of Documented Releases:

No releases from this unit have been documented.

Observations:

PRC observed no evidence of release at this unit.

SWMU 6**Salvage Dock****Unit Description:**

The Salvage Dock is an approximately 250- by 75-foot enclosed area on the north side of the main building. The Salvage Dock consists of an elevated concrete platform with railroad tracks to the north and south. Twelve- 12- by 12- by 10-foot wooden storage pits used for scrap metal storage are located on the platform. A plastic-lined, 20-cubic-yard roll-off box for machining residue

accumulation is on the south railroad track (see Photograph Nos. 8 and 9).

Date of Startup: This unit began operation in 1981.

Date of Closure: This unit is currently active.

Wastes Managed: This used unit manages nonhazardous waste machining residue, oily rags and filter paper generated from filtering lubricating oil from machining lines, and scrap metal and floor sweepings from machining and housekeeping operations.

Release Controls: This unit is indoors on a concrete surface. No floor drains are in the vicinity of the Salvage Dock.

History of Documented Releases: No releases from this unit have been documented.

Observations: PRC observed no evidence of release at this unit.

SWMU 7 Pump Back Reservoirs

Unit Description: Pump Back Reservoirs consist of concrete trenches and sumps at 47 locations underneath machining lines in the main building. Waste lubricating and coolant oil no longer usable in machining lines is drained into these trenches and sumps and is pumped through above- and below ground piping to the WWTS (SWMU 3). Pump Back Reservoirs are covered by metal panels. During the VSI, PRC was unable to determine the volume or dimensions of the Pump Back Reservoirs (see Photograph No. 10).

Date of Startup: This unit began operation in 1981.

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages nonhazardous waste lubricating and coolant oil generated during engine block component machining operations.

Release Controls: This unit is indoors. The unit's trenches and sumps are made of concrete, and the sumps are covered with metal plates. No floor drains are near the Pump Back Reservoirs.

History of Documented Releases: No releases from this unit have been documented.

Observations: PRC observed no evidence of release at this unit.

SWMU 8 Drip Pans

Unit Description: Drip Pans are 5- by 4-foot, curbed metal pans directly under hydraulic units at 166 locations throughout the main building. Oil drippings from the units are collected in Drip Pans. Vacuum trucks pump transfer waste hydraulic oil from Drip Pans to the WWTS (SWMU 3) (see Photograph No. 11).

Date of Startup: This unit began operation in 1981.

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages nonhazardous waste hydraulic oil from minor drips and leaks on hydraulic units.

Release Controls: Drip Pans are constructed of sheet metal. Secondary containment consists of 3-inch metal curbs. The Drip Pans are indoors and not near any floor drains.

History of Documented Releases: No releases from this unit have been documented.

Observations: PRC observed no evidence of release at this unit.

SWMU 9 Adhesive Applicator Drip Pan and Box

Unit Description: The Adhesive Applicator Drip Pan and Box is under the adhesive application unit on the engine block machining line in the north end of the main building. Minor drips of Loctite™ adhesive collect

in a rectangular drip pan and are directed to a cardboard box. The cardboard box is periodically removed and disposed of as general waste (see Photograph No. 12).

Date of Startup: This unit began operation in 1981.

Date of Closure: This unit is currently active.

Wastes Managed: From 1981 to 1986, this unit managed 3M mastic adhesive, which contains polymer sealant and organic solvents. In 1987, the facility began using Loctite™ adhesive in the adhesive application unit. This unit currently manages nonhazardous, random Loctite™ drips.

Release Controls: This unit is indoors inside a fenced enclosure on an elevated platform. No floor drains are near the unit.

History of Documented Releases: No releases from this unit have been documented.

Observations: PRC observed no evidence of release at this unit.

SWMU 10 Waste Paint Thinner SAA

Unit Description: The Waste Paint Thinner SAA consists of a covered 55-gallon steel drum and is in the maintenance spray paint room in the northwest corner of the main building. Paint thinner is periodically pumped through paint lines to clean the lines and to clean electrostatic paint guns. Waste paint thinner is accumulated in the waste paint thinner SAA. Full drums are transferred to the Hazardous Waste Accumulation Area (SWMU 1) (see Photograph No. 13).

Date of Startup: This unit began operation in 1981.

Date of Closure: This unit is currently active.

Wastes Managed: This unit manages hazardous waste paint thinner (D001, D007, and D008) containing xylene and hazardous spent paint filters (D001, D007, and D008).

Release Controls:

This unit is indoors on a concrete floor. The 55-gallon steel drum is covered when waste paint thinner is not added. The Waste Paint Thinner SAA rests on a mobile metal cart with 2-inch metal curbs.

History of Documented Releases:

No releases from this unit have been documented.

Observations:

PRC observed no evidence of release at this unit.

4.0 AREAS OF CONCERN

PRC identified one AOC during the PA/VSI. This AOC is discussed below; its location is shown in Figure 2.

AOC 1 **Former Petroleum Naphtha UST**

The Former Petroleum Naphtha UST was a 5,000-gallon, steel UST located northeast of the WWTS (SWMU 3). The UST was used for product storage of a solution containing 54 percent petroleum naphtha. The Former Petroleum Naphtha UST was installed in 1981 and removed on September 12, 1990. GMC - Plant 5 conducted a facility investigation following UST removal that consisted of soil sampling at the UST excavation and soil sampling from two boreholes. Ground water from the perched water table under the facility was also sampled. Soil and water samples were analyzed for benzene, toluene, ethylbenzene, and xylene. Results of excavation soil sample analysis indicated the presence of toluene (1.8 $\mu\text{g}/\text{kg}$) and xylene (3.7 $\mu\text{g}/\text{kg}$). Results of excavation water sample analysis indicated the presence of xylene (100 $\mu\text{g}/\text{L}$) and ethylbenzene (4.1 $\mu\text{g}/\text{L}$). Results of soil sample analysis for stained soil 9 to 10 feet bgs in a soil boring indicated the presence of xylene (2.0 $\mu\text{g}/\text{kg}$) and total petroleum hydrocarbons (2,000 mg/kg). Ground-water monitoring wells were installed in the spring of 1991 to further define the nature and lateral extent of ground-water contamination. Results of ground-water sample analysis indicated the presence of methylene chloride (0.0067 mg/L). No further corrective measures have been taken (see Photograph No. 14).

