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MEMO

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To:

Dave Favero
Deputy Cleanup Manager - Michigan
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File

From:

Brad Saunders, P.E.

Date:

May 28, 2019

Arcadis Project No.:

B0064607.AD19

Subject:

Property History and Environmental Summary
RACER Trust Pontiac North Campus
United States Postal Service Parcel 14-21-101-007
711 North Glenwood Avenue, Pontiac, MI 48340

INTRODUCTION

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, Arcadis of Michigan, LLC (Arcadis) prepared this memorandum to provide a condensed summary of the history and environmental activities conditions at the United States Postal Service (USPS) property located at 711 North Glenwood Avenue at the RACER Pontiac North Campus Site in Pontiac, Michigan (Site) (refer to Site maps in **Attachment 1**). This memorandum may be used as a reference or resource in conducting a Phase I environmental site assessment of the Site.

BACKGROUND – PROPERTY HISTORY

The Site is an approximate 71.858-acre property with Parcel ID 14-21-101-007 and located at an address of 711 North Glenwood Avenue in Pontiac, Michigan 48340. The Site is currently owned by RACER Properties, LLC (an entity wholly owned by RACER Trust), and the land is leased to the USPS which owns and occupies an approximate 949,031 square foot distribution center at the premises. The Site

(along with other current and former RACER owned adjacent and nearby properties) is included in a September 2011 Administrative Order on Consent (Consent Order) between the United States Environmental Protection Agency (USEPA) and RACER Trust for RACER's portion of the Pontiac North Campus Site (Docket Number RCRA-05-2011-0019).

Prior to RACER ownership, the Site was part of the former General Motors Corporation (GMC) Pontiac North Campus facility operating under RCRA ID#s MID 005 356 886 and MID 085 470 102. Relevant excerpts from the GMC January 31, 2001 Current Conditions Report (CCR) are included in **Attachment 2** and provide relevant historical references, RCRA regulatory history, Site setting details, select previous investigation and remedial action references as of that time, area of interest summaries, and relevant references

Under GMC and predecessor operations, the Site encompassed two former operational buildings: the Foundry (Plant 6) and the Engine Construction (Plant 9). Construction of the Foundry (Plant 6) took place from 1927 to 1929. Site history prior to these dates is unknown. During this time, operations within this plant included production of parts and cars for the Oakland Motor Car Company which was later purchased by GMC. Expansions of the Foundry took place in 1937, 1940, 1941, 1945, 1946, 1957, and 1962. GMC Fisher Body Division commenced construction of the Engine Construction Building (Plant 9) in 1925, with construction completed by the mid-1930s. Expansions to Plant 9 took place in 1945, 1954, 1959, and 1967. In 1987, operations in Plants 6 and 9 ceased. Plant 6 was demolished in 1995, and Plant 9 was demolished in 1997.

In addition to the former operations described above, west of the Foundry was an area (West Yard) at the Site used for material disposal activities, including foundry sand disposal, refuse disposal, sludge dumping and trash burning. The area west of the Foundry was also used as a railroad marshalling area. Also located in the West Yard were a Flammable Liquids Storage Building, a Compressor Building, a Salvage Building, and later a Hazardous waste Storage Pad. The Salvage Building, which included a refuse incinerator, was constructed in 1945 to separate reusable material from unusable wastes. The Salvage Building was demolished in 1998. The Compressor Building was constructed in the early 1970s and subsequently demolished in 1998. The Hazardous Waste Storage Pad was constructed in 1982 to store hazardous waste for periods greater than 90 days, with closure activities initiated in July 1988. Also located in this area is the Montcalm Substation.

In 2004, redevelopment plans were initiated at the Site which involved a number of environmental activities described in the next section, leading to construction of the USPS Building from 2007 to 2008. The USPS completed construction and owns the USPS Building in approximately 2008 in accordance with plans set forth in a Ground Lease executed between GMC and USPS dated November 29, 2008. In June 2009, GMC filed bankruptcy and became Motors Liquidation Company (MLC). While portions of the Pontiac North Campus associated with ongoing automobile manufacturing activities were purchased by the new General Motors Company (GM LLC), other portions of the campus including the Site remained under MLC. In March 2001, RACER Trust was created through the bankruptcy settlement agreement, and ownership of the MLC-owned portion of the Pontiac North Campus including the Site were transferred to RACER Properties LLC.

ENVIRONMENTAL INVESTIGATION & REMEDIATION HISTORY

Since 1996, the Site has been the subject of ongoing soil, groundwater and LNAPL investigations. Hazardous substances including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and metals have been detected in soil and groundwater in concentrations that potentially pose unacceptable risk of exposure without proper controls on the Property.

Various interim measures (IMs) have been undertaken on the Property including prior to the construction of the USPS Building (USPS is the current owner of the building), to remove hazardous substances in select areas. Within the footprint of the existing USPS Building and associated parking lots, PCB-impacted soil was removed (former Plant 6 and Plant 9 basements) and LNAPL recovery was conducted (LNAPL is partially situated beneath the USPS Building footprint). USPS elected, in its sole discretion, to design, construct, install, own, operate, and maintain a subsurface vapor venting system beneath the USPS Building and a portion of the parking lot to prevent potential intrusion of methane and other volatile gases into the USPS Building, which system also includes a monitoring and alarm system (collectively, the USPS Venting System).

Numerous investigation activities from the 1990s to the present time have been conducted outside of the USPS Building footprint, including annual groundwater monitoring, which has resulted in characterization of soils, groundwater and LNAPL at the Site.

SUMMARY OF CURRENT ENVIRONMENTAL CONDITIONS

The results of environmental investigation and remediation activities conducted to date has resulted in characterization of soil and groundwater at the Site. Screening of soil and groundwater data against existing 2013 MDEQ Part 201 Generic Clean Up criteria (2013 criteria) dated January 10, 2018 with GSI criteria updated June 25, 2018 identified exceedances as listed below and included in the attached data package in **Attachment 3** (Tables {soil and groundwater}, Figures 1a-1i {soil} and Figures 2a-2e {groundwater} and Figure 2f {criteria}). In addition, the boundaries of where residual LNAPL has been encountered have been delineated (refer to **Attachment 4**)

INTERIM MEASURES AND PROPOSED FINAL CORRECTIVE MEASURES

At the current time under the AOC, one interim measure is in the process of being implemented, while a second interim measure is being planned.

The interim measure in the process of being implemented is the installation and operation of a groundwater seep re-injection system which entails the collection of groundwater along the south Site boundary of Montcalm Street and reinjection of it approximately 1600 feet upgradient near the northern portion of the Site between the north USPS parking area and stormwater retention ponds (refer to **Attachment 5).**

Another interim measure being planned is the excavation and offsite disposal of PCB impacted soils exceeding 100 ppm in two areas located in the former West Yard located in the field west of the USPS Building and west parking area (refer to **Attachment 6**).

Proposed final corrective measures associated with the USPS Parcel are currently anticipated to include the following:

- Deed restrictions which limit the use of the property to commercial or industrial uses (non-residential).
    - limits the ability to excavate or construct any sub-grade structures without properly managing/disposing of excavated material and implementing appropriate health and safety procedures as required by MDEQ soil management requirements and OSHA.
    - prohibits the construction and/or occupancy of any new building or structures unless such construction and/or occupancy incorporates USEPA's or MDEQ's written approval of an evaluation conducted on the potential for volatilization into indoor air demonstrating compliance with currently applicable requirements or otherwise engineering controls designed to eliminate the potential for subsurface vapor phase contaminants or

hazardous substances to migrate into the structure at concentrations greater than the appropriate concentrations protective of public health.
    - Understanding of designated Low Occupancy Use areas with PCB Remediation Waste impacts outside of the USPS Building and Parking Lot.
    - prohibits the use of groundwater on the property.
- Operation of the Seep Injection System (refer to **Attachment 5**)
- Removal of PCB-impacted soil with PCB concentrations above 100 ppm (refer to **Attachment 6**).
- Off-site groundwater ordinance which prohibits the installation of wells for groundwater use within the ordinance area.
- Groundwater monitoring program to verify that contaminant concentrations and distribution are stable and/or decreasing (refer to **Attachment 5** for monitoring well locations).
- Residual LNAPL monitoring to verify that LNAPL is not mobile or migrating and is not readily recoverable (refer to **Attachment 4**).

Note that the owner of the USPS building is responsible for health and safety within the USPS building and on associated parking and dock areas, including but not limited to operation and maintenance of the USPS Venting System, and for storm water management for those facilities.

Please contact us if you have any questions regarding this memo or its attachments.

Sincerely,

Arcadis of Michigan, LLC



Brad Saunders, P.E.
Principal Engineer

Attachments

Attachment 1	Site Maps
Attachment 2	GMC Current Conditions Report (Excerpts Relevant to USPS)
Attachment 3	Soil and Groundwater Data Package
Attachment 4	LNAPL Boundaries
Attachment 5	Seep Injection System and Monitoring Well Layout
Attachment 6	Planned PCB Impacted Soil Removal Interim Measure

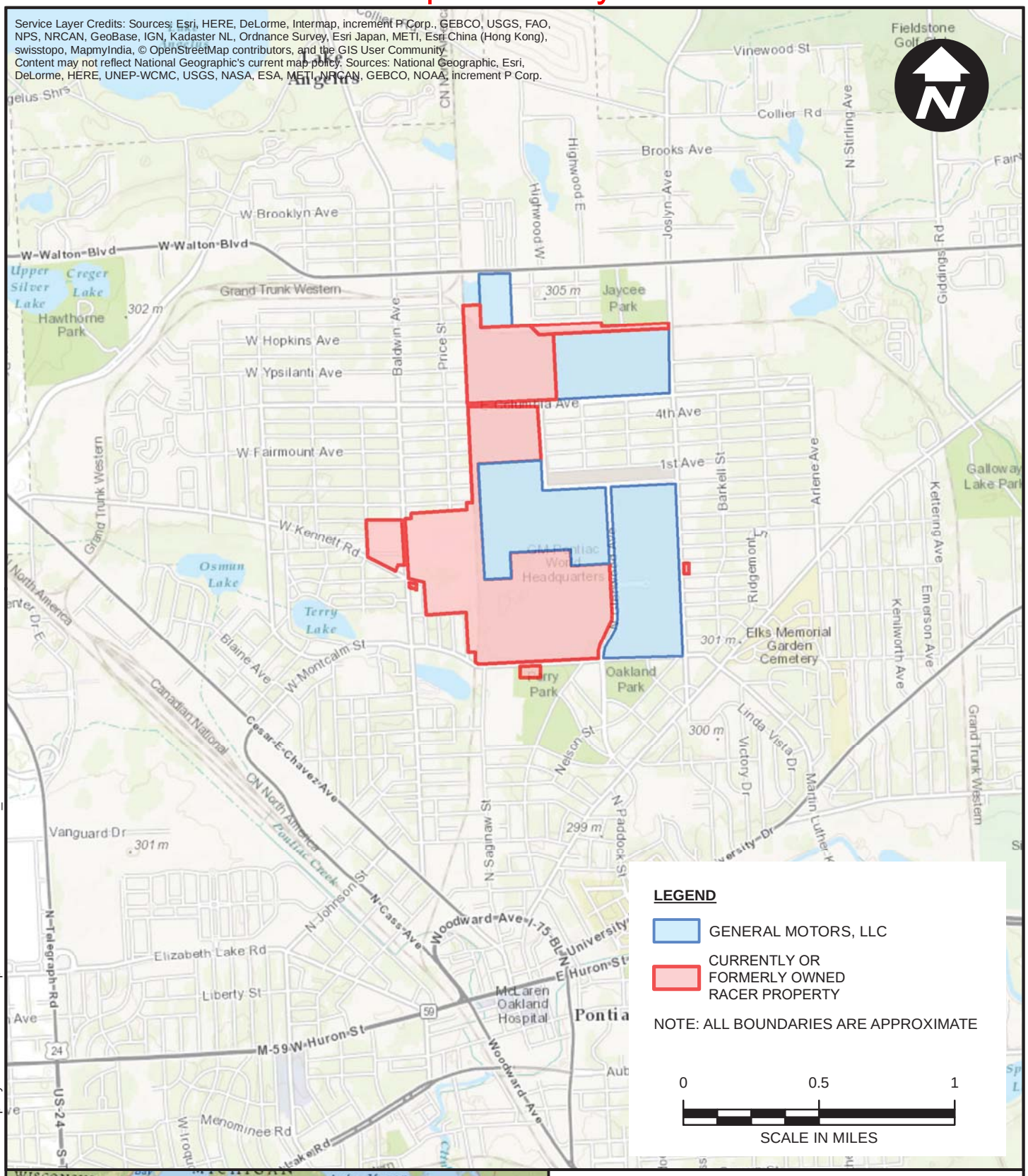
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ATTACHMENT 1

SITE MAPS

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RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

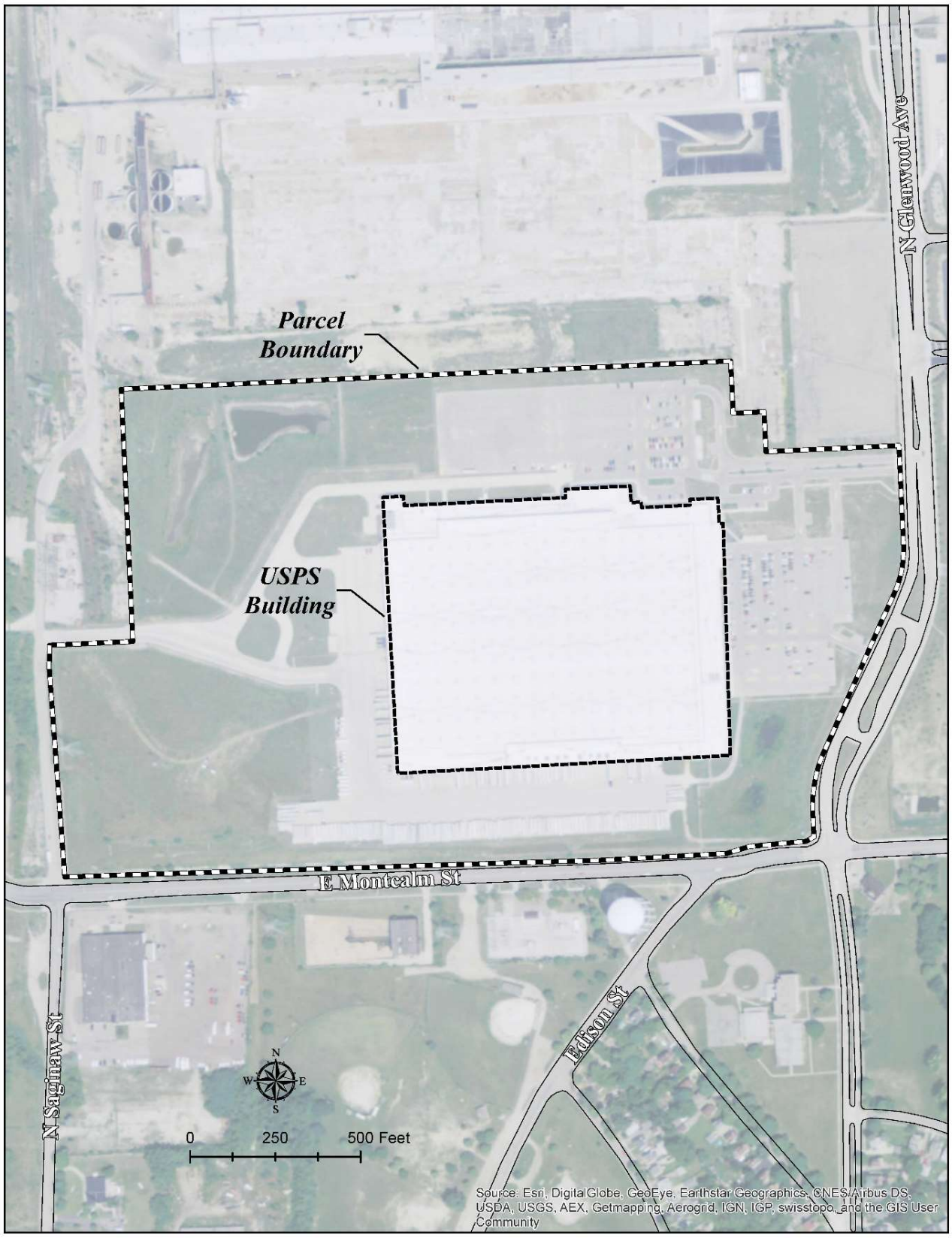
SITE LOCATION

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

PROJECT NUMBER: B0064411.0001.00145
CITY:NOVI DIV/GROUP:ENV DB: PIC: PM: TM: TR:
Path: D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\SiteLocation_AOC.mxd

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ATTACHMENT 2

GMC JANUARY 31, 2001 CURRENT CONDITIONS REPORT (CCR) EXCERPTS

THIS FILE CONTAINS EXCERPTS FROM THE BELOW DOCUMENT THAT RELATE TO THE USPS PARCEL

Current Conditions Report

Pontiac North Campus
Volume I of IV

General Motors Corporation
Pontiac, Michigan

January 31, 2001

ENCORE

January 30, 2001

Mr. Peter Ramanauskas
United States Environmental Protection Agency
Region V
77 West Jackson Street
Chicago, ILL 60604-3590
DW-8J

Re: Voluntary Corrective Action Agreement GM Pontiac North Campus

Dear Mr. Ramanauskas

In accordance with the above captioned agreement I am forwarding the Current Conditions Report prepared by General Motors Corporation. As we discussed I am forwarding one copy, should you require additional copies please contact me.