REFERENCES

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- GMC - Plant 5, 1990b. List of Active and Voided Air Permits, GMC - Plant 5.
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- MDNR, 1991a. Letter from David Hales, MDNR, to Kurt Blizzard, GMC - Plant 5, February 19.
- MDNR, 1991b. Letter from Eric Van Riper, MDNR, to Kurt Blizzard, GMC - Plant 5, September 5.

National Weather Service, 1990, Telephone Conversation between Deb Harrity (PRC) and National Weather Service at the Capitol City Airport, August 5.

Texter, John, 1992. Eaton County Health Department, Telephone Conversation with Peter Lynch, PRC Environmental Management, Inc. (PRC), February 20.

United States Department of Agriculture (USDA) Soil Conservation Service, 1978. Soil Survey of Eaton County, Michigan, October.

United States Department of the Interior, 1981. National Wetlands Inventory, Dimondale, Michigan, May.

United States Geological Survey, (USGS), 1973. Topographic Map, Dimondale Quadrangle, Michigan, 1973.

ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE
MI

02 SITE NUMBER
MTD980700843

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)

General Motors Corporation, Buick-Oldsmobile-Cadillac Group,
Lansing Automotive Division - Plant 5

02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER
2901 S. Canal Road

03 CITY
Lansing

04 STATE
MI

05 ZIP CODE
48917

06 COUNTY
Eaton

07 COUNTY
CODE

08 CONG
DIST

09 COORDINATES: LATITUDE
42°42'10" N

LONGITUDE
084°39'22" W

10 DIRECTIONS TO SITE (Starting from nearest public road)

Interstate 96 south, exit Interstate 496 east, exit Crietz Road south to Mt. Hope Highway; turn right on Mt. Hope Highway to Canal Road; turn right on Mt. Hope Highway to Canal Road; turn left on Canal Road to 2901 S. Canal Road

III. RESPONSIBLE PARTIES

01 OWNER (if known)

General Motors Corporation, Buick-Oldsmobile-Cadillac Group

02 STREET (Business, mailing, residential)
920 Townsend Street

03 CITY
Lansing

04 STATE
MI

05 ZIP CODE
48921

06 TELEPHONE NUMBER
(517) 885-1155

07 OPERATOR (if known and different from owner)
Same

08 STREET (Business, mailing, residential)

09 CITY
Same

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE

☐ B. FEDERAL:

(Agency Name)

☐ C. STATE

☐ D. COUNTY

☐ E. MUNICIPAL

☐ F. OTHER

(Specify)

☐ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3010 DATE RECEIVED: 08 / 07 / 80
MONTH DAY YEAR

☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /

MONTH DAY YEAR

☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

BY (Check all that apply)

☒ YES
☐ NO

DATE 02/10/92

☐ A. EPA

☒ B. EPA CONTRACTOR

☐ C. STATE

☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL

☐ F. OTHER:

(Specify)

CONTRACTOR NAME(S): PRC Environmental Management, Inc.

02 SITE STATUS (Check one)

☒ A. ACTIVE

☐ B. INACTIVE

☐ C. UNKNOWN

03 YEARS OF OPERATION

1981 | Present
BEGINNING YEAR ENDING YEAR

☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

The substances present are primarily waste paint thinners, wastewater, waste oil, and waste residue.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Benzene, toluene, xylene, and ethylbenzene contamination in the soil, and xylene, ethyl benzene, and methyl benzene, and methylene chloride contamination in ground-water, has been documented.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)

☐ A. HIGH

(Inspection required promptly)

☐ B. MEDIUM

(Inspection required)

☐ C. LOW

(Inspect on time-available basis)

☐ D. NONE

(No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT

Kevin Pierard

02 OF (Agency/Organization)
U.S. EPA

03 TELEPHONE NUMBER
(312) 886-4448

04 PERSON RESPONSIBLE FOR ASSESSMENT

Peter Lynch

05 AGENCY

06 ORGANIZATION
PRC-EMI

07 TELEPHONE NUMBER
(312) 856-8700

08 DATE
03/16/92
MONTH DAY YEAR

02 SITE NUMBER
MID 980 700 843



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE
MT

02 SITE NUMBER
MTD 980 700 843

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

02 ☐ OBSERVED (DATE: 10/02/90)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 40,000

04 NARRATIVE DESCRIPTION

Xylene, ethylbenzene, and methylene chloride contamination of ground water have been documented.

01 ☐ B. SURFACE WATER CONTAMINATION

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED:

04 NARRATIVE DESCRIPTION

No surface water contamination has been documented.

01 ☐ C. CONTAMINATION OF AIR

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED:

04 NARRATIVE DESCRIPTION

None

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 800

04 NARRATIVE DESCRIPTION

GMC-Plant 5 employees

01 ☐ E. DIRECT CONTACT

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 800

04 NARRATIVE DESCRIPTION

GMC-Plant 5 employees

01 ☒ F. CONTAMINATION OF SOIL

02 ☐ OBSERVED (DATE: 10/02/90)

☐ POTENTIAL

☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: 5 to 10
(Acres)

04 NARRATIVE DESCRIPTION

Toluene, xylene, and total petroleum hydrocarbon contamination was discovered during UST removal activities and subsequent investigation. Low potential for further releases.