Sincerely,

Keith West/mw

G. Keith West

encl

C: Jean Caufield w/attach
Anthony Thrubis w/attach

Table of Contents

Volume I

Section 1. Introduction 1-1

1.1 General 1-1
1.2 Areas of Interest 1-2
1.3 Purpose and Scope 1-3
1.4 Document Organization 1-3

Section 2. Description of Site 2-1

2.1 Site Location 2-1
2.2 Current and Historical Operations 2-1
2.2.1 Fiero 2-1
2.2.2 Demolition Area (DA) 2-2
2.2.3 Metal Fabrication Division (MFD) 2-3
2.2.4 Powertrain 2-4
2.2.5 Service Parts Operations (SPO) 2-5
2.3 Historical Mapping and Aerial Photographs 2-5
2.4 RCRA Regulatory History 2-5
2.4.1 CPC Pontiac Fiero Assembly Plant of GMC (USEPA ID No. MID 005356910) 2-5
2.4.1.1 Container Storage 2-6
2.4.1.2 Tank Storage and Treatment 2-6
2.4.2 GMC Central Foundry Division Pontiac Plant (USEPA ID No. MID 085470102) 2-6
2.4.3 CPC Pontiac of General Motors Corporation (USEPA ID No. MID 005356886) 2-7
2.4.3.1 Container Storage 2-7
2.4.3.2 Tank Storage and Treatment 2-8
2.4.3.3 Surface Impoundment Storage and Treatment 2-8
2.4.4 GMC Warehousing and Distribution Division (USEPA ID No. MID 076331289) 2-9
2.5 Historical and Current Waste Management Practices 2-9
2.5.1 Historical Waste Management Practices 2-9
2.5.2 Current Waste Management Practices 2-10

Section 3. Site Setting 3-1

3.1 Land Use 3-1
3.2 Demographics 3-1
3.3 Climate 3-1

3.4 Regional Geology 3-2
3.4.1 Overburden 3-2
3.4.2 Bedrock 3-2
3.5 Regional Hydrogeology 3-3
3.5.1 Unconfined Water Table Zone 3-3
3.5.2 Glacial Aquifer(s) 3-3
3.5.3 Lower Sand and Gravel Aquifer 3-4
3.5.4 Bedrock Aquifer(s) 3-4
3.6 Regional Hydrology 3-4
3.7 Site Geology 3-4
3.8 Site Hydrogeology 3-5
3.9 Site Hydrology 3-5

Section 4. Listing of Previous Investigations 4-1

4.1 Fiero 4-1
4.2 Demolition Area (DA) 4-1
4.3 Metal Fabrication Division (MFD) 4-2
4.4 Powertrain 4-2
4.5 Service Parts Operation (SPO) 4-3

Section 5. Listing of Previous Remedial Actions 5-1

5.1 Fiero 5-1
5.2 Demolition Area (DA) 5-1
5.3 Metal Fabrication Division (MFD) 5-2
5.4 Powertrain 5-2
5.5 Service Parts Operations (SPO) 5-3
5.6 Sitewide Storm Sewer System 5-3

Section 6. Areas of Interest 6-1

6.1 Fiero 6-1
6.1.1 Powerhouse Satellite Accumulation Areas (AOI F-1) 6-2
6.1.1.1 Historical and Current Operations 6-2
6.1.1.2 Previous Investigations and Remedial Actions 6-2
6.1.1.3 Current Status 6-3
6.1.2 Waste Gasoline Accumulation Area (AOI F-2) 6-3
6.1.2.1 Historical and Current Operations 6-3
6.1.2.2 Previous Investigations and Remedial Actions 6-3
6.1.2.3 Current Status 6-3

6.1.3 Container Storage Area (CSA) (AOI F-3) 6-4
6.1.3.1 Historical and Current Operations 6-4
6.1.3.2 Previous Investigations and Remedial Actions 6-4
6.1.3.3 Current Status 6-5
6.1.4 Closed Container Storage Area (CSA) (AOI F-4) 6-5
6.1.4.1 Historical and Current Operations 6-5
6.1.4.2 Previous Investigations and Remedial Actions 6-6
6.1.4.3 Current Status 6-6
6.1.5 Former Fiero Wastewater Treatment Plant (WWTP) (AOI F-5) 6-6
6.1.5.1 Historical and Current Operations 6-6
6.1.5.2 Previous Investigations and Remedial Actions 6-6
6.1.5.3 Current Status 6-7
6.1.6 Waste Purge Thinner UST and Three Product USTs (AOI F-6) 6-7
6.1.6.1 Historical and Current Operations 6-7
6.1.6.2 Previous Investigations and Remedial Actions 6-7
6.1.6.3 Current Status 6-8
6.1.7 Wastewater Collection Sumps (AOI F-7) 6-8
6.1.7.1 Historical and Current Operations 6-8
6.1.7.2 Previous Investigations and Remedial Actions 6-9
6.1.7.3 Current Status 6-9
6.1.8 Former Paint Sludge Storage Area (AOI F-8) 6-9
6.1.8.1 Historical and Current Operations 6-9
6.1.8.2 Previous Investigations and Remedial Actions 6-10
6.1.8.3 Current Status 6-10
6.1.9 Temporary Container Storage Area (CSA) (AOI F-9) 6-10
6.1.9.1 Historical and Current Operations 6-10
6.1.9.2 Previous Investigations and Remedial Actions 6-10
6.1.9.3 Current Status 6-11
6.1.10 High-Pressure Fly Ash Storage Silo (AOI F-10) 6-11
6.1.10.1 Historical and Current Operations 6-11
6.1.10.2 Previous Investigations and Remedial Actions 6-11
6.1.10.3 Current Status 6-11
6.1.11 Low-Pressure Fly Ash Storage Silos (AOI F-11) 6-12
6.1.11.1 Historical and Current Operations 6-12
6.1.11.2 Previous Investigations and Remedial Actions 6-12
6.1.11.3 Current Status 6-12
6.1.12 Coal Storage Area (AOI F-12) 6-12
6.1.12.1 Historical and Current Operations 6-13
6.1.12.2 Previous Investigations and Remedial Actions 6-13
6.1.12.3 Current Status 6-13

6.1.13 Former Oily Pea Gravel, Concrete, and Debris Area (AOI F-13) 6-13
6.1.13.1 Historical and Current Operations 6-13
6.1.13.2 Previous Investigations and Remedial Actions 6-13
6.1.13.3 Current Status 6-14
6.1.14 Fuel AST Area (AOI F-14) 6-14
6.1.14.1 Historical and Current Operations 6-14
6.1.14.2 Previous Investigations and Remedial Actions 6-14
6.1.14.3 Current Status 6-14
6.2 Demolition Area (DA) 6-15
6.2.1 West Yard (AOI W-1) 6-15
6.2.1.1 Historical and Current Operations 6-15
6.2.1.2 Previous Investigation and Remedial Actions 6-16
6.2.1.3 Current Status 6-18
6.2.2 Former Hazardous Waste Storage Pad (AOI W-2) 6-18
6.2.2.1 Historical and Current Operations 6-18
6.2.2.2 Previous Investigations and Remedial Actions 6-19
6.2.2.3 Current Status 6-20
6.2.3 Former Plant 8 Flammable Liquid Storage Tank Farm (AOI W-3) 6-20
6.2.3.1 Historical and Current Operations 6-20
6.2.3.2 Previous Investigations and Remedial Actions 6-21
6.2.3.3 Current Status 6-21
6.2.4 Transformer Substation D-1 (AOI W-4) 6-21
6.2.4.1 Historical and Current Operations 6-21
6.2.4.2 Previous Investigations and Remedial Actions 6-22
6.2.4.3 Current Status 6-22
6.2.5 Plant 8 Basement AST Area (AOI W-5) 6-22
6.2.5.1 Historical and Current Operations 6-22
6.2.5.2 Previous Investigations and Remedial Actions 6-22
6.2.5.3 Current Status 6-23
6.2.6 Former Plant 8 Flammable Materials Storage Building (AOI W-6) 6-23
6.2.6.1 Historical and Current Operations 6-23
6.2.6.2 Previous Investigations and Remedial Actions 6-23
6.2.6.3 Current Status 6-23
6.2.7 Plant 9 Turbo Tank (Tank 9-1) (AOI W-7) 6-24
6.2.7.1 Historical and Current Operations 6-24
6.2.7.2 Previous Investigations and Remedial Actions 6-24
6.2.7.3 Current Status 6-24
6.2.8 Former Plant 9 Basement AST Area (AOI W-8) 6-24
6.2.8.1 Historical and Current Operations 6-24
6.2.8.2 Previous Investigations and Remedial Actions 6-25
6.2.8.3 Current Status 6-25

6.2.9 Former Central Foundry (Plant 6) Resin Spill and UST (AOI W-9) 6-25
6.2.9.1 Historical and Current Operations 6-25
6.2.9.2 Previous Investigations and Remedial Actions 6-25
6.2.9.3 Current Status 6-28
6.2.10 Railroad Marshalling Area Drainage System (AOI W-10) 6-28
6.2.10.1 Historical and Current Operations 6-28
6.2.10.2 Previous Investigations and Remedial Actions 6-28
6.2.10.3 Current Status 6-29
6.2.11 Salvage Yard Sump Drain (AOI W-11) 6-29
6.2.11.1 Historical and Current Operations 6-29
6.2.11.2 Previous Investigations and Remedial Actions 6-29
6.2.11.3 Current Status 6-30
6.2.12 Catalina Substation (AOI W-12) 6-30
6.2.12.1 Historical and Current Operations 6-30
6.2.12.2 Previous Investigations and Remedial Actions 6-30
6.2.12.3 Current Status 6-30
6.2.13 Montcalm Substation (AOI W-13) 6-30
6.2.13.1 Historical and Current Operations 6-31
6.2.13.2 Previous Investigations and Remedial Actions 6-31
6.2.13.3 Current Status 6-31
6.3 Metal Fabrication Division (MFD) 6-31
6.3.1 Wastewater Treatment Plant Area (AOI M-1) 6-32
6.3.1.1 Historical and Current Operations 6-32
6.3.1.2 Previous Investigations and Remedial Actions 6-32
6.3.1.3 Current Status 6-33
6.3.2 Former Plating Operations Area (AOI M-2) 6-33
6.3.2.1 Historical and Current Operations 6-33
6.3.2.2 Previous Investigations and Remedial Actions 6-34
6.3.2.3 Current Status 6-34
6.3.3 Former Track 31 (AOI M-3) 6-34
6.3.3.1 Historical and Current Operations 6-35
6.3.3.2 Previous Investigations and Remedial Actions 6-35
6.3.3.3 Current Status 6-36
6.3.4 Plant 25 Former Gasoline UST and Current Gasoline AST Location (AOI M-4) 6-36
6.3.4.1 Historical and Current Operations 6-36
6.3.4.2 Previous Investigations and Remedial Actions 6-36
6.3.4.3 Current Status 6-37
6.3.5 Former A-2 Fill Area (AOI M-5) 6-38
6.3.5.1 Historical and Current Operations 6-38
6.3.5.2 Previous Investigations and Remedial Actions 6-38
6.3.5.3 Current Status 6-39

6.3.6 Plant 5 Hydraulic Fluid Spill (AOI M-6) 6-39
6.3.6.1 Historical and Current Operations 6-39
6.3.6.2 Previous Investigations and Remedial Actions 6-39
6.3.6.3 Current Status 6-40
6.3.7 ELPO Building (AOI M-7) 6-40
6.3.7.1 Historical and Current Operations 6-40
6.3.7.2 Previous Investigations and Remedial Actions 6-41
6.3.7.3 Current Status 6-41
6.3.8 Plant 25 Oil Storage Area (AOI M-8) 6-41
6.3.8.1 Historical and Current Uses 6-41
6.3.8.2 Previous Investigations and Remedial Actions 6-42
6.3.8.3 Current Status 6-42
6.3.9 Plant 11 Heat Treat Oil Storage Area (AOI M-9) 6-42
6.3.9.1 Historical and Current Operations 6-42
6.3.9.2 Previous Investigations and Remedial Actions 6-43
6.3.9.3 Current Status 6-43
6.3.10 Plant 23 Basement AST Area (AOI M-10) 6-43
6.3.10.1 Historical and Current Operations 6-43
6.3.10.2 Previous Investigations and Remedial Actions 6-43
6.3.10.3 Current Status 6-43
6.3.11 Plant 12 Former Gasoline Storage Area (AOI M-11) 6-44
6.3.11.1 Historical and Current Operations 6-44
6.3.11.2 Previous Investigations and Remedial Actions 6-44
6.3.11.3 Current Status 6-44
6.3.12 AST East of Plant 49 (AOI M-12) 6-45
6.3.12.1 Historical and Current Operations 6-45
6.3.12.2 Previous Investigation and Remedial Actions 6-45
6.3.12.3 Current Status 6-45
6.3.13 ASTs Area West of Plant 14 (AOI M-13) 6-45
6.3.13.1 Historical and Current Operations 6-45
6.3.13.2 Previous Investigations and Remedial Actions 6-46
6.3.13.3 Current Status 6-46
6.3.14 Current AST Area East of Plant 12 (AOI M-14) 6-46
6.3.14.1 Historical and Current Uses 6-46
6.3.14.2 Previous Investigations and Remedial Actions 6-47
6.3.14.3 Current Status 6-47
6.3.15 Track 26 (AOI M-15) 6-47
6.3.15.1 Historical and Current Operations 6-47
6.3.15.2 Previous Investigations and Remedial Actions 6-47
6.3.15.3 Current Status 6-48

6.3.16 Plant 25 Basement Sump Area (AOI M-16) 6-48
6.3.16.1 Historical and Current Operations 6-48
6.3.16.2 Previous Investigations and Remedial Actions 6-48
6.3.16.3 Current Status 6-49
6.3.17 Plant 15 Southern Piping Trench (AOI M-17) 6-49
6.3.17.1 Historical and Current Operations 6-49
6.3.17.2 Previous Investigations and Remedial Actions 6-49
6.3.17.3 Current Status 6-49
6.3.18 Plant 5 Waste Accumulation Area (AOI M-18) 6-49
6.3.18.1 Historical and Current Operations 6-50
6.3.18.2 Previous Investigations and Remedial Actions 6-50
6.3.18.3 Current Status 6-50
6.3.19 Plant 5 Southern Access Railway (AOI M-19) 6-50
6.3.19.1 Historical and Current Operations 6-51
6.3.19.2 Previous Investigations and Remedial Actions 6-51
6.3.19.3 Current Status 6-51
6.3.20 Plant 23 Basement Area (AOI M-20) 6-51
6.3.20.1 Historical and Current Operations 6-51
6.3.20.2 Previous Investigations and Remedial Actions 6-52
6.3.20.3 Current Status 6-52
6.3.21 Plant 14 Transformer Station (AOI M-21) 6-52
6.3.21.1 Historical and Current Operations 6-52
6.3.21.2 Previous Investigations and Remedial Actions 6-52
6.3.21.3 Current Status 6-53
6.3.22 Plant 15 - Columbia Avenue Switch House (AOI M-22) 6-53
6.3.22.1 Historical and Current Operations 6-53
6.3.22.2 Previous Investigations and Remedial Actions 6-53
6.3.22.3 Current Status 6-53
6.3.23 Plants 25, 33, and 75 Substation and Power Building (AOI M-23) 6-53
6.3.23.1 Historical and Current Operations 6-54
6.3.23.2 Previous Investigations and Remedial Actions 6-54
6.3.23.3 Current Status 6-54
6.3.24 Plant 12 Transformer Oil Spill (AOI M-24) 6-54
6.3.24.1 Historical and Current Operations 6-54
6.3.24.2 Previous Investigations and Remedial Actions 6-55
6.3.24.3 Current Status 6-55
6.3.25 Plant 33 Basement Sump Area (AOI M-25) 6-55
6.3.25.1 Historical and Current Operations 6-55
6.3.25.2 Previous Investigations and Remedial Actions 6-55
6.3.25.3 Current Status 6-56

6.4 Powertrain 6-56
6.4.1 Former Powertrain UST Farm (AOI P-1) 6-56
6.4.1.1 Historical and Current Operations 6-56
6.4.1.2 Previous Investigations and Remedial Actions 6-57
6.4.1.3 Current Status 6-58
6.4.2 Existing Powertrain UST Farm (AOI P-2) 6-58
6.4.2.1 Historical and Current Operations 6-58
6.4.2.2 Previous Investigations and Remedial Actions 6-59
6.4.2.3 Current Status 6-59
6.4.3 Car Wash (AOI P-3) 6-60
6.4.3.1 Historical and Current Operations 6-60
6.4.3.2 Previous Investigations and Remedial Actions 6-60
6.4.3.3 Current Status 6-61
6.4.4 Powertrain Former Used Oil UST and Utility Line (AOI P-4) 6-61
6.4.4.1 Historical and Current Operations 6-61
6.4.4.2 Previous Investigations and Remedial Actions 6-62
6.4.4.3 Current Status 6-63
6.4.5 Powertrain Former Stoddard Solvent UST (AOI P-5) 6-63
6.4.5.1 Historical and Current Operations 6-63
6.4.5.2 Previous Investigations and Remedial Actions 6-63
6.4.5.3 Current Status 6-64
6.4.6 Emissions Control Building Former UST Farm and Stoddard Solvent AST (AOI P-6) 6-64
6.4.6.1 Historical and Current Operations 6-64
6.4.6.2 Previous Investigations and Remedial Actions 6-65
6.4.6.3 Current Status 6-65
6.4.7 Former Plant 18 Coolant AST Location (AOI P-7) 6-65
6.4.7.1 Historical and Current Operations 6-66
6.4.7.2 Previous Investigations and Remedial Actions 6-66
6.4.7.3 Current Status 6-66
6.4.8 Former Vacant Lot UST (AOI P-8) 6-66
6.4.8.1 Historical and Current Operations 6-66
6.4.8.2 Previous Investigations and Remedial Actions 6-67
6.4.8.3 Current Status 6-67
6.5 Service Parts Operations (SPO) 6-67
6.5.1 Former SPO Gasoline UST Location (AOI S-1) 6-68
6.5.1.1 Historical and Current Uses 6-68
6.5.1.2 Previous Investigations and Remedial Actions 6-68
6.5.1.3 Current Status 6-68
6.5.2 Former SPO Diesel UST Location (AOI S-2) 6-68
6.5.2.1 Historical and Current Uses 6-69
6.5.2.2 Previous Investigations and Remedial Actions 6-69
6.5.2.3 Current Status 6-69

6.6 Sitewide Storm Sewer System 6-69
6.6.1 Storm Sewer Outfall 001 6-69
6.6.1.1 Historical and Current Operations 6-70
6.6.1.2 Previous Investigations and Remedial Actions 6-70
6.6.1.3 Current Status 6-70

References

List of Acronyms

Tables

2-1 Historical and Current Site Buildings
2-2 RCRA Hazardous Waste Codes

6-1 Areas of Interest - Fiero
6-2 Storage Tank Summary - Fiero
6-3 Historic Data Summary - AOI F-3
6-4 Historic Data Summary - AOI F-6
6-5 Areas of Interest - Demolition Area
6-6 Storage Tank Summary - Demolition Area
6-7 Historic Data Summary - AOI W-1
6-8 Historic Data Summary - AOI W-2
6-9 Historic Data Summary - AOI W-9
6-10 Areas of Interest - Metal Fabrication Division
6-11 Storage Tank Summary - Metal Fabrication Division
6-12 Historic Data Summary - AOI M-3
6-13 Historic Data Summary - AOI M-4
6-14 Historic Data Summary - AOI M-5/S-3
6-15 Historic Data Summary - AOI M-15
6-16 Areas of Interest - Powertrain
6-17 Storage Tank Summary - Powertrain
6-18 Historic Data Summary - AOI P-1
6-19 Historic Data Summary - AOI P-2
6-20 Historic Data Summary - AOI P-3
6-21 Historic Data Summary - AOI P-4
6-22 Historic Data Summary - AOI P-5
6-23 Historic Data Summary - AOI P-8
6-24 Areas of Interest - Service Parts Operation
6-25 Storage Tank Summary - Service Parts Operation
6-26 Historic Data Summary - AOI S-1

6-27 Historic Data Summary - AOI S-2
6-28 Site Storm Sewer System Area of Interest

Figures

1-1 Site Location
1-2 Site Facilities
1-3 Site Operational Areas
1-4 Summary of Operational Areas and Facilities

2-1 Storm and Sanitary Sewer Outfalls

3-1 City of Pontiac Land Use Map
3-2 Regional Surficial Geology
3-3 Regional Bedrock Geology
3-4 Aquifer Characterization of the Glacial Drift
3-5 Aquifer Vulnerability to Surface Contamination
3-6 River Basins

6-1 Areas of Interest - Fiero
6-2 Areas of Interest - Demolition Area
6-3 Current Estimated Extent of LNAPL
6-4 Soil Boring and Monitoring Well Locations
6-5 Areas of Interest - Metal Fabrication Division
6-6 Areas of Interest - Powertrain
6-7 Areas of Interest - Service Parts Operation

Appendices

A SWMU Documentation
B Topographic Map, Sanborn Map, and Aerial Photograph Review
C RCRA Facility Information for CPC Pontiac Fiero Assembly Plant (MID 005356910)
D RCRA Facility Information for GMC Central Foundry Division – Pontiac Plant (MID 085470102)
E RCRA Facility Information for CPC Pontiac Division of GMC - Pontiac (MID 005356886)
F Demographic Information, 1990 Census
G Container Storage Area (AOI F-3)/Waste Purge Thinner (AOI F-6)
H Closed Container Storage Area (AOI F-4)
I Temporary Container Storage Area (AOI F-9)

Volume II

J	West Yard (AOI W-1)

Volume III

K	Hazardous Waste Storage Pad (AOI W-2)
L	Former Plant 8 Flammable Liquid Tank Farm (AOI W-3)
M	Transformer Substation D-1 (AOI W-4)
N	Former Plant 9 Turbo Tank (AOI W-7)
O	Former Central Foundry (Plant 6) (AOI W-9)
P	Railroad Marshalling Area Drainage System (AOI W-10)
Q	Salvage Yard Sump Drain (AOI W-11)
R	Catalina Substation (AOI W-12)
S	WWTP Boring Program (AOI M-1) and Former Track 31 (AOI M-3)
T	Former A-2 Fill Area (AOI M-5)
U	Plant 6 PCB Cleaup (AOI M-6) and Track 26 (AOI M-15)

Volume IV

V	Former Powertrain UST Farm (AOI P-1)
W	Existing Powertrain UST Farm (AOI P-2)
X	Car Wash UST Farm (AOI P-3)
Y	Powertrain Former Used Oil UST and Utility Line (AOI P-4)
Z	Powertrain Former Stoddard Solvent UST (AOI P-5)
AA	Former Vacant Lot UST (AOI P-8)
AB	Former SPO Gasoline UST (AOI S-1)
AC	Former SPO Diesel UST (AOI S-2)
AD	Site Storm Sewer System

1. Introduction

1.1 General

This Current Conditions Report (CCR) for the Pontiac North Campus, Pontiac, Michigan Site was prepared by ENCORE Environmental Consortium, LLC (EEC) (a consortium consulting group consisting of Blasland, Bouck, & Lee, Inc. [BBL], Conestoga-Rovers & Associates [CRA], and Haley and Aldrich, Inc.) for Environmental Corporate Remediation (ENCORE), a wholly-owned subsidiary of General Motors Corporation (GM, GMC).

On October 10, 2000, the U.S. Environmental Protection Agency (USEPA) and GM entered into a Voluntary Corrective Action Agreement for the GM Pontiac North Campus (hereafter referred to as the "Site"). The agreement calls for GM to work independently and voluntarily to investigate and, as necessary, stabilize and remediate releases of hazardous wastes or hazardous constituents at or from the Site in accordance with the Resource Conservation and Recovery Act (RCRA) and relevant USEPA corrective action guidance documents. This report was prepared and is submitted in accordance with Section V(1)(a) of the Voluntary Corrective Action Agreement.

The Site encompasses approximately 595 acres in the northwest quadrant of the City of Pontiac (Figure 1-1). This report covers four facilities, including:

- Chevrolet-Pontiac-Canada Group (CPC) Pontiac Fiero Assembly Plant (formerly GMC Fisher Body Division – Pontiac; USEPA ID No. MID 005356910);
- GMC Central Foundry Division - Pontiac Plant (USEPA ID No. MID 085470102);
- CPC - Pontiac (USEPA ID No. MID 005356886); and
- GMC Warehousing and Distribution Division (USEPA ID No. MID 076331289).

Each of these facilities is shown on Figure 1-2. Because Site operations have changed significantly in recent years, this report has grouped the operations according to current activities as follows:

- Fiero;
- Demolition Area (DA);
- Metal Fabrication Division (MFD);
- Powertrain; and
- Service Parts Operations (SPO).

Each of these operational areas are shown on Figure 1-3. Figure 1-4 provides an overlay of the facilities with the operational areas. A sixth sitewide area consists of the storm sewer system.

A wide range of automotive-related production processes have been performed at the Site since 1925, including car assembly, engine assembly, plating, heat treating, painting, metal stamping, machining, foundry operations, metal casting, and wastewater treatment operations.

1.2 Areas of Interest

Historically, two documents have been prepared regarding Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). The first document, titled *Certification Regarding Potential Releases from Solid Waste Management Units, CPC Pontiac Facility (USEPA ID No. MID 005356886)*, was completed by GM at the request of the USEPA in February 1986 (GM, 1986c) (Appendix A). This survey included the current MFD, Powertrain, and portions of the DA operational areas and identified seven SWMUs.

The second document, a report entitled *Preliminary Assessment/Visual Site Inspection* (PA/VSI) *Report, General Motors Corporation, Pontiac Fiero Plant, Pontiac, Michigan* (hereafter referred to as the Fiero PA/VSI Report), was prepared in February 1992 by PRC Environmental Management, Inc. (PRC), under contract to the USEPA (PRC, 1992) (Appendix A). The Fiero PA/VSI Report identified a total of 11 SWMUs and/or other AOCs at Fiero (MID 005356910). PA/VSIs have not been performed at the other three facilities.

For the purpose of this RCRA Corrective Action at the Site, areas identified during prior investigations using terms such as SWMUs and AOCs have been re-identified using the single term Area of Interest (AOI).

Presented within this CCR are a total of 64 AOIs, which were identified in the following manner:

- Seven SWMUs identified by GM in the 1986 *Certification Regarding Potential Releases from Solid Waste Management Units* (GM, 1986c);
- 11 SWMUs identified by PRC in the Fiero PA/VSI Report (PRC, 1992); and
- 46 other AOIs identified by GM as a result of a thorough review of historical GM files, Freedom of Information Act (FOIA) requests to regulatory agencies, discussions with GM personnel, and multiple Site walkthroughs.

A description of each AOI is provided in Section 6 of this report.

1.3 Purpose and Scope

The purpose and scope of this report is to provide the following:

- Brief overview of the pertinent features of the Site;
- Brief summary of the regional setting of the Site;
- Review of available information concerning the current and historical uses of the Site for the treatment, storage, or disposal of hazardous wastes or hazardous constituents;
- Summary of previous investigations;
- Summary of remedial activities conducted at the Site;
- Identification of any AOIs that may warrant further investigation or evaluation; and
- Justification for no further action at other AOIs identified in this report that do not warrant further investigation or evaluation.

1.4 Document Organization

This document is organized into six main sections. Section 1 presents the background, purpose, and organization of the document. Section 2 presents a brief description of the Site, including Site location, historical and current operations, and historical and current waste management practices. Section 3 presents regional information pertaining to the Site, including surrounding land use, demographics, climate, geology, hydrogeology, and hydrology. Section 4 presents a listing of previous investigations conducted at the Site. Section 5 presents a listing of remedial actions conducted at the Site. Finally, Section 6 presents a description and summary of the various AOIs, organized by operational area. A list of references and acronyms used in the report are provided following Section 6.

Tables, figures, and appendices referenced throughout this document provide additional supporting information.

2. Description of Site

This section provides a general description of the Site location, historical and current operations at the Site, a review of historical topographic and Sanborn maps and aerial photographs, RCRA regulatory history, and historical and current waste management practices.

2.1 Site Location

Comprising approximately 595 acres, the Site is located in the City of Pontiac, Oakland County, Michigan (see Figure 1-1). The Site is bounded to the south by Montcalm Street, to the west by Baldwin Avenue and the Grand Trunk Western Railroad Line, to the east by Joslyn Avenue and a plant service road, and to the north by Walton Boulevard and the Grand Trunk Western Railroad Line. Surrounding areas consist of residential subdivisions and mixed commercial and light industrial use properties.

2.2 Current and Historical Operations

This subsection contains information regarding current and historical operations at each of the five operational areas at the Site as shown on Figure 1-3. Information regarding the Site prior to development in 1924 was not available.

Historically, a wide range of automotive-related production processes, including car assembly, engine assembly, plating, heat treating, painting, metal stamping, machining, foundry operations, metal casting, and wastewater treatment activities, have been performed at the Site. Currently, the Site is used for metal fabrication, warehousing, and engineering. Many of the plants have changed designations during the life of the facility. Table 2-1 presents a summary of historical and current plant designations and associated activities. The locations of the plants, with current designations, are shown on Figure 1-3.

2.2.1 Fiero

The Fiero operational area consists of approximately 81 acres located at the southwestern portion of the Site (Figure 1-3) and includes Plant 17. Currently, this area is used for prototyping, storage, and other non-production purposes.

Operations began at the Fiero facility in 1925 as the GMC Fisher Body Plant. This plant supplied closed-type automotive bodies for the Oakland Motor Car Company, located at the Site. In 1932, the Oakland Motor Car Company became the Pontiac Motor Division. In 1935, the original GMC Fisher Body Plant, located at the Site, combined operations with the GMC Fisher Body Pontiac Plant with operations consisting of metal fabrication, soft trim fabrication, and body assembly. In 1942, operations at the Fiero facility converted to defense production work, which included production of military vehicle parts.

The facility was modernized to a two-line automotive assembly operation from 1959 to 1961. In August 1982, the facility ceased operations, and the Pontiac Motor Division took possession of the Site and renamed it Fiero. From 1983 to 1988, the Pontiac Fiero was assembled in Plant 17 on a one-car assembly line. The plant was divided into a body shop, chassis department, paint shop, and trim department. Fiero assembly operations ceased in August 1988. Since 1988, the facility has been used for various non-production purposes, including storage and prototyping.

Current and historical wastes generated from car assembly at Fiero may have included scrap metal and metalworking fluids and oils (petroleum-based, oil-water emulsions, or synthetic emulsions), paints, paint solvents, and plasticizers. A wastewater treatment plant was in operation at the Site from 1973 to 1983 and managed wastewater, wastewater treatment sludge, paint sludge, and bonderite sludge.

2.2.2 Demolition Area (DA)

The DA consists of approximately 48 acres of the south-central portion of the Site. There are currently no buildings or operations within the DA portion of the Site. The three former main operational buildings (the Foundry [Plant 6], Final Vehicle Assembly [Plant 8], and Engine Construction [Plant 9]) were demolished in 1995, 1997, and 1997, respectively. Since 1996, the DA has been the subject of ongoing soil and groundwater investigations and various interim measures that will be discussed in Section 6. The former plant locations are shown on Figure 1-3.

Construction of the Foundry (Plant 6) and Final Vehicle Assembly Plant (Plant 8) took place from 1927 to 1929. During this time, operations within these plants included production of parts and cars for the Oakland Motor Car Company. Expansions of the Foundry took place in 1937, 1940, 1941, 1945, 1946, 1957, and 1962. Expansions to Plant 8 took place in 1956, 1960, 1962, 1963, 1964, and 1970. Fisher Body Division commenced construction of the Engine Construction Building (Plant 9) in 1925, with construction completed by the mid-1930s. Expansions to Plant 9 took place in 1945, 1954, 1959, and 1967. In 1987, operations in Plants 6, 8, and 9 ceased. Plant 6 was demolished in 1995, and Plants 8 and 9 were demolished in 1997.

West of the Foundry (Plant 6) is an area referred to as the West Yard (see Figure 1-3). The West Yard was used for material disposal activities, including foundry sand disposal, refuse disposal, sludge dumping, and trash burning. An area designated as the Railroad Marshalling Area, located along the western side of the West Yard, was used for temporary storage of railcars loaded with scrap metal prior to being shipped off site. Also located in the West Yard were the Flammable Liquids Storage Building, the Compressor Building, and the Salvage Building. The Salvage Building, which included a refuse incinerator, was constructed in 1945 to separate reusable material from unusable wastes. The Salvage Building was demolished in 1998. The Compressor Building was constructed in the early 1970s and subsequently demolished in 1998. Also located in this area are the Montcalm Substation and the former crane bay.

In the 1970s, the West Yard was divided between two GM business units. The eastern and central portion of the West Yard became a portion of the Central Foundry Division, and the western area became property of the Automotive Manufacturing and Support Operations (Pontiac Motor Division, later CPC). In 1982, CPC constructed a Hazardous Waste Storage Pad to store hazardous waste for periods greater than 90 days. Closure activities for the Hazardous Waste Storage Pad were initiated in July 1988 by CPC.

Current and historical wastes generated in the DA may have included wastewater (which may have contained cadmium and lead), calcium carbide desulfurization slag, baghouse dust, and foundry sand. Additionally, solvents may have been used for cleaning.