01 ☐ G. DRINKING WATER CONTAMINATION

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED:

04 NARRATIVE DESCRIPTION

None

01 ☐ H. WORKER EXPOSURE/INJURY

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 800

04 NARRATIVE DESCRIPTION

Overall industrial hygiene of the facility was satisfactory; however, potential for exposure to solvents exists

01 ☐ I. POPULATION EXPOSURE/INJURY

02 ☐ OBSERVED (DATE:)

☐ POTENTIAL

☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED:

04 NARRATIVE DESCRIPTION

None



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE
MT

02 SITE NUMBER
MTD 980 700 843

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION

☐ POTENTIAL

☐ ALLEGED

None. All secondary containments appeared to be in satisfactory condition

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

01 ☒ O. CONTAMINATION OF SEWERS, DRAINS, WWTPS
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

Wastewater generated in the WWTS (SWMU 3) is discharged into the Delta Township WWTS.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

None

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 40,000

IV. COMMENTS

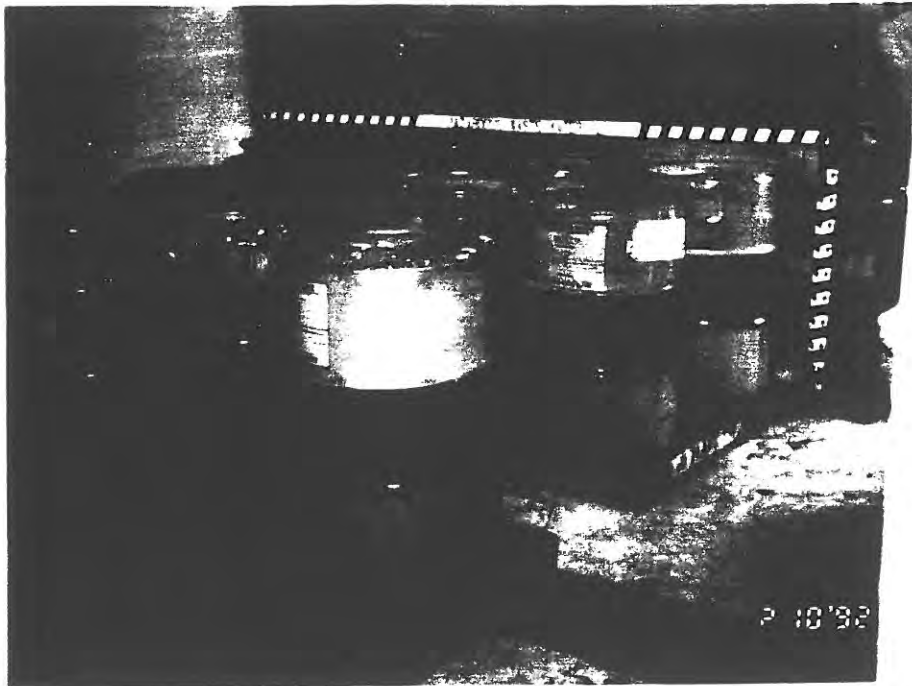
Release to soil and ground water in the vicinity of the Former Petroleum Naptha UST (AOC 1) has been documented. Soil has not been remediated, and further contamination of ground water is possible.

V. SOURCES OF INFORMATION (Cite specific references; e.g., state files, sample analysis, reports)

MDNR files, U.S. EPA Region 5 files, site inspection

ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS



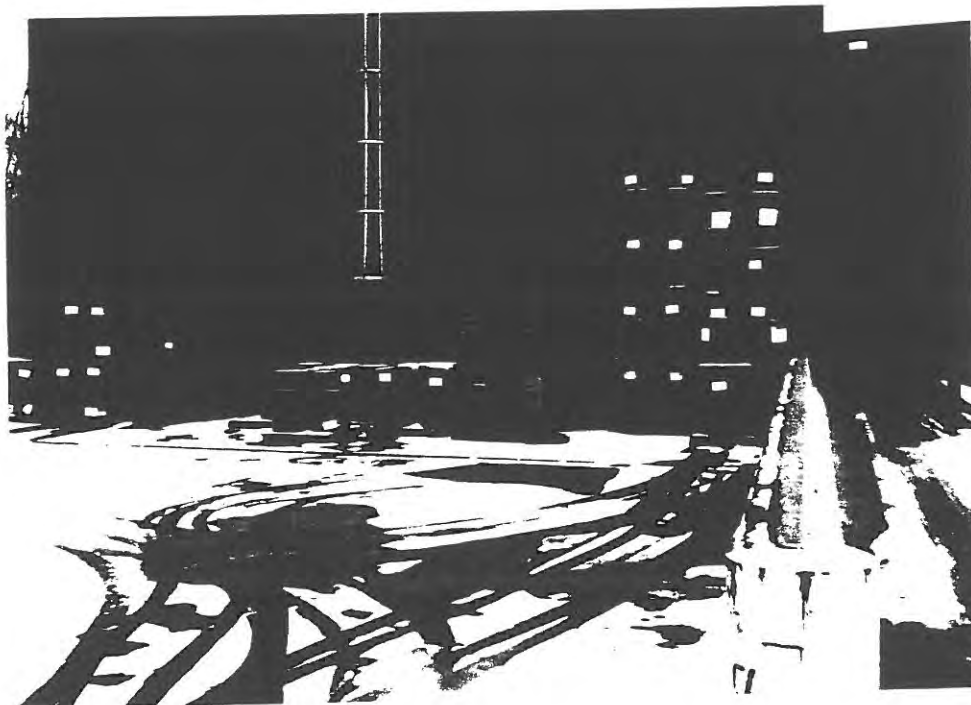
Photograph No. 1

Orientation: Northwest

Description: Drums containing waste paint thinner stored on pallets in the Hazardous Waste Accumulation Area (SWMU 1); trench in foreground has no outlets