2.2.3 Metal Fabrication Division (MFD)

The MFD area consists of approximately 236 acres in the center of the Site (Figure 1-3). It also represents the most active area of the Site with regard to current manufacturing operations. Plants currently located in the MFD area include Plants 5, 11, 12, 14, 15, 23, 25, 33, 49, 56, and ELPO (electrodeposition). Also present in the MFD area is a wastewater treatment plant (WWTP), which is located directly west of Plants 5 and 23. The locations of each of these plants and the WWTP are shown on Figure 1-3. Table 2-1 provides a cross-reference of historical and current plant numbers.

Plant 11 currently is used for repair work and maintenance activities. Plants 12 and 56 are vacant in preparation for demolition. Plants 14, 15, 49, and the eastern portion of Plants 5 and 23 house pressed metal operations, maintenance operations, and other support activities. The eastern portion of Plants 5 and 23 also houses axle and differential operations. The western portion of Plants 5 and 23 is used to store miscellaneous machine parts and also contains a waste storage and accumulation area. Plants 25 and 33 are undergoing renovation.

A significant portion of the MFD area is covered with paved parking areas, roadways, pallet storage areas, and truck trailer storage areas.

Plants 5 and 56 were originally constructed in 1927 and were used for the storage and final shipping of automobiles for the Oakland Motor Car Company. By 1945, Plant 56, originally designated Plant 2, had been converted for metal plating operations, and Plant 5 had been converted for axle operations. Metal plating operations at Plant 56 ceased in 1987. Plant 11, originally designated as Plant 1, was constructed in 1945 as the heat treating plant. Expansions to these buildings took place in 1958, 1963, 1964, 1966, and 1969, with Plant 5 subsequently being subdivided into Plants 5 and 23.

The Car Storage and Shipping Building (Plant 12) was constructed from 1950 to 1951 and was expanded in 1963. Two pressed metal plants (Plant 14 and Plant 15) were added in 1951 and 1952, respectively. Plant 14 was expanded in 1966. Plant 15 was expanded in 1954 and 1966. The Car Finishing Plant (Plant 16) was added in 1954. Plant 16 has since been demolished. Plant 49 was constructed in 1965 as a storage and shipping plant with an expansion occurring in 1969.

2.2.5 Service Parts Operations (SPO)

The SPO area consists of 80 acres of land located at the northern portion of the Site (Figure 1-3) and includes Warehouse Storage and Shipping & Receiving operations and parts painting (Plant 75). The building and adjacent paved roadways and parking areas encompass nearly all of this area.

The eastern portion of Plant 75 was built in 1964. Several expansions of Plant 75 occurred until the 1990s.

Current and historical wastes generated at SPO may have included paint-related material, parts washer solvent, plant trash, light ballast, and scrap auto parts (including leaded batteries).

2.3 Historical Mapping and Aerial Photographs

Historical topographic maps, Sanborn maps, and aerial photographs from Site records were reviewed. A detailed summary of the information obtained from these documents is provided in Appendix B. In general, the topographic map and aerial photograph reviews show a progression of development of the Site, which included filling of low areas/wetlands and construction of plants/buildings.

2.4 RCRA Regulatory History

A history of the Site with respect to RCRA compliance activities for each of the four facilities shown on Figure 1-2 is chronicled below.

2.4.1 CPC Pontiac Fiero Assembly Plant of GMC (USEPA ID No. MID 005356910)

GM submitted a Notification of Hazardous Waste Activity (USEPA Form 8700-12) on August 8, 1980 (GM, 1980c) and a RCRA Part A Permit Application on November 11, 1980 (GM, 1980e). The Part A Permit Application listed the GMC Fisher Body Division Pontiac as a treatment, storage, and disposal (TSD) facility. The permit cited processes requiring container storage (S01), tank storage (S02), tank treatment (T01), and other treatment (T04). In the June 1985 revision to the Part A Permit Application, the name of the facility was changed to CPC Pontiac Fiero Assembly Plant of GMC (GM, 1985c).

A discussion of the Interim Status Units for the CPC Pontiac Fiero Assembly Plant of GMC is provided below. Available RCRA Part A Permit Applications and related correspondence are provided in Appendix C.

2.4.1.1 Container Storage

The container storage interim status unit was located outside Plant 17 in the southwest driveway adjacent to the railroad tracks. The container storage area had an 18,700 gallon capacity and was used to store F001, F002, F007, F008, F003, F005, F010, F011, F017, and D001 waste (GM, 1980c). GM removed all waste codes except D001 waste in the June 1985 Part A Permit Application revision (GM, 1985c). GM received clean closure for the container storage area in February 1988 (MDNR, 1988a). A new container storage area was constructed on the south side of the storage dock of the assembly plant to replace the former container storage area (GM, 1985c). The new area had the same storage capacity as the former area and was used to store D001, F001, and F003 wastes (GM, 1987i). A closure report for the new container storage area was submitted in January 1995 (RUST, 1995); however, GM has not received official notification of clean closure from MDEQ.

2.4.1.2 Tank Storage and Treatment

In the November1980 Part A Permit Application, the interim status units for tank storage (600,000 gallon capacity), tank treatment (768,000 gallons per day [gpd] capacity), and other treatment (3,501,600 gpd capacity) were related to the WWTP (GM, 1980e). The November 1980 Part A permit application cited 384,000 gpd wastewater treatment sludge dewatering, 3,110,400 gpd paint sludge dewatering, and 86,400 gpd bonderite sludge dewatering in the "other treatment" (T04) treatment category. The WWTP stored and/or treated F018, F006, F009, F017, and D002 wastes. The tank storage, tank treatment, and other treatment processes associated with the WWTP were removed from the Part A Permit Application in June 1985 due to the January 4, 1985 RCRA Amendments (GM, 1985c).

A new interim status unit for tank storage was included in the June 1985 Part A Permit Application revision. This interim status unit was the waste purge thinner UST, located north of Plant 17 and west of the paint mix building. This unit had a capacity of 12,000 gallons and was used to store D001 waste (GM, 1985c). This waste category was changed to F005 waste in the February 1986 Part A Permit Application revision (GM, 1986b). A closure report for the waste purge thinner UST was submitted in January 1995 (RUST, 1995); however, GM has not received official notification of clean closure from MDEQ.

2.4.2 GMC Central Foundry Division Pontiac Plant (USEPA ID No. MID 085470102)

GM submitted a Notification of Hazardous Waste Activity in August 1980 (GM, 1980a) and a RCRA Part A Permit application to the USEPA on November 17, 1980 (GM, 1980f). The Part A Permit application listed the GMC Central Foundry Division Pontiac Plant as a TSD facility. The permit cited processes requiring container storage (S01) and treatment (T04). The container storage and treatment area was located west of the northern end of the former casting plant. Baghouse dust (D006) was the only waste listed on the application.

In February 1981, GM received a letter from USEPA (waste analysis program) that the baghouse dust stored at the plant did not meet the definition of a hazardous waste under 40 CFR Part 261.24 (USEPA, 1981). The *Arc Furnace Baghouse Dust EP Toxicity Study* by Clayton Environmental Consultants, Inc. (CEC) confirmed the previous USEPA findings (CEC, 1981).

Based on the CEC report, GM withdrew the RCRA Part A Permit application in July 1982 (GM, 1982b). Based on the information submitted by GM, the USEPA (waste management branch) confirmed that the baghouse dust was not defined as a hazardous waste (40 CFR 261.3); therefore, they concluded that the facility was not required to have a hazardous waste permit under Section 3005 of RCRA (USEPA, 1983).

The RCRA Part A permit application and associated correspondence are presented in Appendix D.

2.4.3 CPC Pontiac of General Motors Corporation (USEPA ID No. MID 005356886)

GM submitted a Notification of Hazardous Waste Activity on August 8, 1980 (GM, 1980b) and a RCRA Part A permit application on November 18, 1980 (GM, 1980g). The Part A Permit Application listed the Pontiac Motor Division of GMC as a TSD facility. The permit cited process codes for container storage (S01), tank storage (S02), surface impoundment storage (S04), tank treatment (T01), surface impoundment treatment (T02) and other treatment (T04). The facility name was changed to CPC Pontiac of General Motors Corporation in the June 1985 Part A Permit application revision (GM, 1985b). A discussion of Interim Status Units for CPC Pontiac of General Motors Corporation is presented below. Available RCRA Part A Permit Applications and associated correspondence are provided in Appendix E.

2.4.3.1 Container Storage

In the November 1980 Part A Permit Application, container storage at the facility was listed with a total capacity of 222,100 gallons (GM, 1980g). According to the map included with the November 1980 Part A Permit Application, there were numerous container storage areas throughout the facility. These areas were used to store F001, F002, F003, D001, F005, F006, F012, F018, F007, F008, F009, F010, F011, and F017 wastes. The number of container storage areas was reduced in the September 1982 Part A Permit Application revision due to the removal of paint sludge from hazardous classification (GM, 1982c). The only container storage area that retained interim status was the barrel storage area located southwest of the former engine plant.

The barrel storage area was a diked, concrete pad with a storage capacity of 45,000 gallons and was used to store D001 waste. GM revised the Part A Permit Application in January 1986 to address revisions to the solvent listings. As a result, the F001, F005, and D008 wastes were cited for the barrel storage area (GM, 1986a). In November 1987, GM informed USEPA that they wanted to convert their hazardous waste operations to "generator only" status. GM indicated that they had recently enclosed a portion of their barrel storage area and that they intended to use the enclosed area for accumulation of hazardous waste (GM, 1987h).

3. Site Setting

This section provides an overview of pertinent information on the regional and local setting of the Site. Section 3.1 provides relevant information regarding land use, Section 3.2 describes basic demographics within a 5-mile radius of the Site, Section 3.3 describes regional climate, Section 3.4 describes regional geologic conditions, Section 3.5 describes regional hydrogeologic conditions, Section 3.6 describes regional hydrologic conditions, Section 3.7 describes the Site geology, Section 3.8 describes the Site hydrogeology, and Section 3.9 describes the Site hydrology.

3.1 Land Use

The Site is zoned for industrial use, and areas surrounding the Site are zoned for a mixture of residential, commercial, and industrial use. Zoning determinations were based on a review of the City of Pontiac zoning map (Figure 3-1). The area south of the Site is occupied by two city parks (Perry Park and Oakland Park). The areas east and west of the Site are occupied by residential neighborhoods. Additionally, there is a residential neighborhood south of the SPO area in the northeast quadrant of the Site (Figure 1-3). The area north of the Site is occupied by a city park (Jaycee Park) and is also zoned for residential and industrial uses.

3.2 Demographics

Demographic information from the 1990 census indicated that approximately 14,300 people lived within a 1-mile radius of the Site, and approximately 109,800 people lived within a 5-mile radius of the Site (USEPA, 2000). More complete demographics information is presented in Appendix F.

3.3 Climate

Oakland County's weather is generally temperate, with an average winter temperature of 25.3° F and an average summer temperature of 70.2° F. The sun shines 38% of the time during the winter and 67% of the time in the summer. Average seasonal snowfall is 34.6 inches. Average annual precipitation is 29.7 inches with 58% (17.2 inches) occurring between the months of April and September. The average relative humidity for Oakland County is 80% (Feenstra, 1982). The prevailing winds are typically from the northwest in the winter months and the southwest in the summer months.

3.4 Regional Geology

Information on the regional geologic setting of the Site is based on published information.

East-central Oakland County is characterized by glaciofluvial deposits that are common to Oakland County. The regional overburden material consists of glacial till composed mainly of clay and some sands. Overburden material is regionally underlain by shales of Early Mississippian age.

3.4.1 Overburden

Continental glaciers advanced into this area of Michigan at least twice, once in each of the last two glacial stages of the Illinoian and Wisconsinan glaciers of the Pleistocene epoch. During the Wisconsinan stage, ice sheets of the Huron-Erie glacial lobe advanced from the southeast across the area of the Site. During the advance and retreat of this ice sheet, a series of end moraines (Fort Wayne, Defiance, and Birmingham) and a thick sequence of ground moraine (glacial till) composed of clay, silt, and rock fragments were deposited in this area. As the ice sheet retreated to the southeast, large volumes of meltwater formed glacial Lake Maumee between the Fort Wayne Moraine and the retreating glacier. The ice again advanced, forming the Defiance Moraine, and subsequently retreated, forming glacial Lake Arkona. As the ice advanced yet again from the east, the Birmingham Moraine was formed.

Pleistocene glaciation deposited glacial drift in a thickness of over 400 feet in parts of Oakland County. The buried bedrock surface is highly irregular. The Site is located in an area that is part of the lake plain of southeastern Michigan, formed by lakes that were ancestral to the present Great Lakes. Dunes, offshore bars, and lake-bottom sands, silts, and clays associated with the lakes are found in Oakland County. Figure 3-2 presents the regional surficial geology.

3.4.2 Bedrock

Oakland County is located along the southeast side of the Michigan Basin, a "bowl-like" feature in which the sedimentary rocks dip inward from all directions toward the center of the Southern Peninsula of Michigan.

The Coldwater Shale, of Early Mississippian age, is the first bedrock formation encountered in the area. The shale is primarily gray to dark gray. Other lithologies within this unit include red fossiliferous or nonfossiliferous shale, carbonate (limestone or dolomite), siltstone, and sandstone. Total thickness of the Coldwater Shale ranges across the Michigan Basin. In the vicinity of the Site, the unit may be up to 1,300 feet thick (Westjohn and Weaver, 1996). Located beneath the Coldwater Shale are sedimentary formations of the Berea Sandstone - Bedford Shale unit. Figure 3-3 presents the regional bedrock geology.

3.5 Regional Hydrogeology

Regional groundwater flow in both bedrock and glacial overburden appears to be predominantly to the east and south. Groundwater flow in glacial deposits in the Pontiac area is generally eastward towards local stream valleys, primarily the Clinton River (see Figure 3-6).

Groundwater resources in the Clinton River watershed exist in both the glacial drift and bedrock of the area. In the region surrounding the Site, groundwater is encountered in four general water-bearing units, as discussed in the following subsections:

- unconfined water table zone;
- glacial till aquifer(s);
- lower sand and gravel aquifer; and
- bedrock aquifer(s).

3.5.1 Unconfined Water Table Zone

The upper glacial till of the area contains an unconfined water table that is influenced by seasonal precipitation, local drainage patterns, and topography. The water table is located at a depth of approximately 10 to 30 feet below ground surface (bgs). The unconfined water table zone is not used for water supply purposes. The use of this zone as a potable supply would be generally prohibited by Michigan Department of Public Health regulations (Part 127 of Act 368 [Groundwater Quality Control], 1978) because it is at a depth of less than 25 feet.

3.5.2 Glacial Aquifer(s)

The regional glacial till is quite extensive, both areally and vertically. The glacial till moraines consist of poorly stratified clays, sand, and gravel that are not always continuous with depth. This material does not transmit large quantities of water and as a result, water bearing zones within this unit are not considered significant aquifers. However, in some areas, glacial outwash underlies the moraine material. In the vicinity of the Site, the outwash appears in a more complex, bedded sequence with the moraine. It is within these interbedded layers of outwash that larger quantities of water can be yielded over longer periods of time. Figure 3-4 identifies the Site within the regional aquifer characterization. As illustrated on Figure 3-5, impervious material (e.g., aquitards) may protect the lower, useable aquifers from surface contamination in the general vicinity of the Site (Western Michigan University, 1981).

3.5.3 Lower Sand and Gravel Aquifer

The regional lower sand and gravel aquifer is glacial outwash that generally consists of beds of well-sorted sand and gravel. This regional aquifer unit underlies the glacial till and the interbedded local outwash aquifers described above. Although the lower sand and gravel aquifer is not widespread throughout southeastern Michigan, it is prevalent throughout the region of the Site where the outwash is in distinct channels. This unit is considered the most important aquifer in the region because it provides storage for large quantities of water that can be used for both residential and industrial supplies.

3.5.4 Bedrock Aquifer(s)

On a regional basis, the Coldwater Shale and Bedford Shale are commonly considered nonproductive aquifers, typically yielding only small amounts of water. However, on a local basis, within parts of the region, the Coldwater Shale contains beds of sandstone. This occasional sandstone layer and the Berea Sandstone (where present) yield enough water for residential use. A more abundant water supply is found at impractical greater depths and with significant increases in mineral content.

3.6 Regional Hydrology

The Site is located within the Clinton River basin. The Clinton River basin drains an area of approximately 760 square miles, covering almost half of Oakland County and the majority of Macomb County to the east. The location of the Site within the Clinton River basin is shown on Figure 3-6. The Clinton River discharges into Lake St. Clair (approximately 25 miles to the east), which is used as a municipal drinking water supply for the City of Detroit.

Based on a review of the U.S. Geological Survey (USGS) Pontiac North Quadrangle map (USGS, 1983) (Figure 1-1), the nearest surface water bodies are Harris Lake, Terry Lake, and Osmun Lake, which are approximately 600 to 3,200 feet southwest to west of the Site, and the Clinton River, which is approximately 5,200 to 6,000 feet south to southeast of the Site.

Topography in the area of the Site is typically identified by relatively flat lake plain. This is separated from the undulating morainal hills of the northwest by relic beaches, which extend to the northeast.

3.7 Site Geology

Characterization of the overburden deposits at the Site have been limited to a few areas, mainly in the Powertrain and DA portions of the Site. Where information is available, the overburden at the Site is composed of fill materials underlain by sand or clay. These fill materials consist mainly of spent foundry sand that contains a variety

of debris including slag fragments and steel casings. Intermixed with the foundry sand is gravel, gray clay stringers, clayey fill material, and light brown sand. Fill material is typically encountered to depths of 4 to 14 feet bgs.

The fill material is underlain by either a sand or a clay unit. The sand unit contains lenses of silt or organic-rich peat and marl. The clay unit contains some interbedded sand lenses and silt, generally at depths of more than 14 feet bgs. Pebbles are often also encountered within the clay units. Local water well records indicate that the thickness of the clay unit in the vicinity of the Site ranges from 20 to 80 feet and that the clay is underlain by a sand and gravel unit that is approximately 20 feet thick. Fine-grained (e.g., silt or clay) and coarse-grained (e.g., sand or gravel) units alternate until bedrock is reached, at approximately 320 feet bgs.

3.8 Site Hydrogeology

Site groundwater is typically found at depths ranging from 10 to 20 feet bgs. Groundwater within this unit typically flows west-southwest, toward a series of small lakes (Harris Lake, Terry Lake, and Osmun Lake). Detailed Site-specific hydrogeologic information is restricted to areas of previous investigations, such as the West Yard portion of the DA.

Groundwater in the area near the Site is not currently used as a municipal water supply source. There are no municipal drinking water supply wells within a 5-mile radius of the Site (USEPA, 2000). The area surrounding the Site is on a municipal water supply from the City of Detroit (MDNR, 1987e). The nearest private well is approximately 5,000 feet from the Site (Superior, 2000).

3.9 Site Hydrology

Surface water drainage in the area surrounding the Site is to the west-southwest, toward a series of small lakes (Harris Lake, Terry Lake, and Osmun Lake) as shown on Figure 1-1. Site drainage is controlled by the paved surfaces and is typically directed to the storm sewer system.

4. Listing of Previous Investigations

This section provides a listing of the areas of the Site where previous investigations have occurred. It should be noted that all areas of the Site that were previously investigated are identified as an AOI, even if further investigations are not necessary. A detailed discussion of investigations for each AOI, if any, is presented in Section 6.

4.1 Fiero

Various investigations were conducted between 1986 and 1995 at the Fiero facility. These investigations consisted of:

- closure activities and additional subsurface investigation for the Container Storage Area (CSA) (AOI F-3);
- closure activities for the Closed CSA (AOI F-4); and
- closure activities for the Waste Purge Thinner UST and Three Product USTs (AOI F-6).

4.2 Demolition Area (DA)

Various investigations were conducted between 1971 and the present in the DA. These activities consisted of:

- various soil, groundwater, and light non-aqueous phase liquid (LNAPL) investigations in the West Yard (AOI W-1);
- various soil, chemical, and geotechnical and groundwater investigations in the area of the Former Hazardous Waste Storage Pad (AOI W-2);
- soil investigations related to the Former Plant 8 Flammable Liquids Storage Tank Farm (AOI W-3);
- wipe samples related to the polychlorinated biphenyl (PCB)-stained concrete floor of Plant 8 at Transformer Substation D-1 (AOI W-4);
- closure assessment for the Plant 9 Turbo Tank (Tank 9-1) (AOI W-7);
- various soil and groundwater investigations related to the Former Central Foundry (Plant 6), including closure assessment investigations (AOI W-9);

- soil and visual investigation related to the Railroad Marshalling Area (AOI W-10); and
- influent and effluent sampling during dumping at the Salvage Yard Sump Drain (AOI W-11).

4.3 Metal Fabrication Division (MFD)

Various investigations were conducted between 1985 and 2000 at MFD. These investigations consisted of:

- soil sampling adjacent to the WWTP (AOI M-1);
- residual material sampling in and around the Former Plating Operations Area (AOI M-2);
- various soil and groundwater investigations related to the Former Track 31 (AOI M-3);
- a soil and groundwater investigation in the vicinity of the Plant 25 Former Gasoline UST and Current Gasoline Aboveground Storage Tank (AST) Location (AOI M-4);
- a soil and groundwater investigation to characterize the material within the Former A-2 Fill Area (AOI M-5);
- analysis of spilled hydraulic fluid for PCBs at the Plant 5 Hydraulic Fluid Spill (AOI M-6); and
- a soil and concrete investigation at Track 26 (AOI M-15).

4.4 Powertrain

Various investigations were conducted between 1984 and 2000 at Powertrain. These investigations consisted of:

- various soil and groundwater investigations of the Powertrain Former UST Farm (AOI P-1);
- various soil and groundwater investigations of the Powertrain Existing UST Farm (AOI P-2);
- various soil and groundwater investigations of the Former Car Wash UST Farm (AOI P-3);
- various soil investigations of the Former Powertrain Used Oil UST and Utility Line (AOI P-4);
- a soil investigation of the Former Powertrain Stoddard Solvent UST (AOI P-5);

5. Listing of Previous Remedial Actions

This section provides a listing of the areas of the Site where remedial actions have occurred. It should be noted that all areas of the Site where previous remedial activities have occurred are identified as an AOI, even if further remedial activities are not necessary. A detailed discussion of remedial actions for each AOI, if any, is presented in Section 6.

5.1 Fiero

Several remedial actions and tank removal activities were conducted between 1986 and 1996 at Fiero. These activities consisted of:

- removal, transport, and disposal of wastes stored at the CSA (AOI F-3);
- closure and removal of the Closed CSA (AOI F-4);
- removal of the Waste Purge Thinner UST and Three Product USTs (AOI F-6); and
- removal of oily pea gravel, concrete, and debris from the Former Oily Gravel Area (AOI F-13).

5.2 Demolition Area (DA)

Various remedial actions and tank removals were conducted between 1971 and 1999 in the DA. These activities consisted of:

- removal of LNAPL from wells located in the West Yard (AOI W-1);
- remediation of leaking PCB transformers in the Compressor Building (AOI W-1);
- initiation of closure activities for the Former Hazardous Waste Storage Pad (AOI W-2);
- removal of PCB-containing transformer and 2 to 3 inches of concrete beneath the transformer at Transformer Substation D-1 (AOI W-4);
- removal of the Plant 9 Turbo Tank (Tank 9-1) (UST) (AOI W-7);
- remediation of resin spill in the Former Central Foundry (Plant 6) (AOI W-9);

- closure of the Former Central Foundry (Plant 6) (AOI W-9); and
- installation of the Railroad Marshalling Area Drainage System (AOI W-10).

5.3 Metal Fabrication Division (MFD)

Various remedial actions and tank removal activities were conducted between 1985 and 1996 at MFD. These activities consisted of:

- excavation of PCB-contaminated soil at the Former Track 31 (AOI M-3);
- removal of a UST and associated contaminated soils and installation of a hydrocarbon recovery system at the Plant 25 Former Gasoline UST and Current Gasoline AST Location (AOI M-4);
- removal of blacktop, concrete, and soil from the Plant 5 Hydraulic Fluid Spill (AOI M-6); and
- removal of soil and concrete potentially affected by the Plant 12 Transformer Oil Spill (AOI M-24).

5.4 Powertrain

Various remedial actions and tank removal activities were conducted between 1984 and 1999 at Powertrain. These activities consisted of:

- removal of a UST farm and excavation of contaminated soils associated with the Powertrain Former UST Farm (AOI P-1);
- removal of dispensing equipment and excavation of contaminated soils associated with the Powertrain Former UST Farm, at the location of the Powertrain Existing UST Farm (AOI P-2);
- removal of three USTs and excavation of contaminated soils associated with the Former Powertrain Car Wash (AOI P-3);
- removal of a UST and excavation of contaminated soils associated with the Former Powertrain Used Oil UST and Utility Line (AOI P-4);
- removal of a UST and excavation of contaminated soils associated with the Former Powertrain Stoddard Solvent UST (AOI P-5); and

- installation of recovery wells and removal of the USTs at the Former Emissions Control Building UST Farm and Stoddard Solvent AST (AOI P-6).

5.5 Service Parts Operations (SPO)

Two tank removals have been conducted in the SPO area. The activities consisted of:

- removal of an UST and excavation of contaminated soils associated with the Former SPO Gasoline UST (AOI S-1); and

- removal of an UST and excavation of contaminated soils associated with the Former SPO Diesel UST (AOI S-2).

5.6 Sitewide Storm Sewer System

The storm sewer system has been identified as an AOI due to the presence of PCBs. Remedial activities implemented to date include:

- cleaning of the storm sewer section that flows to the storm-water retention pond;

- removal of sediment from the storm-water retention pond; and

- upgrading of the storm-water treatment system.

6. Areas of Interest

This section provides a description and summary of Site AOIs. These AOIs were identified based on a review of available Site records, interviews with Site personnel, Site reconnaissance, historical investigations and remedial actions, the 1986 *Certification Regarding Potential Releases from Solid Waste Management Units* (GM, 1986c), the Fiero PA/VSI Report (PRC, 1992), and knowledge of past or present Site processes. AOIs were identified on the basis of whether a release of hazardous wastes and/or hazardous constituents to the environment had been determined to have occurred (i.e., prior documentation or verbal information) or was likely to have occurred (e.g., oil-saturated flooring or ground covering, staining of floor or ground surfaces coupled with cracks and holes in floor or ground coverings).

This section is organized with respect to the five operational areas that make up the Site, and a sixth area, which is the Site storm sewer system for Outfall 001:

- Fiero;
- Demolition Area (DA);
- Metal Fabrication Division (MFD);
- Powertrain;
- Service Parts Operations (SPO); and
- Site Storm Sewer System (Outfall 001).

These operational areas are illustrated on Figure 1-3.

A total of 64 AOIs have been identified, including various manufacturing processes and process components, process waste facilities, tanks, known or suspected areas of prior release of hazardous waste or hazardous constituents, waste handling areas, and prior remedial activities. A breakdown of the number and type of AOIs for each area is discussed below. Each AOI is discussed with respect to AOI description, historical and current operations, previous remedial investigations and actions, and current status, such as Further Action or No Further Action. Any AOIs designated as No Further Action either have approved Closures or can be visually inspected with little potential for historic releases to have impacted the surrounding area. Any AOIs not meeting these criteria have subsequently been designated as a Further Action AOI.

6.1 Fiero

There are 14 AOIs located within Fiero. The 14 AOIs in the Fiero area are shown on Figure 6-1 and consist of:

- six waste and/or container storage areas (AOI F-1, AOI F-2, AOI F-3, AOI F-4, AOI F-8, and AOI F-9);
- one former WWTP (AOI F-5);
- two UST or AST locations (AOI F-6 and AOI F-14);

6.2 Demolition Area (DA)

There are 13 AOIs located within the DA. The 13 AOIs in the DA are shown on Figure 6-2 and consist of:

- a former fill area (AOI W-1);
- a former hazardous waste storage pad (AOI W-2);
- five former UST or AST locations (AOI W-3, AOI W-6, AOI W-5, AOI W-7, and AOI W-8);
- three electrical transformers (AOI W-4, AOI W-12, and AOI W-13);
- the former foundry (AOI W-9);
- the railroad marshalling area (AOI W-10); and
- a sump drain (AOI W-11).

Each of these AOIs for the DA is summarized in Table 6-5 and discussed below. A listing of ASTs and USTs for the DA is provided in Table 6-6.

6.2.1 West Yard (AOI W-1)

AOI W-1 consists of the West Yard, an area of approximately 20 acres located in the southwest corner of the DA. It is bounded to the south by Montcalm Street, to the west by the Grand Trunk Western Railroad, to the east by the former Foundry (Plant 6) and to the north by the former Plant 9 (demolished in 1995). The West Yard area also includes the former A-1 fill area. The former landfill and a former waste pile were identified as SWMUs by GM in the *Certification of Potential Releases from Solid Waste Management Units* (GM, 1986c); therefore, the West Yard area is considered an AOI.

6.2.1.1 Historical and Current Operations

The entire area of the West Yard was historically used for material management activities related to the automotive manufacturing and support activities and foundry operations at the Site. Disposal activities occurred in the West Yard from the 1940s until 1979 and included foundry sand disposal, refuse disposal, sludge dumping, and trash burning. Soil borings indicate that the foundry sand extends from the surface to a depth of 18 feet bgs. A Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Section 103(c)) Notification was filed by GM in 1981, which indicated that past land use included the disposal of "organics, inorganics, and heavy metals" in this area until 1979 (GM, 1981a). GM also completed the *Certification Regarding Potential Releases from Solid Waste Management Units* in 1986. The CERCLA notification and the *Certification Regarding Potential Releases from Solid Waste Management Units* are presented in Appendix A.

During the 1940s, the Salvage Building was constructed to separate reusable/salvageable materials from unusable wastes. Wastes such as wood and cardboard ash from incineration were disposed in the West Yard.

The Compressor Building was located on the western boundary of the West Yard, immediately east of the Railroad Marshalling Area. The building contained two transformers, one inside the building and one immediately adjacent to it, that have been historically noted as leaking PCB-containing fluids.

After the complex was reorganized in the 1970s, part of the West Yard came under control of the Former Central Foundry (AOI W-9), while the rest of the West Yard came under control of the automotive manufacturing and support operations (originally the Pontiac Motor Division, later the CPC Division). CPC built and operated the Former Hazardous Waste Storage Pad (AOI W-2) on the western portion of the West Yard, which was used from 1982 through 1988 to support the automotive manufacturing and support services.

The West Yard has soils and groundwater that are known to contain organics and inorganics (i.e., heavy metals) due to disposal of wastes from the foundry, plating and polishing, and automotive assembly operations as reported in the *Certification Regarding Potential Releases from Solid Waste Management Units* (GM, 1986c). Light non-aqueous phase liquids (LNAPL) containing PCBs is also present in the West Yard. The area also contains a closed bermed settling basin (backfilled with sand) used for settling solids from water generated from foundry processes and a Railroad Marshalling Area Drainage System (AOI W-10) where railroad cars were used to load metal scrap for transport.

6.2.1.2 Previous Investigation and Remedial Actions

In 1996 and 1997, Parsons Engineering Science, Inc. (Parsons) conducted a review of historical field investigations. Parsons also conducted a field investigation in 1997 to further delineate contamination in this portion of the Site. As summarized by Parsons in its *West Yard Investigation Report* (Parsons, 1997b), various monitoring wells, geotechnical borings, test trenches, and soil borings were installed and sampled between 1988 and 1997. Included in the Parsons summary are historical investigations conducted by Dames & Moore and Groundwater Technology, Inc (GTI) with respect to the closure and decommissioning of the Former Hazardous Waste Storage Pad (AOI W-2). The Dames & Moore and GTI investigations are further discussed in Section 6.2.2 (AOI W-2). The Parsons' report is provided in Appendix J. Table 6-7 provides a summary of historical soil and groundwater analytical data with a comparison to current MDEQ Part 201 applicable standards.

The analytical results from the Parsons investigation are summarized below for both soil and groundwater.

Soil

Twenty surface samples were collected and analyzed for Target Compound List (TCL) VOCs, TCL semivolatile organic compounds (SVOCs), total PCBs, and Target Analyte List (TAL) metals. VOCs were detected in surface soil samples collected at the Site. Most VOC detections were below 79 micrograms per kilogram (ug/kg), with the exception of acetone, which was detected at a maximum concentration of 360 ug/kg. SVOCs were detected at a maximum concentration of 110,000 ug/kg. PCBs were detected at a maximum concentration of 3,100 ug/kg.

Various metals were also detected within the surficial soil samples. Manganese was detected in nine of the surficial soil samples at concentrations above the MDEQ Part 201 Criteria for the Generic Particulate Soil Inhalation Criteria.

Forty-eight subsurface soil samples were collected and analyzed for TCL VOCs, TCL SVOCs, PCBs, and TAL metals. VOCs were detected at a maximum concentration of 150,000 ug/kg. Generally, SVOC detections were below 480,000 ug/kg, although a maximum concentration of 1,100,000 ug/kg was detected for butyl benzyl phthalate, which exceeded the soil saturation (Csat) criteria. PCBs were detected at a maximum concentration of 43,000 ug/kg.

All results were below applicable criteria with the exception of butyl benzyl phthalate, which was detected once at a concentration above the Csat Criteria; PCBs and antimony, which were detected once at a concentration above MDEQ Part 201 Direct Contact Criteria; lead, which was detected at concentrations above the MDEQ Part 201 Direct Contact Criteria in three surficial soil samples; and manganese, which was detected at concentrations above the MDEQ Part 201 Criteria for the Generic Particulate Soil Inhalation Criteria in seven surficial soil samples.

Groundwater

Groundwater flow in the West Yard is generally to the southwest. The depth to groundwater varies from approximately 5 to 27 feet bgs and is present in the sand and fill zones underlain by a lower permeability clay zone. Groundwater samples were collected and analyzed for VOCs, SVOCs, PCBs, dioxins/furans, and metals. VOCs were detected at a maximum concentration of 310 micrograms per liter (ug/L). SVOC detections were generally below 50 ug/L, although a maximum concentration of 390 ug/L was detected for 2,4-dimethylphenol. PCBs were detected at a maximum concentration of 37 ug/L. Dioxins were detected at a maximum concentration of 0.00117 ug/L TEFs. The only constituents that exceeded applicable Part 201 criteria were vinyl chloride, which was detected once at a concentration above the MDEQ Part 201 Generic Groundwater Contact Criteria; and total PCBs, which were detected twice at concentrations above the MDEQ Part 201 Generic Groundwater Contact Criteria.