Location: SWMU 1

Date: 02/10/92



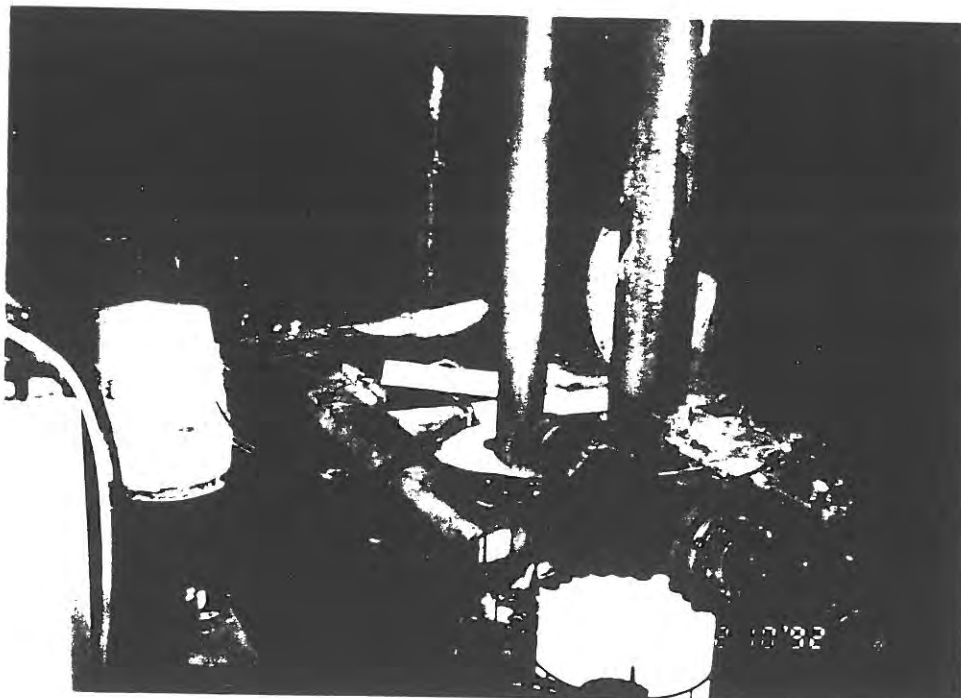
Photograph No. 2

Orientation: Northeast

Description: Empty 55-gallon product drums stored on wood pallets on a bermed concrete pad; the Flammable Liquid Storage Building, containing the Hazardous Waste Accumulation Area (SWMU 1), is in background

Location: SWMU 2

Date: 02/10/92



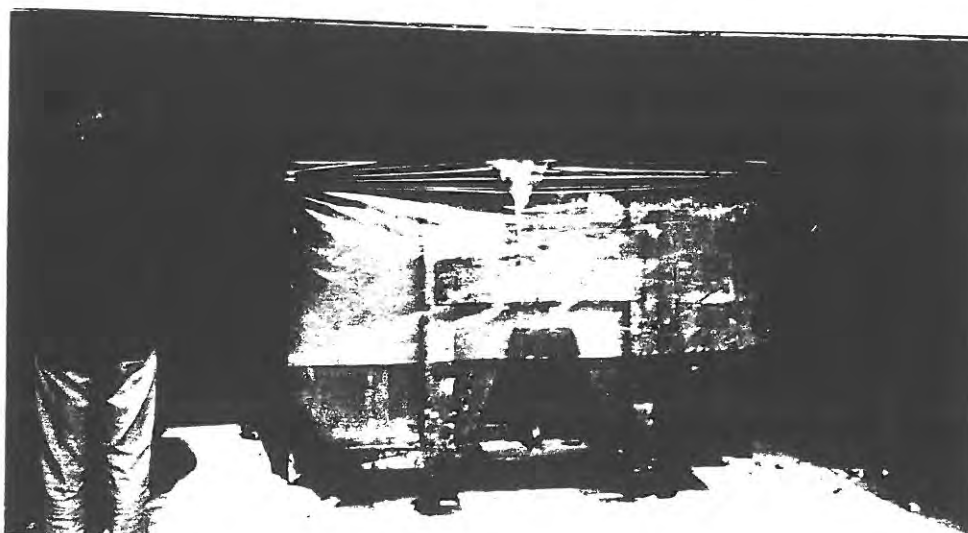
Photograph No. 5

Orientation: Southeast

Location: SWMU 3

Date: 02/10/92

Description: Treated wastewater discharged to Delta Township WWTs sewer after treatment in the WWTs (SWMU 3); white cylindrical plastic container on the far left monitors water quality on a continual basis



Photograph No. 6

Orientation: Northwest

Location: SWMU 4

Date: 02/10/92

Description: A plastic-lined, 20 cubic-yard roll-off box collects WWTs filter cake from the WWTs (SWMU 3) filter press



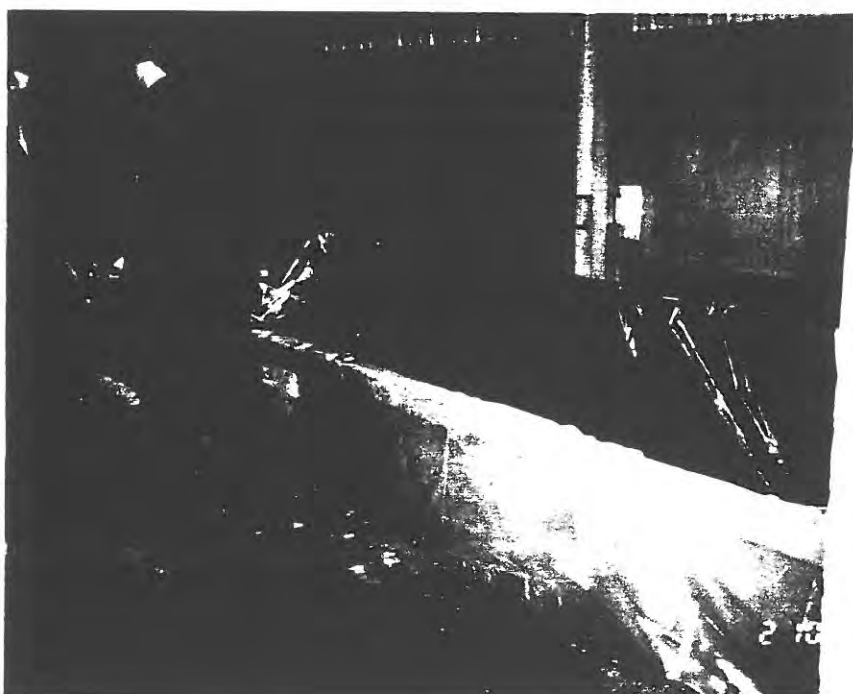
Photograph No. 7

Orientation: South

Location: SWMU 5

Date: 02/10/92

Description: Machining residue deposited from a dragout unit into a Machine Residue Satellite Accumulation Area (SAA) (SWMU 5) consisting of a 1-cubic yard gondola