In January 1998, CRA initiated a bi-monthly LNAPL Recovery Program and Interim Remedial Measure (IRM). The IRM consisted of bail-down tests, sample collection and LNAPL removal activities from selected wells. Recovered LNAPL was containerized into 55-gallon drums, sealed, labeled, and disposed off site. The bi-monthly activities were conducted until August 1999. Currently, the LNAPL Recovery Program is conducted approximately monthly.

CRA performed an LNAPL investigation in 1999 to further delineate the nature and extent of LNAPL in the West Yard. The LNAPL investigation included the installation of soil borings and monitoring wells, LNAPL monitoring, the collection of soil samples, and the collection of LNAPL samples. The results of the LNAPL investigations are presented in the Draft LNAPL Delineation Report (CRA, 2000c; Appendix J). Figure 6-4 presents new and historical monitoring well locations where the LNAPL measurements were made. Soil and LNAPL analytical results are presented in the Draft LNAPL Delineation Report (CRA, 2000c).

LNAPL was also observed in the "Montcalm" well, which is located along the southern perimeter of the West Yard. The well is a former production well that is 13 inches in diameter and approximately 190 feet bgs. Investigations of the well performed by CRA determined that the LNAPL did not originate through migration from the surrounding soils in the West Yard (CRA, 2000c, draft). All LNAPL has been removed from the well, and the well is scheduled to be abandoned.

Figure 6-3 presents the estimated limits of LNAPL in the West Yard based on available information in CRA's report. CRA concluded from the investigation that there appear to be at least three sources of LNAPL present at the Site. CRA also concluded that the potential exists for further lateral migration of LNAPL based on the fill materials present at the West Yard.

Internal GM documentation (presented in Appendix J) reported historical issues with respect to leaking transformers in the Compressor Building. Transformer 451, located inside the Compressor Building, was noted as leaking on March 2, 1988, and was remediated daily (i.e., cleaned with solvents) until the leak was sealed on March 7, 1988. Transformer 450, located west of the Compressor Building, was noted as leaking on October 29, 1985, and was remediated daily (method of remediation unknown) until the leak was sealed on November 18, 1985. The transformers have been removed and the compressor building has been decommissioned and demolished. The concrete slab from the Compressor Building remains in place.

6.2.1.3 Current Status

Based on historical site usage and the data obtained during previous investigations indicating subsurface contamination, including the presence of LNAPL, **FURTHER ACTION** is recommended for AOI W-1.

6.2.2 Former Hazardous Waste Storage Pad (AOI W-2)

AOI W-2 consists of a former hazardous waste storage pad located in the western portion of the West Yard. This area is considered an AOI due to correspondence with the MDNR, as discussed under Section 6.2.2.3.

6.2.2.1 Historical and Current Operations

In 1982, a hazardous waste storage pad was constructed to store RCRA hazardous waste (RCRA Interim Status Unit). The hazardous waste storage pad is located immediately south of the former Salvage Building and west of the former Compressor Building. The pad is an approximate 27,000-square-foot, 8-inch-thick concrete pad with a 4-inch curb. Activities conducted on the pad included waste storage, drum washing, and empty drum storage. The pad was used for the storage of solid and liquid hazardous and non-hazardous wastes (i.e., paint, paint thinner, gasoline, chlorinated solvents, machine wastes, lead chips, and spent halogenated solvents) prior to July 1, 1988, at which time closure activities were initiated by CPC. As reported in the *Certification Regarding Potential*

Releases from Solid Waste Management Units, a waste pile containing WWTP sludge, machine sludges, and paint sludges occupied the storage pad from 1979 to 1981 (GM, 1986c).

6.2.2.2 Previous Investigations and Remedial Actions

Prior to pad construction, TEC conducted a soil/geotechnical investigation, the results of which are summarized in the report *Soil Investigation for Barrel Storage Area* (TEC, 1982). TEC stated that analytical testing was performed for chemicals and metals, although only select metals were presented in the report and the full analytical list was not provided. Based on the data, TEC concluded the soil could remain in place to allow for the construction of the Hazardous Waste Storage Pad. TEC's report is presented in Appendix K.

Closure plans were subsequently submitted by GM to MDNR in November 1987 (GM, 1987g), February 1988 (GM, 1988a), and May 1988 (GM, 1988c) to allow for the decommissioning of the pad. The MDNR rejected the first two closure plans, and in June 1988 approved the May 1988 plan (MDNR, 1988b). The May 1988 closure plan and MDNR's approval letter are presented in Appendix K. Closure activities conducted by Dames & Moore commenced in July 1988. As part of the decommissioning activities, Dames & Moore conducted two phases of soil sampling as summarized in the *Interim Closure Report - Former Container Storage Area* (Dames & Moore, 1989; Appendix K). It was noted in this report that the pad was heavily cracked and that much of the contamination was found in low-lying areas. All soil and groundwater samples were analyzed for lead, benzene, toluene, xylenes, 1,1,1-trichlorethane, methylene chloride, methyl ethyl ketone and 1-butanol. A summary of the soil and groundwater analytical results is presented in Table 6-8.

Dames & Moore reported in the *Endangerment Assessment - Former Container Storage Area* (Dames & Moore, 1990; draft) that there was a significant risk associated with the carcinogenic contamination. The estimated worst-case current use exposures and associated potential health risks were identified to be within the USEPA's target risk range.

GTI conducted a soil vapor extraction feasibility study that is summarized in both the *Subsurface Investigation and Soil Vapor Pilot Test - Feasibility Study* (GTI, 1990a) and the *Soil Vapor Pilot Test #2 – Feasibility Study* (GTI, 1990b). GTI installed several monitoring wells and obtained soil samples. Analytical results are summarized in Table 6-8. During a subsequent investigation, as reported in the *RCRA Pad Review - Hazardous Waste Storage Area* (GTI, 1991), it appears that GTI installed two additional monitoring wells, however well logs were not included. In this report, GTI summarizes the ongoing history of the hazardous waste storage pad without making any further discoveries in addition to those outlined previously.

A Parsons Site investigation conducted in 1996 and 1997 (Parsons, 1997b), which included AOI W-2, summarized historical investigations and remedial activities, concluding that it appeared infeasible to remediate the underlying soil and groundwater at the pad to the pad closure criteria. The Parsons investigation further stated:

The source of compounds in soils and groundwater under the pad most likely was not the activities at the pad, but historical waste management activities in the entire West Yard area associated with automotive manufacturing and support operations... GM agreed to conduct a West Yard area-wide investigation to evaluate the environmental conditions and assess the need for any appropriate corrective actions (Parsons, 1997b).

This conclusion is further supported by groundwater sampling and analysis conducted by Parsons in January 1996, which indicated that the LNAPL sampled from different wells originated from different sources and consisted of different concentrations and combinations of constituents (Parsons, 1997b).

6.2.2.3 Current Status

As outlined in a letter from the MDNR (MDNR, 1991), the former hazardous waste storage area did not meet "clean closure" criteria due to the unknown extent of contamination, and the inability of the proposed vapor extraction process to provide a final remediation. MDNR's letter is provided in Appendix K. GM previously reached an agreement with MDEQ that final closure of the pad would be granted upon implementation of remediation activities pertaining to historical impacts in the West Yard. GM will pursue final approval of the pad closure at an appropriate time. Based on this information, **NO FURTHER ACTION** is recommended for the hazardous waste storage pad.

6.2.3 Former Plant 8 Flammable Liquid Storage Tank Farm (AOI W-3)

AOI W-3 consists of a former flammable liquid storage tank farm located near the former Plant 8 in the northwestern corner of DA. This area is considered to be an AOI because of the materials historically stored in the former ASTs.

6.2.3.1 Historical and Current Operations

The former flammable liquid storage tank farm (tank farm) was historically used for the storage of flammable liquids, including diesel fuel, line thinner, gasoline, and solvents. The tank farm consisted of two separate areas, a north area and south area, each contained within a 3-foot-high dike. The condition or construction of the floor was not discussed in the available documents. The tank farm contained nine ASTs ranging in capacity from 13,000 to 26,000 gallons. The north section contained five ASTs and the south section contained four ASTs. Table 6-6 provides a summary of the tanks.

6.2.3.2 Previous Investigations and Remedial Actions

In the *Preliminary Soils Contamination Assessment - Plant 8 Flammable Liquid Tank Farm* completed by Keck Consulting Services (Keck) (Keck, 1984a), it was reported that many minor spills have occurred at the tank farm. The spills occurred during filling of the ASTs, when excess product in fill hoses was routinely drained inside the diked area surrounding the ASTs.

Keck evaluated the extent of fuel-contaminated soils in the *Preliminary Soils Contamination Assessment - Plant 8 Flammable Liquid Tank Farm* (Keck, 1984a) by placing eight soil borings and collecting soil samples for analysis. This assessment indicated that hydrocarbon-contaminated soil (concentrations not reported) was present from ground surface to depths of 8 to 16 ft bgs, where at six locations, a silt/clay layer was encountered. Keck concluded that the contamination had not entered the groundwater system because the clay layer was impeding the downward flow of the contaminants, and there was no evidence of hydrocarbon contamination in the deeper saturated sands of other borings. It was further recommended that the investigation be expanded in order to delineate the lateral extent of contamination outside the tank farm area. The 1984 assessment is included in Appendix L.

6.2.3.3 Current Status

The former flammable liquids storage tank farm has been decommissioned and demolished. There is no documentation indicating that recommended remedial investigations have taken place in the area of the tank farm nor is there documentation of the tank closure activities. Based on this information and historic information indicating subsurface contamination, **FURTHER ACTION** is recommended for AOI W-3.

6.2.4 Transformer Substation D-1 (AOI W-4)

AOI W-4 consists of transformer substation D-1, which was previously located in the southeast quadrant of the former Plant 8. This area is considered an AOI because of documented PCB transformer oil spills within the substation.

6.2.4.1 Historical and Current Operations

Transformer Substation D-1 was located within Plant 8 until it was removed prior to the demolition of Plant 8 in 1997.

6.2.4.2 Previous Investigations and Remedial Actions

As part of the demolition of Plant 8, PCB-containing transformers were removed from substation D-1 located within the plant. Following removal of the transformers, staining observed on the concrete floor was cleaned by the contractor who removed the transformers. Wipe samples taken after the spill cleanup indicated residual PCB contamination. Remedial actions were subsequently undertaken by SUNPRO and summarized in the *Final Report-PCB Remediation Substation D-1* (SUNPRO, 1996). The SUNPRO report is provided in Appendix M.

SUNPRO provided environmental remediation services in August 1996 to address residual PCB contamination after transformer decommissioning and removal. SUNPRO removed 2 to 3 inches of concrete from where the transformers were formerly located. Concrete removal was conducted under negative air to suppress dust migration during removal activities. Post remedial wipe sampling indicated compliance with the USEPA PCB cleanup requirement of less than 10 ug/100 cm^2.

6.2.4.3 Current Status

The transformer substation D-1 has been decommissioned and demolished. Cleanup activities relative to the concrete staining were completed in 1996 and met USEPA cleanup requirements. Based on this information, **NO FURTHER ACTION** is recommended for AOI W-4.

6.2.5 Plant 8 Basement AST Area (AOI W-5)

AOI W-5 consists of ASTs located in the basement of the former Plant 8. The basement AST area of the former Plant 8 is considered an AOI because of the materials (weak metallic wastewater, alkali wastewater, and unknown materials) historically stored in the former ASTs.

6.2.5.1 Historical and Current Operations

Undated CPC documents indicate that the basement of Plant 8 contained 17 ASTs, of which three had a capacity of 680 gallons, seven had a capacity of 7,400 gallons, and seven had a capacity of 11,300 gallons each. The documentation further indicates that 15 of the ASTs were empty, while two of the 7,400-gallon ASTs were used to store weak metallic wastewater and alkali-oily wastewater, respectively. This information is summarized in Table 6-6.

6.2.5.2 Previous Investigations and Remedial Actions

No documentation available.

6.2.5.3 Current Status

Plant 8 has been decommissioned and was demolished in 1997. There is no current information available on closure of the ASTs; therefore, **FURTHER ACTION** is recommended for AOI W-5.

6.2.6 Former Plant 8 Flammable Materials Storage Building (AOI W-6)

AOI W-6 consists of the former Plant 8 Flammable Materials Storage Building located in the northwestern corner of the DA, west of the Flammable Liquid Tank Farm (AOI W-3). This area is considered an AOI because of the materials (oils and glycols) historically stored in the building.

6.2.6.1 Historical and Current Operations

Undated documentation provided by CPC indicates that the Flammable Materials Storage Building housed 17 tanks containing oils and glycols, of which nine were 15,000-gallon tanks and eight were 22,000-gallon tanks. A summary of the tanks is presented in Table 6-6. The doors of the storage building were above ground level, causing the storage building to act as a diked area. The railroad and truck unloading areas contained catch basins that were connected to the WWTP.

The area is now vacant land.

6.2.6.2 Previous Investigations and Remedial Actions

No documentation available.

6.2.6.3 Current Status

The flammable materials storage building has been decommissioned and demolished. Portions of the building foundation remain in place. There is no information available on the closure of the tanks prior to demolition; therefore, **FURTHER ACTION** is recommended for AOI W-6.

6.2.7 Plant 9 Turbo Tank (Tank 9-1) (AOI W-7)

AOI W-7 consists of a turbo tank (Tank 9-1) that was previously located in the area immediately northwest of the former Plant 9. This area is considered an AOI because of the material historically stored in the UST.

6.2.7.1 Historical and Current Operations

Tank 9-1 was a registered UST installed as early as 1983, and was used for storing gasoline. Tank 9-1 is presented on the UST summary presented in Table 6-6. The 550-gallon UST was reportedly removed in June 1991, and was requested to be considered "closed" in an application to the Michigan State Police, Fire Marshal Division, Hazardous Materials Section, in three letters from CPC dated September 11, 1990 (GM, 1990), June 27, 1991 (GM, 1991), and March 6, 1992 (GM, 1992a). These letters are presented in Appendix N.

6.2.7.2 Previous Investigations and Remedial Actions

TEC's *UST Closure Site Assessment* could not be located but was mentioned in the letter from GM dated June 27, 1991 (see Appendix N). The TEC Tank 9-1 site assessment showed no contamination, and was therefore considered closed by CPC Pontiac.

6.2.7.3 Current Status

Based on the closure activities associated with the UST, **NO FURTHER ACTION** is recommended for AOI W-7.

6.2.8 Former Plant 9 Basement AST Area (AOI W-8)

AOI W-8 consists of 12 ASTs formerly located in the Plant 9 basement. This area is considered an AOI because of the materials (kerosene, coolants, and unknown materials) historically stored in the ASTs. Furthermore, during recent storm sewer cleaning activities, kerosene-like odors were observed in the section of storm sewer near former Plant 9.

6.2.8.1 Historical and Current Operations

According to undated CPC correspondence, the basement of Plant 9 contained 12 ASTs (ASTs 9-2 through 9-13). Of the 12 ASTs, five tanks (four 10,000-gallon, and one 6,400-gallon) previously contained kerosene, three tanks (two 1,4000-gallon and one 2,000-gallon) were empty, and four tanks (all 10,000-gallon) previously contained coolant. Table 6-6 presents a summary of the tanks formerly contained in the basement of Plant 9.

6.2.8.2 Previous Investigations and Remedial Actions

No documentation available.

6.2.8.3 Current Status

All tanks have been removed and Plant 9 has been decommissioned and demolished. However, there is no documentation on the closure of the ASTs. Kerosene-like odors have also been reported in the storm sewers in this area. As a result, **FURTHER ACTION** is recommended for AOI W-8.

6.2.9 Former Central Foundry (Plant 6) Resin Spill and UST (AOI W-9)

AOI W-9 consists of the former Central Foundry (Plant 6) previously located in the southeast corner of the DA, which was bordered on the south by Montcalm Street, on the west by the West Yard, on the east by Glenwood Avenue, and on the north by Plant 9. The former Central Foundry Building covered approximately 900,000 square feet. This area is considered an AOI because of the historical use of PCBs in the foundry, a resin spill that occurred in the plant, and a former 20,000-gallon tank that was located in this area.

6.2.9.1 Historical and Current Operations

The foundry was originally built for the Oakland Motor Car Company and was later transferred to Pontiac Motor Division around 1932. Major modifications to the foundry included the installation of a rotary mechanical iron pourer and a new mold line. The foundry produced iron from metallic ore, which was cast into automotive parts, such as cast iron engine blocks and heads. The Pontiac Central Foundry ceased production and closed in May 1987 and was demolished in April 1995. Foundry sand from the plant was used as fill material in the West Yard as discussed in AOI W-1, and was also reportedly disposed off site in at least one former Oakland County Landfill.

6.2.9.2 Previous Investigations and Remedial Actions

On November 17, 1980, GM filed a RCRA Part A permit application for the GM Central Foundry Plant (MID 085470102) (GM, 1980f). The only waste listed on the application was baghouse dust (code D006) from the facility's electric arc melt furnaces. The RCRA Part A permit application and associated correspondence are provided in Appendix D.