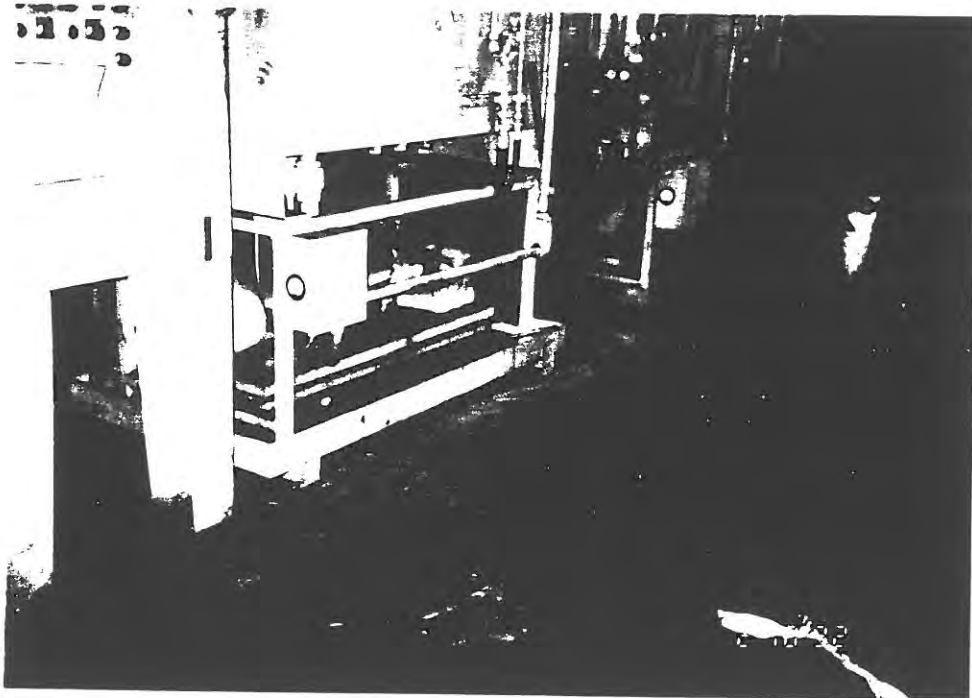
Photograph No. 8

Orientation: Southeast

Location: SWMU 6

Date: 02/10/92

Description: Machining Residue SAAs (SWMU 5) emptied into a plastic-lined, 20 cubic-yard roll-off box in the Salvage Dock (SWMU 6)



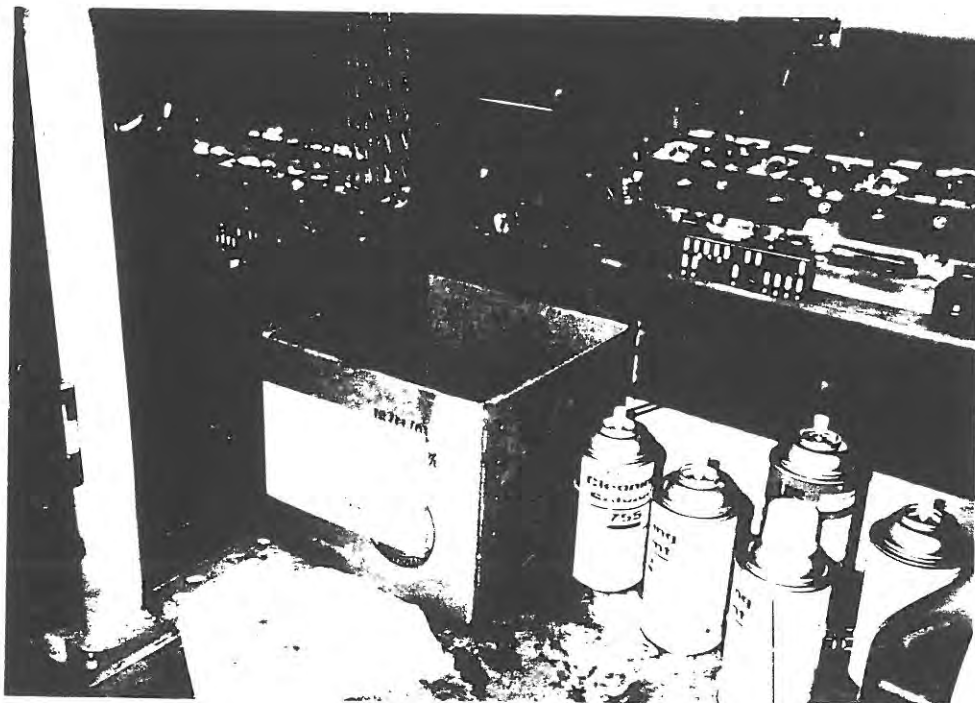
Photograph No. 11

Orientation: Southwest

Location: SWMU 8

Date: 02/10/92

Description: Drip Pans (SWMU 8) under hydraulic units collect minor hydraulic oil drips and leaks; drip pans are curbed



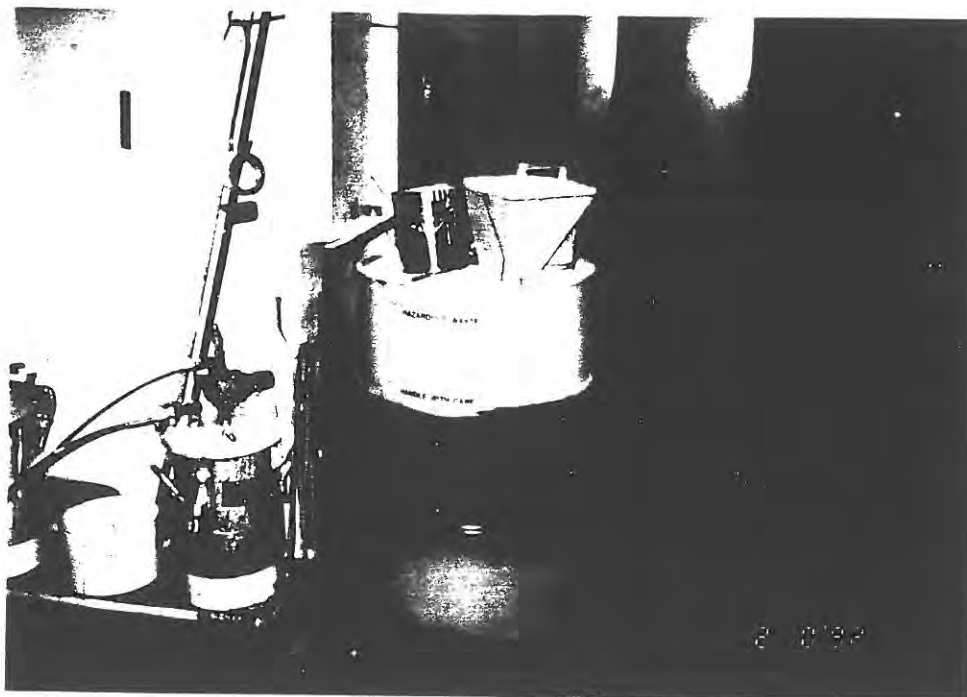
Photograph No. 12

Orientation: Northwest

Location: SWMU 9

Date: 02/10/92

Description: Cardboard box collects minor drips of Loctite™ adhesive from rectangular drip pan directly above; Adhesive Applicator Drip Pan and Box (SWMU 9) inside a fenced enclosure



Photograph No. 13

Orientation: Northwest

Location: SWMU 10

Date: 02/10/92

Description: Waste paint thinner generated from routine painting equipment cleaning operations accumulated in a covered 55-gallon drum in the Waste Paint Thinner SAA (SWMU 10); hazardous waste label affixed to the drum



Photograph No. 14

Orientation: Southeast

Location: AOC 1

Date: 02/10/92

Description: Brown post in center of photograph is a ground-water monitoring well that marks the location of the Former Petroleum Naphtha Underground Storage Tank (AOC 1); fence in background is facility boundary

ATTACHMENT C
VISUAL SITE INSPECTION FIELD NOTES

9:50 am

Cold, overcast, windy
Kurt Blumgard - GWC
Leroy Vahovich - MDNR

Facility # 5

281.10 acres

1122.421

Used up product in tank
13 that had leaked before
they removed tank. 51%
petroleum naphtha.
all UST's at pt. 5 are
product except for waste oil
tanks and waste water treat-
ment tanks.

11:00 Met at plant 5

Ed Schmitz - Environmental

① Engineer.

(Cast iron work machining
Rod machining)

machining ops → scrap metal,
scrap parts, waste filter
paper

~~have some drops pan →~~
waste lubricating oil from
machining is closed system.
When no longer usable shipped
it is removed from dedicated
sumps to an dedicated
pipeline above ground in plant
then underground to waste
water treatment.

② 80-100 cu. yards per year
of waste water filter cake.
water to Delta Township

waste oil to General Oil, to Reford → recycling

② Waste paint thinner from
maintenance spray paint. Stored
in building 566 in an indoor drum
storage area. Paint filters

③ parts washers from Everclean,
East Lansing, prior to Supply House.
might have for 111 TEE

④ Dust → none, no permit to outside
⑤ Only air filters → collect
oil & every 6 months
changed. Sent to Greager
Landfill.

⑥ Scrap metal stored in Dock
area

Raw material received by truck.
Nothing in by rail.

800 employees, 3 shifts

N. houses, residential

S.

E. industrial / commercial (Coke)

W. industrial / commercial - Merckel Electric

At house security, manufacturing area is fenced entire property is not. Security cameras

Built in 1981. ~~BB~~ before it was farm land.

= Release of 54% nitrogen naphtha from tank # 13 in 1990

= no other documented releases

= Current RCRA Status $\Rightarrow$ generator only.

had formerly generated

used to make 6 cylinder diesel engine

* 3M mastic waste $\Rightarrow$ used.

1. ⁸⁶ spent at ^{valley corner} ¹¹¹¹¹¹¹¹ fracture ^{with 1000}

its a gooey substance to take

out VOCs. Currently using

Loctite $\Rightarrow$.

used to make 6 cy. until April 87.

started making 4 cy. in Jan. 87.

12:15 Ken Price and John Curtis

Waste water

① Goes into a 5000 gallon concrete holding tank

② pumped ④ to rotary drum screen solids placed into a gon

⑤ to grit collector solids settled

⑥ incline plate separator solids to bottom floatable oils to top.

③ oily waste water → to batch tank 150,000 gal
concrete epoxy read
to batch tank.
- add cationic emulsifier
breaker to break the emulsion
- add aluminum
- coagulating polymer
- allow tank to stand
- rep. soluble oil
floats to surface of batch tank.

④ pump water to dissolved air floatation system.
takes ament air under pressure; super saturated
= cleans-out residual matter
+ polymer to remove any residual oil.

⑤ goes to 3 holding
2 - 10,000 gal. concrete
1 - 90,000 gal.
→ floatation effluent tanks.

⑥ water pumped through sand filter ~~effluent~~

⑦ goes to 3 holding
2 - 10,000 gal. concrete
1 - 90,000 gal. concrete

⑧ aerobic bio reactor system
uses micro-organisms to
remove extractables. Hold
sand into.

⑨ Discharged

Waste scum oil from top of
WW. holding tanks goes to

holding tanks & goes to
cooker.

Total water received

18,113,300

Total discharged

14,809,730

Plants 143 $\Rightarrow$ waste oil
came in by tanker trucks.

(A) Recovering tanks $\Rightarrow$

Concrete 20x20 under ground
2 feet thick

(B) putting in above-ground
tanks.

floor is stained, building is
extremely ~~poor~~ plumbed.

12 inch concrete curb around
product caustic

waste machine residue $\Rightarrow$
sent to landfill, 1st
solidified by Granger &
then landfilled.