The RCRA Part A permit application was withdrawn on July 12, 1982 on the basis that the baghouse dust was not a hazardous waste under 40 CFR part 261 (GM, 1982b). A March 29, 1983 letter from USEPA acknowledged the withdrawal of the RCRA Part A permit application (USEPA, 1983).

In 1985, a resin spill occurred in Plant 6. The resin storage building was located in the northwest quadrant of the foundry. Within the resin storage building there were two 6,000-gallon tanks located on a steel grilled floor, each positioned over a sump designed to contain spills and overflows. During the summer of 1985, it was discovered that the sumps were leaking resin, and the situation was reported to the MDNR.

Between August and December of 1985, Schleede-Hampton Associates Inc. (SHA) performed a preliminary exploration of the area surrounding the resin storage facility to determine the soil conditions and the extent of resin contamination in the area. SHA concluded that the resin constituents are confined to the area within approximately 20 feet of the resin storage building. Based on the information gathered during this exploration, a work plan for the cleanup was developed. This work plan is presented in the report entitled *Department 671 Resin Storage Facility - Outline for the Design of a Remedial Action Program* (SHA, 1985). This report contains the preliminary exploration information as well as guidelines for further soil sampling exploration. It was approved by the MDNR on February 11, 1987 (MDNR, 1987a).

In a letter to the MDNR dated July 1, 1987, GM noted that the implementation of the 1985 work plan was scheduled to begin on July 6, 1987 (GM, 1987e). The *Department 671 Resin Storage Facility - Site Exploration and Environmental Action Plan* (SHA, 1988) presents the results of the additional investigation. A summary of soil and groundwater samples analyzed during this study are presented in Table 6-9.

The *Results of Final Soil Sampling and Analysis for Clean-Up Verification* report, summarizes the resin remedial activities that took place on site (SHA, 1989). The report is provided in Appendix O. The dates of the cleanup and the specific actions taken are not presented in any of the documentation. The remedial action instituted at the Site was limited to excavation of resin contaminated soils. At a nominal depth of 20 feet below the ground surface verification sampling and analytical testing were completed on a grid pattern. The results verified that no evidence of resin constituents were present in any of the grid positions. On December 11, 1989, the MDNR approved closure of the Department 671 Resin Storage Facility (MDNR, 1989) (see Appendix O).

Several recommendations with respect to areas of concern within the foundry were identified and included the removal, decontamination, and proper disposal of the 20,000-gallon UST on the south side of the facility within nine months after the tank is removed from service.

The *Deactivation Assessment (Final Draft Report)* (O'Brien & Gere [OBG], 1994) mentions that the UST was removed prior to plant shutdown. No other documentation is available for the UST removal. The *Deactivation Assessment (Final Draft Report)* identifies items of environmental concern at the foundry prior to the demolition of equipment and facilities.

A reconnaissance survey by OBG revealed three distinct basement areas within the foundry: basement area 2, the cleanup room and the foundry basement. Basement area 2 was inaccessible due to an accumulation of 1.25 ft of water on the floor. The water contained dissolved arsenic at a concentration exceeding MDNR Type B Criteria for groundwater.

The cleanup room and the foundry basement held significant accumulation of sediment and dust. Analytical results showed that the concentration of total metals and organics in both areas and the cyanide concentration in the foundry basement exceeded the MDNR Type B Criteria for soil. Leachability tests indicated that the detected metals in both areas do not readily leach. PCBs were present in concentrations above Toxic Substances Control Act (TSCA) regulated levels on stained surfaces in the cleanup room and in soil/dust samples in the foundry basement.

Analysis of the first floor, second floor and penthouse level of the foundry building indicated the presence of asbestos containing materials (ACMs) existing in the form of dust and debris on the first floor. Equipment that may contain PCBs, mercury, oil and/or hydraulic fluid was found on all three levels. Paint chips collected from the first and second floors contain lead concentrations exceeding MDNR Type B Criteria for soil. Soil, sediment, and dust samples collected within the first floor and penthouse level indicate the presence of total metals in concentrations that exceed the MDNR Type B Criteria for soil. Leachability analyses of the paint chips and the soil/sediment/dust indicate that the metals do not readily leach.

Demolition of the foundry structure was completed in April 1995. No correspondence regarding the decommissioning and demolition activities was available for review.

From May 22 through May 24, 1995, the USEPA performed a PCB soil and/or debris sampling inspection. The *PCB Sampling Report* (Chester, 1996) is presented in Appendix O. At the time of the sampling, the foundry was demolished. The remaining structures included the compressor, salvage, and melt shop buildings and part of the core storage office and East Loading Dock area.

Five soil and/or debris samples were taken at locations throughout the demolition site where PCB's had been identified during a GM-conducted Facility Assessment. Four samples were collected by removing soil and/or debris from the top of concrete slabs. The fifth sample was collected in the Molding area at the soil surface. Two samples were taken from each location and were individually tested by both USEPA and GM. Aroclor 1242 was the only Aroclor detected at the East Loading Dock at a concentration 82 mg/kg and 36 mg/kg from the USEPA and GM, respectively. As stated in the *PCB Sampling Report*, the USEPA informed GM that this was the only area of concern, as it was the only area with a PCB concentration greater than 50 mg/kg (USEPA result) (Chester, 1996).

Prior to demolition, the East Loading Dock area was swept and the debris placed in 55-gallon drums. These drums were sealed, removed from the site, and disposed at an EPA approved landfill. To confirm the cleanliness of the area, the USEPA requested four wipe samples be taken. Five wipe samples were taken from the concrete surface, and analysis showed that the highest PCB concentration was 4.4 ug/wipe. The report concludes at this point and does not suggest any further action is required.

6.2.9.3 Current Status

The Foundry (Plant 6) has been decommissioned and demolished. Previous remedial activities have addressed the former resin spill and the presence of PCBs. However, documentation does not exist for closure of the 20,000-gallon UST; therefore, **FURTHER ACTION** is recommended.

6.2.10 Railroad Marshalling Area Drainage System (AOI W-10)

AOI W-10 consists of a railroad marshalling area that extends the entire length of the western boundary of the West Yard. This area is considered an AOI because of historical operations.

6.2.10.1 Historical and Current Operations

Historical operations at the Railroad Marshalling Area included the temporary storage of railcars loaded with scrap metal and grinding waste to be shipped off site. Waste from the waste metal chips drained out of the railcars and into the railway ballast/soil immediately beneath the tracks. An oily discharge originating from the railroad area was noted in July 1971 immediately south of the marshalling area in a culvert on school property. The culvert is known to drain into Harris Lake.

6.2.10.2 Previous Investigations and Remedial Actions

The following information was obtained from a CPC Environmental Evaluation Report dated August 5, 1971 (GM, 1971), and subsequent internal handwritten CPC documents dated as late as February 1972. Available documentation is provided in Appendix P. The superintendent of the Pontiac School District bus garage, Mr. Carl Burnside, reported to CPC that an oily discharge was seen coming from a culvert originating from CPC property. A sample from the culvert was obtained by Ron Grimes of the Oakland County Environmental Health Department and analyzed for coliform, which indicated 214,000 counts, a concentration above Michigan State guidelines. A visual inspection of the area indicated that oil had run off the CPC property from the railroad area, down the roadway, and entered an on-site storm sewer discharging to Harris Lake. The oil in the storm sewer was pumped out, and daily monitoring of the area ensued. The duration and extent of the monitoring activities is not known. An earthen sump existed at the marshalling area that collected the oily runoff, and a pump was installed that directed oily wastewater to the WWTP. Overflow during periods of rain was noted during the months of September and October, and sampling during this period indicated coliform counts remained above guidelines. It is unclear where the samples were obtained. Correspondence could not be located for periods between February and November of 1972.

As a result of the incident, the railroad marshalling area drainage system was installed by CPC in November 1972. The drainage system was designed to collect the oily discharge dripping out of railcars and to pump the oil to the WWTP.

6.2.10.3 Current Status

The railroad marshalling area is no longer used for the storage of railcars. The railroad marshalling area drainage system remains at the Site. Based on reported oily discharges and historic operations associated with the railroad marshalling area, **FURTHER ACTION** is recommended for AOI W-10.

6.2.11 Salvage Yard Sump Drain (AOI W-11)

AOI W-11 consists of the Salvage Yard sump drain. The location of the sump drain is unclear. The Salvage Building was located on the western boundary of the West Yard, north of the Compressor Building, and immediately east of the rail lines. This area is considered an AOI because of the historical disposal activities that took place at this location.

6.2.11.1 Historical and Current Operations

The location of the Salvage Yard sump drain is unclear, since it is not directly mentioned in the documentation. It should be noted that there is a sump located immediately adjacent to the Salvage Building, within the hazardous waste storage pad, but it is not known if this is the location where dumping activities took place.

Internal CPC documentation dated September 24, 1985, indicates that 69 barrels with various liquid contents were dumped down the salvage sump during June and July 1985. The documentation indicates that numerous city sewer ordinance limits were breached by CPC. Samples of water were taken from the influent and effluent tanks at the WWTP each day of the dumping. Chloride concentrations exceeded the city limits on each of the eight days of dumping. Total Kjeldahl Nitrogen (TKN) was exceeded on six of the eight days of dumping, and nickel was exceeded on two of the days of dumping.

6.2.11.2 Previous Investigations and Remedial Actions

Samples of water were taken from the influent and effluent tank at the WWTP each day of the dumping. Chloride concentrations exceeded the city limits on each of the eight days of dumping. TKN was exceeded on six of the eight days of dumping, and nickel was exceeded on two of the days of dumping.

6.2.11.3 Current Status

Information is not available on the condition of the sump drain. Due to the past reported incidents at this location, **FURTHER ACTION** is recommended for AOI W-11.

6.2.12 Catalina Substation (AOI W-12)

AOI W-12 consists of the Catalina Substation located south of Montcalm Street and east of the storm-water retention pond. This area is considered an AOI because there were reported spills of PCB-containing oils with subsequent remedial action implemented.

6.2.12.1 Historical and Current Operations

The substation is owned by GM and leased to Detroit Edison. This power station was used to service the foundry operations.

Access to the substation was restricted during the recent Site walkthrough.

6.2.12.2 Previous Investigations and Remedial Actions

In response to a release of PCB-containing transformer oils on August 19, 1985, GM initiated a sampling and analysis program for PCB-contaminated soils followed by remedial action (GM, 1986j). These remedial actions involved removal of PCB-contaminated soils. These remedial efforts were approved by the MDNR in a letter dated May 27, 1987 (MDNR, 1987b), and are provided in Appendix R.

6.2.12.3 Current Status

Based on the approved remedial activities, **NO FURTHER ACTION** is recommended for AOI W-12.

6.2.13 Montcalm Substation (AOI W-13)

AOI W-13 consists of the Montcalm Substation, located east of Saginaw Street and north of Montcalm Street. This area is considered an AOI because transformer oil that potentially contained PCBs was used at the substation.

6.2.13.1 Historical and Current Operations

The Montcalm Substation is located east of Saginaw Street and north of Montcalm Street. This substation was used to service the Site and acted as a backup to the Catalina Substation.

Access to the substation was restricted during the recent Site walkthrough. There have been no documented releases associated with the power substation.

6.2.13.2 Previous Investigations and Remedial Actions

There have been no previous investigations or remedial actions associated with the substation.

6.2.13.3 Current Status

There is no information available on this area; therefore, **FURTHER ACTION** is recommended for AOI W-13.

6.3 Metal Fabrication Division (MFD)

There are 25 AOIs located within the MFD portion of the Site. The 25 AOIs in the MFD area consist of:

- one wastewater treatment plant (AOI M-1);
- one former plating area (AOI M-2);
- three former PCB-containing fluid spills (AOI M-3, AOI M-6, and AOI M-24);
- nine UST or AST locations (AOI M-4 and AOI M-7 to AOI M-14);
- one former fill area (AOI M-5);
- two railroad spurs (AOI M-15 and AOI M-19);
- two building sump areas (AOI M-16 and AOI M-25);
- one piping trench (AOI M-17);
- one waste accumulation area (AOI M-18);
- one plant basement (AOI M-20); and
- three electrical substations (AOI M-21 to AOI M-23).

Figure 6-5 shows the locations of the AOIs within the MFD portion of the Site. A summary of the MFD AOIs is presented in Table 6-10. A detailed listing of the ASTs and USTs is presented in Table 6-11.

6.5.2.1 Historical and Current Uses

Plant 75 is used exclusively for warehousing. A 10,000-gallon gasoline UST was removed from a location on the south side of Plant 75. A 4,000-gallon fiberglass UST used to store diesel fuel was removed January 28, 1992.

6.5.2.2 Previous Investigations and Remedial Actions

O'Brien & Gere submitted a 45-day report describing the removal activities in March 1992 (OBG, 1992) (see Appendix AC). As a result of BTEX and PAH detection in the soil and water samples collected during the removal, GM was required to complete a hydrogeological investigation to define the horizontal and vertical extent of the impacted soil and groundwater. A summary of analytical data is presented in Table 6-27.

A 4,000-gallon fiberglass UST used to store diesel fuel was removed January 28, 1992. The tank was cleaned by K & D Industrial Services and removed by Prewitt Enterprises (OBG, 1992). During the excavation, stained and odorous soil was observed to a depth of 6 feet below grade. No free product was observed during the removal (OBG, 1992). Five soil samples were collected from the excavation. Additionally, a sample of the standing water in the excavation was collected. The only constituent detected above Part 201 generic criteria was benzo(a)anthracene (see Table 6-27). There was no visible evidence of the former UST observed during a recent site walkthrough. The UST removal report was submitted to the MDNR in 1992 (OBG, 1992).

6.5.2.3 Current Status

Based on existing information, which indicates no significant impact to subsurface conditions, **NO FURTHER ACTION** is recommended for AOI S-2.

At the site, there are a total of six storm sewer outfall points, as shown on Figure 2-1. Two outfalls are at Fiero (001-F and 002-F) and four are located throughout the remainder of the site (001, 002, 010, and 011). Five of these outfalls are not considered AOIs, since there is no historic data indicating a potential environmental issue with these outfalls.

6.6 Sitewide Storm Sewer System

Outfall 001, which conveys storm water from Plant 14 south has been identified as an AOI (ST-1) due to the presence of PCBs. AOI ST-1 is summarized in Table 6-28 and discussed below.

6.6.1 Storm Sewer Outfall 001 (AOI ST-1)

The storm sewer system, which discharges to Outfall 001, has been identified as a sitewide AOI due to the presence of PCBs detected in water and sediment samples obtained from the storm sewer system. This storm water system collects and conveys storm-water runoff from Plant 14 southward including portions of MFD and DA. Storm water is retained in the storm-water retention pond on the south side of Montcalm Street for subsequent treatment.

6.6.1.1 Historical and Current Operations

The storm-water conveyance system comprising this AOI is located in the oldest portions of the site and was built as the site was developed in the early 1900's. This system originally conveyed storm water from the Foundry, West Yard, Plant 2, Plant 8, Plant 14, Plants 5 and 23, the WWTP, portions of Powertrain parking lots, and areas of MFD north to Walton Avenue. Recently the area served by this system was reduced in areal extent and now only conveys water from the north side of Plant 14 southward to the retention pond. Laterals to the West Yard, WWTP, Powertrain parking lots, and other nonessential areas have also been plugged off.

In 1985, a storm-water retention pond and treatment system was installed to collect and treat storm water from this system for oil and grease prior to discharge to the City of Pontiac storm sewer system (Outfall 001). In 1999 as part of the MDEQ National Pollutant Discharge Elimination System (NPDES) repermitting process, PCBs were added to the analytical list for Outfall 001 and were subsequently detected at levels above the proposed NPDES permit limits. As a result, GM installed an activated carbon system to treat storm water prior to discharge. This system was recently upgraded to treat up to 800 gallons per minute (gpm) of storm water.

6.6.1.2 Previous Investigations and Remedial Actions

On February 5, 2000 GM initiated a storm sewer cleaning program to address PCBs detected within the storm water. These sediments were known to potentially contain PCBs. This cleaning program was completed on September 2, 2000 and resulted in the removal of approximately 200 cubic yards of materials from approximately five linear miles of storm-water pipe. During this process storm-water samples were obtained at various points within the system to ascertain the effectiveness of cleaning activities and also to determine the upgradient limits of PCB contamination. Memoranda summarizing storm-water PCB analytical results are provided in Appendix AD. Analytical results obtained on the sediments as part of disposal characterization are also provided in Appendix AD.

After the completion of storm sewer cleaning activities sediments were removed from the storm-water retention pond. Cleaning activities were performed from September 26, 2000 to October 1, 2000 and were performed in accordance with the project work plan. Approximately 300 cubic yards of sediments were removed from the retention pond. Sediment characterization data for the retention pond are provided in Appendix AD.

6.6.1.3 Current Status

Additional work is currently being implemented to identify, if possible, the source(s) of PCBs which have been identified in the outfall storm water. Remedial activities implemented to date have drastically reduced the levels of PCBs within the storm-water system with most recent analytical results showing levels just above method detection levels (0.15 ppb versus greater than 1.0 ppb at start of program). The activated carbon system will

continue to operate to treat storm water prior to discharge. Based on these on-going activities, **FURTHER ACTION** will be required for the storm sewer Outfall 001 AOI.