Drum of waste paint thinner
in catalysts area $\Rightarrow$ no data

empty drums of ~~product~~ residue to
empty drum recycler
Bell with barrel, ground tanks
since 1989 $\Rightarrow$

5 storage room. trenches
to pump that goes.
nowhere 6 drums paint
thinner to. Petro Chem, Detroit
⇒ contaminated gasoline
6 drums water to be
characterized

fuel room ⇒ dust
carbide & carbon
steel particles

water lub. coolant to pump
to WW treat.

drip pans under machines
hydraulic oil pumped w/ vac
& taken to: WW treat.

^{residue}
machine sludge from turning
cleaning of machined parts

MOS to liner from mach. drum
to indoor storage area

Recommended at 2:45 make arrangements to
for tomorrow's visit. Left facility at
3:00pm.

(1)

Wright Pa' V-2 II

PAV: 22105 MOBILE,

PLANT 5

MTD + 980 700 843

PREC # 008-005087 MZ

Dr

'4

Q930

Arrive en ville (Plant 1)

Inspectors Calmelée, Lecker
and Peter Lynch superman!
weather: partly cloudy 35°

Lecky Vachonik (MUSE)

en ville (Plant 1)

Kust Bly 3 and
arrives.

and works about schedule 20

Calmelée Samp one day

@ Plant 5, 2 days at

Plant 1

When leave

2/10/42

1 unit construction, paperwork
Am Semmits.

Calley starts w/ some
general construction

employees, shifts, etc.
Emp
280 acres.

Process discussion.

- manufacture engine components, assembly.
- No longer paint, but still look at paint.
- AMU's

Process begins (P2)

Porter Laid. 2/10/92

(3)

- waste water
- formerly H.W.
- now chandra treatment
- new non H.W.
- shipped originally as H.W.

Not receiving waste from plants 1 and 3.

- Alud 50 + tanks originally in H.W.

- permit, included in clause.

- Plant 5 only waste shipped to

- however, it is

treated on-site
Porter Laid. 2/10/92

cy
'cooked' 50% oil
to 90% oil.

when oil treated at
Pl. 5 (from 1 & 3),
then went to a
reclaimer.

Calby only for
Clasine Schramberg
from BPA

1020

UST 5
- tank farm. No
waste

Tank 13 - product
leak. - removed.
waste tanks were
washed out & sludge.
Peter Kinch 2/10/92

1100

5/10/92

waste water treatment
tanks.

Tank 13

- used up contents
before removal.
- 54% naphtha

Group Depart for
Plant 5.

Group assemblies
at Plant 5

- meet Mr. P. Schramberg
Plant 5 env. manager.
Conclude in mtg. room.

North End - Cast iron block
machining
Peter Kinch 2/10/92

⑥

Previous to 3/10/92,
Kumland.

Plant 5, built in 1981 -
for oil/water - purchased
by G.M.

Recene cast iron,
black, aluminium
machining.

- Engine - 4 cylinders.

Machining waste

- Scrap metal
- Scrap parts
- machining residue
- distillate residue

* Filter paper to
remove solids

- oil/grease system.
Deter pump 2/10/92

⑦

Coolant circulates
Drip oil → wet track.

SAA's

- Pans are tapered
- No SAA's. Drip oil
brought back
into system.

waste oil

- replaced.
- Pumped to Waste
Treatment.

Coolants

- Soluble oils
- Synthetic oils
- Machine in liquid
+ recirculated.

Deter pump 2/10/92

(8)

waste oil returned -
pumped up
in Langrange
pipeline.

waste oil collected
in dedicated drums.

2 Tanks

- we to have oil
removed in treatment

2/10/92

waste solvents

waste paint
thinner - paint
sheetmetal, non-
productive service
operation. Roshon mainline

Filter knock 2/10/92

(9)

ww filter cake
- 80-100 cu. yds/gr.
~~city~~ (PT)

waste oily sludge

may be lab solvents
waste.

PT

Everclean Parts washer

- Doo7

- East Lansing

waste Paint Thinner

- Generated in 502

Stored in 566

SE corner.

ww Treatment - 561

- also Filter cake

Filter knock 2/10/92

(6)

- ww
- discharged ww to Delta Twp
 - ww only sludge reclaim to General Oil, Redford, MI
 - Slicker cake
 - Granger Landfill, Lansing

Waste Paint Overpouring
- filter - replaced dry filter.
- manifested as Ban Hw.

solvents
- paint gum.

Peter Lynch 2/10/92

(11)

Bag house waste
- recirculated
- bags are dry
- renewed bag laundering

only must collecters
- recirculate thru plant
- also permitted to exhaust to outside.

oil must media
disposed of every 6 mos, per our demand. → Kanger

Peter Lynch 2/10/92

(12)

- Scrap metal
 - into Salvage Dept.
 - sold out for ~~the~~ ^{the} sale
 - \$200 to scrap recycling facilities
- Raw material arrives by truck.
- Rail capabilities, but no rail use.

Employees

- 800
- 3 shifts
 - 2 shifts mfg - production
 - 1 shift - maintenance

Date Recd. 2/10/92

(13)

- Neighbors
 - North - 3 armed residential
 - West/East - light electrical industry - commercial
 - South
 - industrial - Bang Warner Lighting
- Security
 - fenced, 24 hr. guard.
 - property line for roads.
 - cameras throughout
- Decommissioned Relays
 - 1 54% Pet. Rep. the from 55 # 13 -
 - April 1990
 - Date Recd. 2/10/92

(16)

April 1981

1981 - 6 cylinders
diesel engine
(converted)

Jan. 1987 - 4 cylinders Quad
H. Gasoline
engine

1200 Group begins term.

1215 WW Intmt. bldg - 561
- West Kan Price

- WW Treatment
- Catigene Emulsion
breakers.
- Done by batch.

Arrives @ bldg
- in post well
P. 1215 2/10/92

(17)

Receiving tank -
collects flow
- 5000 gal concrete
- Pumped through
processes to remove
solids. - 3 processes
① Rotary Drum Screen
- Solids removed
- Fall into a garbage.

② - Dump collected in
→ to inclined

Plate separator -
add solids removed
- oil skimmed

only w w, surfactants,
etc. collected in
15000 gal. batch
tank. Cancelled w

Epoxy coating.
Data book 2/10/92

18) Tank is filled & heated w/ cottonso
emulsion breaker
to break emulsion
41304 - 150 ppm
Polymer - 1 ppm
separated oil & water
goes in emulsion
float to top of batch
tank.

Dissolved Air Flotation
- aerated air +
supersaturated water.
- creates bubbles to
remove particulate
→ water then goes to
more holding tanks
- 3 tanks
Date Rec'd 2/10/12

19) 2 - 70,000 } concrete
1 - 90,000 }
→ Flotation effluent
+ ambig
water then is pumped
through sand
filters. Sand
filters are backwashed
into systems
swales then goes
to more tanks.
Silted water tanks
→ Then goes to an
Aerobic Bioreactor
- uses microorganisms
to remove BOD, COD,
and extractables
- 100,000 gal/day
Discharging → 2/10/12
Date Rec'd 2/10/12

(22)

Sum 0-1

- Periodically transferred from batch treatment system to a holding tank to a cooker for repressing & resale.

Ray Fayer - General oil man H.W. filter cake.

Water Received - 1921

18, 113, 300 gal / yr
water discharged.

14, 800, 730 gal / yr.

Plant 1-53 oil
- received by tank truck.

Water Received 2/10/92

1241

(22)

Holding Tanks 1 & 2

oil from plants 1 + 3

- 2' thick

- 20' x 20'

→ no longer heating.

Plant 1, 2, filter cake

- filter cake dumpster storage.

Tanks 9A: 9B waste sum
oil

Slack drains are closed
deep.

wet well pumps

Water Received 2/10/92

23

Northeast corner,
lower level
- cooker material.
tanks

648 Photo 2, Cooker NW.
500 gal tank on rt - Caustic oil -
tank on left - Caustic oil -

Bioreactor
- fluidizing sand
- oxygenated system

1250 Photo 3, SE
5000 gal tanks
contain pumped oil
ready for shipment
to reclaimers.

Interlined, 2/10/92

1253

Photo 4, SE
- Sludge Conditioning
tanks - 3000 gal
- before sludge goes
to filter press

1254

Photo 5, E
- Batch tanks on
both sides
- step 1.
150,000 gal tanks
6 tanks

Drip collector tanks
collector drums etc
leaving upstairs
Interlined 2/10/92

23

Brace tanks - west
- acidic, water, alum
caustic, alum

258

John Curtis
Photo 6, 5' bridge holding
Tand - T 10
5,000 gal.

Treated water
Discharge
Photo 7 SE

1300

- water is sampled
prior to discharge.

Photo 8 Filter Press NW
- dispersed into a
dumpster.

1309

Grill Collectors.

IPS - Inclined Plate Separator
(step 2)

- oil separator.
Peter lunch 2/10/92

259

Well NW corner
(Base skimmer)
5,000 gal.

Cooker

Fume scrubber.

1318 Photo 9, T 13 0.3T SE
- brown post in
monitoring well
approx location

1321 Photo 10, NW
waste oil, sludge & fumes
- sludge from skimmer
1 & 3.

Peter lunch 2/10/92

1326

Photo 11 - Parts Degrease & Ever clean. \$5 gal.

1336

Group corner @ main Production Bldg.

1344

Salvage Dock.

Photo 12 - (containing Dumpsta waste of Machining Residue - Solidified by Granger Priced to Sent to Landfill.

1336

1349

1338

Photo 13, SE Scrap metal, misc. Dumpster. wood.

PGE requested TCEP Data on Machining
Peters lunch 2/10/93

1337

Residue + WW treatment Filter Cake.

Photo 14, NW Paint Thinner SAA. Foo 3, Foo 5, Foo 1 Paint Related Material

Photo 15, NE - west side bldg 505 empty drums for reclaimer.

De Witt Barron @ in Grand Rapids. Secondary (outcrops) slopes to French drain - direct to WW Treat.

Peters lunch 2/10/92

8/29/92

new corner - product storage

Waste Accum Area - 566

13 HW

2 NON HW

French Drainers, no heavy

concrete floors, pumped

curbing to doors

no curbing at garage

doors

drums stored on pallets

Photo 6 NW

waste Accum Area

Transporter - pulsed water

waste paint - Petroskan

Refractuel blending

7/20/92

Enter lunch 2/10/92

11:00

14/6

Photo 17 SW

under metal panels

codant oil

trench in background, under line

Enter lunch 2/10/92

(29) Rldh

main Production

Range Casting Blocks
- finishes up raw casting
- raw casting

- 1 cum can & single can

Codant - enters
trenches under lines
(machines, blocks, etc.
operations)

Photo 17 SW

under metal panels

codant oil

trench in background, under line

Enter lunch 2/10/92

(30)

1416

Photo 18. SW

- drip pans under hydraulic unit
- dripped coolant
- no pumped out
- taken to WWTs

Machining Residue

- blocks are cleaned
- grit, dirt, 5 tubes, 1 pen, 1 unit.

1419

Photo 19. S

1430

Photo 20 NW

back tight drip pan and box.

- box goes to H+S guy.
- PPE requested incl PPE.
- File of back tight material

Enter book 2/10/92

1431

(31)

only rags into machining residue box.

- Before back tight, used 3-m waste
- in 55 gal drum
- pressure filled
- liner & waste.

PPE requested for back tight incl 1/2 lb waste goes

- Crane assemblies in Conf. room, fl. 5-
- gutting. tomorrow + 1 day 1 team.
- WTS, Pennsylvania, Fab operations (hoods, benches, molding)
- Enter book 2/10/97

(32)

North-South Assembly,
Repair

PRC requests to ~~test~~
of Pump Back Reservoir
(coolant) and check pump.
+ Machining Residue

1500

VSI ends. Group
breaks up

PRC inspectors leave
facility sign-out

Intermed 2/10/92