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List of Acronyms

ACM - Asbestos containing material
AOC - Area of concern
AOI - Area of interest
AST - Aboveground storage tank
BBL - Blasland, Bouck & Lee, Inc.
BDA - Building decommissioning assessment
bgs - Below ground surface
BTEX - Benzene, toluene, ethylbenzene, and xylenes
BTN - British Thermal Unit
CCR - Current Conditions Report
CEC - Clayton Environmental Consultants, Inc.
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CET - Carlo Environmental Technologies, Inc.
CPC - Chevrolet-Pontiac-Canada Group
CRA - Conestoga-Rovers & Associates, Inc.
CSA - Container storage area
Csat - Soil saturation criteria value
DA - Demolition Area
EEC - ENCORE Environmental Consortium, L.L.C.
ELPO - Electrodeposition
ENCORE - Environmental Corporate Remediation
FOIA - Freedom of Information Act
GM - General Motors Corporation
GMC - General Motors Corporation
gpd - Gallons per day
gpm - Gallons per minute
GTI - Groundwater Technology, Inc.
HVO - Halogenated volatile organics
IRM - Interim Remedial Measure
LNAPL - Light non-aqueous phase liquid
LUST - Leaking underground storage tank
MDEQ - Michigan Department of Environmental Quality
MDNR - Michigan Department of Natural Resources
MERA – Michigan Environmental Response Act
MFD - Metal Fabrication Division
MPC - MPC Environmental
MTBE - Methyl-tert-butyl-ether

NPDES - National Pollutant Discharge Elimination System
OBG - O'Brien & Gere
OHM - O.H. Materials
PA/VSI - Preliminary Assessment/Visual Site Inspection
PCB - Polychlorinated biphenyls
PNA - Polynuclear aromatic hydrocarbon
POTW - Publicly owned treatment works
ppb - Parts per billion
PRC - PRC Environmental Management, Inc.
PVC - Polyvinyl chloride
RAP - Remedial Action Plan
RBCA - Risk-Based Corrective Action
RCRA - Resource Conservation and Recovery Act
RFI - RCRA Facility Investigation
RUST - RUST Environmental and Infrastructure
SAA - Satellite Accumulation Area
SHA – Schleede-Hampton Associates, Inc.
SPO - Service Parts Operations
SVOC - Semivolatile organic compound
SWMU - Solid Waste Management Unit
TAL - Target Analyte List
TCL - Target Compound List
TCLP - Toxicity Characteristic Leaching Procedure
TEC - Testing, Engineers, and Consultants, Inc.
TEF - Toxicity Equivalence Factor
TKN - Total Kjeldahl Nitrogen
TSCA - Toxic Substances Control Act
TSD - Treatment, storage, and disposal
ug/kg - Micrograms per kilogram
ug/L - Micrograms per liter
USEPA - United States Environmental Protection Agency
USGS - United States Geological Survey
USPCI - United States Pollution Control, Inc.
UST - Underground storage tank
VOC - Volatile Organic Compounds
VSR - Verification of soil remediation
WMD - Waste Management Division
WWTP - Wastewater Treatment Plant

TABLE 2-1
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

HISTORICAL AND CURRENT SITE BUILDINGS

Current Building Number or Name	Current Activity	Historic Building Number(s) or Name(s)	Original Year Built	Historic Activity
Fiero				
Plant 17	Non-production storage, prototyping	Plant 17, Fiero Assemebly Fiero Body Plant	1925	automotive assembly, metal fabrication, body shop, chassis, painting, trim
Powerhouse	Idle but operational power plant	Powerhouse		Power plant
Demolition Area (DA)				
Vacant Lot	Demolished	Plant 8	1927	automotive assembly
Vacant Lot	Demolished	Plant 9	1927	engine assembly
Vacant Lot	Demolished	Plant 6	1925	foundry
Vacant Lot	Demolished	Salvage Building	1945	Incineration, scrap/refuse separation
Vacant Lot	Demolished	Compressor Building		electrical transformers, air compressors
Metal Fabrication Division (MFD)				
Plant 25	engine assembly and future engine assembly	Plant 25	1967	engine assembly
		Plant 51	1967	chassis parts, machining
Plant 33	engine assembly	Plant 55	1981	engine assembly
Plant 15	pressed metal	Plant 15	1952	pressed metal
Plant 12	Vacant building scheduled for demolition	Plant 12	1950	car finishing, sales garage, equipment storage & shipping, miscellaneous non-production activities
Vacant Lot	Demolished (majority of facility)	Plant 16	1954	pressed parts, car finishing, storage
Plant 14	pressed metal	Plant 14	1951	pressed metal
Plant 49 *	pressed metal	Plant 49	1965	storage & shipping, pressed metal
Plant 11 *	Repair work and maintenance activities.	Plant 1	1945	heat treating
Plant 56 *	Western portion vacated.	Plant 2	1945	plating, pressed metal, maintenance, shipping & receiving
Plants 5 and 23 *	Western portion consists of storage and shipping & receiving.	Plant 5	1927	shipping and receiving, axle / differential
	Eastern portion is pressed metal and axle/differential operations, maintenance activities	Plant 23	1945	axle / differential, pressed metal
WWTP	wastewater treatment	WWTP	1957	wastewater treatment
ELPO	Phosphating, painting, flammable liquids storage, chemical storage	Frame Storage Building and Apprentice School	1927	Phosphating, painting, flammable liquids storage, chemical storage

TABLE 2-1
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

HISTORICAL AND CURRENT SITE BUILDINGS

Current Building Number or Name	Current Activity	Historic Building Number(s) or Name(s)	Original Year Built	Historic Activity
Powertrain				
Powertrain Engineering		Engineering North		product engineering
		Emissions Control Building		
Powertrain Headquarters		Powertrain Headquarters	1967	
		Administration Building		
Vacant Lot	Vacant	Plant 18, Plant 71	1942	demolished / engine assembly, component parts
Service Parts Operation (SPO)				
Plant 75 / SPO	warehouse	Plant 75 / General Motors Parts Division	1964	warehouse
		Flammable Liquids Storage Building	early 1970s	flammable liquids storage

Notes:

* GM has recently renamed several plants (see below). **The new plant identification system has not been used in this report.**
  Plant 49 renamed to Plant 14 East
  Plants 11 and 56 renamed to Plant 14 South
  Plants 5 and 23 renamed to Plant 23

TABLE 2-2
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

RCRA HAZARDOUS WASTE CODES

ID Number	Hazardous Waste Description
D001	Wastes which are hazardous due to the characteristic of ignitibility.
D002	Wastes which are hazardous due to the characteristic of corrosivity.
D006	Wastes which are hazardous due to TCLP Cadmium.
D008	Wastes which are hazardous due to TCLP Cadmium.
F001	Halogenated solvents used in degreasing: tetrachloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of those spent solvents and spent solvent mixtures.
F002	Spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, one or more of the above halogenated solvents or those listed in F001, F004, F005; and still bottoms from the recovery of those spent solvents and spent solvent mixtures
F003	Spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethylbenzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of 10% or more (by volume) of one of the solvents listed in F001, F002, F004, F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F005	Spent non-halogenated solvents: toluene, methy ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations.
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.

See Notes, Page 2.

TABLE 2-2
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

RCRA HAZARDOUS WASTE CODES

ID Number	Hazardous Waste Description
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.
[F017]*	Paint residues or sludges from industrial painting in the mechanical and electrical products industry.
[F018]*	Wastewater treatment sludges from industrial painting in the mechanical and electrical products industry.
[K054]**	Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome/tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; shearing.
P029	Copper Cyanide Cu(CN)
P030	Cyanides (soluble cyanide salts), not otherwise specified
P106	Sodium Cyanide Na(CN)

Notes:
40 CFR Part 261 Subpart D.
[ ]* = Waste was removed from RCRA hazardous waste listing in 1981.
[ ]** = Waste was removed from RCRA hazardous waste listing in 1980.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-1: West Yard						
Open area in southwest corner of DA. Bounded to the south by Montcalm Ave, to the west by the Grand Trunk Western Railroad line, to the east by the former foundry (Plant 6), and to the north by the former Plant 9.	Yes	No	Area is approximately 20 acres in size. Was historically used for materials management activities, including: disposal of foundry sand, refuse, sludge and trash from the 1940's to the 1960's; salvaging usable material from unusable waste; RCRA hazardous waste storage pad from 1982 to 1988 (AOI W2) railroad marshalling area (AOI W11); and a backfilled settling basin. The Compressor Building contained within the West Yard was known to contain two transformers that were historically noted as leaking PCBs.	Impacted soils and groundwater known to contain VOCs, SVOCs, metals, and PCB contaminated LNAPL.	A CERCLA (Section 103(c)) notification indicated past disposal of "organics, inorganics, and heavy metals" up until 1979. 1996/1997 investigation by Parsons continued previous West Yard investigation initiated by hazardous waste storage pad investigations by D&M and GTI. CRA LNAPL Investigation in 1999 to further delineate the nature and extent of LNAPL. On October 29, 1985 Transformer 450, located west of the building, was noted as leaking. It was remediated daily until the leak was sealed on November 18, 1985. On March 2, 1988 Transformer 451, located inside the building, was noted as leaking. It was remediated daily until the leak was sealed on March 7, 1988.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-2 - Former Hazardous Waste Storage Pad						
In the Western portion of the West Yard, east of the Grand Trunk Railroad line, west of the Compressor building, south of the Salvage building.	Yes	No	Constructed in 1982, the storage pad is an approximately 27,000 square-foot, 8-inch thick concrete pad which is contained within a 4-inch curb. Activities at the pad included waste storage, drum washing and empty drum storage. Hazardous waste storage included paint, paint thinner, gasoline, chlorinated solvents, machine wastes, lead chips, and spent halogenated solvents prior to closure activities in July 1988. Prior to the pad construction, a waste pile containing WWTP sludges, machine sludges, and paint sludges was contained within the footprint of the storage pad, from 1979 to 1981.	BTEX and lead were found within soil and groundwater samples taken from beneath the pad. 1,1,1-TCA and MEK were also detected in soil samples. Soil borings indicate that the area was previously used for waste disposal.	Closure activities were conducted by Dames & Moore beginning in 1988. During the two phases of soil sampling BTEX, MEK, methylene chloride and lead were detected in soil and groundwater samples. The Parsons Site Investigation conducted in 1996/1997 concluded that the contamination under the pad was not due to historic operations at the pad, but due to historical waste management activities conducted in the entire West Yard area.	No Further Action is recommended.
AOI W-3: Former Plant 8 Flammable Liquids Storage Tank Farm						
Northwestern corner of the DA.	Yes	No	Area consisted of a north and a south area each contained within a 3-foot high dike. These areas held a total of nine ASTs with five ASTs in the north area and four in the south area. The ASTs ranged in size from 13,000 to 26,000 gallons. The ASTs were used to store diesel fuel, line thinner, gasoline and solvents.	It is reported that the soils under the Tank Farm contain hydrocarbon contamination.	Keck evaluated the extent of hydrocarbon contamination. This investigation indicated hydrocarbons from ground level to 8 to 16-feet bgs where a clay layer impeded the downward flow of hydrocarbons. There is no indication of remedial activities being conducted in the area of the Tank Farm.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-4: Transformer Substation D-1						
Located in the southeast quadrant of former Plant 8.	Yes	No	PCB-containing transformers were removed from the substation D-1 prior to the demolition of Plant 8 in 1997.	Following the removal of the transformers, staining was observed on the concrete floor and was subsequently removed by the contractor. Post-cleanup wipe samples indicated remaining PCB contamination.	SUNPRO removed 2 to 3 inches of concrete from the transformer footprint while under negative air pressure to suppress dust migration. Post-remedial wipe samples indicated compliance with U.S. EPA PCB clean-up requirements. The transformer substation D-1 has been decommissioned, remediated and demolished.	No Further Action is recommended
AOI W-5: Former Plant 8 Basement AST Area						
Located on the northern boundary of the West Yard area.	No	No	The basement of Plant 8 contained 17 ASTs ranging in size between 680 and 11,300 gallons. Undated documentation by CPC indicates that 15 of the ASTs were empty. The remaining two ASTs were both 7,400 gallons in size and were known to contain alkali/oily and weak metallic wastewaters.	No documentation on closure of ASTs.	Plant 8 was decommissioned and demolished. No correspondence was found with respect to closure of the ASTs.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-6: Former Plant 8 Flammable Materials Storage Building						
Located in the northwestern corner of the DA.	No	No	The Material Storage Building was known to house 17 tanks containing oils and glycols. 9 of the tanks were 15,000 gallons and 8 were 22,000 gallons. The doors of the building were above level causing the storage building to act as a diked area. Truck and railroad unloading areas had catch basins attached to the WWTP.	No documentation of closure of tanks.	The Flammable Materials Storage Building has been decommissioned and demolished. No documentation available for closure	Further Action is recommended.
AOI W-7: Former Plant 9 Turbo Tank (Tank 9-1)						
Located immediately northwest of former Plant 9.	Yes	No	This registered UST was installed as early as 1983 and was used for storing gasoline. Tank 9-1 was removed in June 1991.	None.	In a letter from the CPC to the Michigan State Police, dated June 27, 1991, a "UST Closure Site Assessment" is mentioned; the TEC report could not be located. The letter states that the TEC "Closure Site Assessment" showed no contamination with respect to the UST removal, and was therefore considered closed by the CPC.	No Further Action is recommended
AOI W-8: Former Plant 9 Basement AST Area						
Located immediately south of Plant 8.	No	No	The basement contained 12 ASTs which previously contained kerosene, coolant, and unknown material.	No documentation of AST closure. Kerosene-like odors encountered in storm sewer.	Plant 9 has been decommissioned and demolished, with no documentation available.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-9: Former Central Foundry (Plant 6) Resin Spill and UST						
Located in the southern portion of DA and was bordered to the south by Moncalm Ave, on the west by the West Yard, on the east by Glenwood Ave and on the north by Plant 9.	Yes	No	The Foundry produced grey iron from metallic ore to be casted into automotive parts. The Foundry ceased production and closed in May 1987, and was demolished on April 19, 1995. Foundry sand was used as fill material in the West Yard (AOI W-1).	The Resin Storage Building located in the northwest quadrant of the facility is known to have released resin from leaking sump drains. Soil and groundwater were known to contain resin related contaminants (kerosene and phenols), BTEXs, and TCE and its breakdown products. No documentation available on 20,000-gallon UST.	A RCRA Part A permit application was filed on November 17, 1980 and was withdrawn on July 12,1982 on the basis that the baghouse dust was not a hazardous waste under 40 CFR part 261. August - December 1985 Schleede-Hampton performed a preliminary exploration of the resin storage facility area. Concluded resin is confined to within 20 feet of the Resin Storage Building. The "Results of Final Soil Sampling and Analysis for Clean-Up Verification" report by Schleede-Hampton summarized the remedial activities. This consisted of the excavation of resin contaminated soils and analytical testing to verify compliance.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-9; Former Central Foundry (Plant 6) (cont.)						
					The MDNR approved the Site as "closed" on December 11, 1989 with respect to resin contamination. The Deactivation Assessment" report by O'Brien & Gere Engineers reported PCB and heavy metal concentrations above guidelines for soil. PCB Sampling report summarizes the investigation and remedial actions taken with respect to PCB removal. Aroclor 1242 detected in soil samples at one location. Wipe samples showed the area did not exceed guidelines for soil.	
AOI W-10; Railroad Marshalling Area Drainage System						
Extends the entire length of the western boundary of the West Yard.	Yes	No	The Area was used for the temporary storage of railcars loaded with scrap metal and grinding waste. This allowed for waste oils to drain out of the cars and into the railway ballast/soil immediately beneath the tracks.	In July 1971, an oily discharge was noted in a culvert immediately south of the Marshalling Area which drains into Harris Lake. The discharge was also noted to be draining into a storm sewer in the immediate area which also drained into Harris Lake.	The Oakland County Environmental Health Department obtained a water sample that contained 214,000 counts of coliform. CPC began pumping the contaminated water to the CPC WWTP and initiated daily monitoring of the area.	Further Action is recommended.

TABLE 6-5
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - DEMOLITION AREA

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI W-11: Salvage Yard Sump Drain						
The location of the sump drain is unclear. The Salvage Building was located on the western boundary of the West Yard, north of the Compressor Building, and immediately east of the rail lines.	Yes	No	During June and July 1985, 69 barrels of liquid were dumped down the Salvage Yard sump drain. Internal CPC documentation indicates that numerous City Sewer Ordinance limits were breached, including: Chloride concentrations exceeded limits on each of the eight days of dumping; TKN concentrations exceeded limits on six of the eight days of dumping; and Nickel concentrations exceeded limits on two of the days of dumping.	No documentation exists on the integrity of the sump. Liquids of unknown constituents dumped into sump.	No documented investigations or remedial actions found.	Further Action is recommended.
AOI W-12: Catalina Substation (GM owns; leased to Edison)						
Power station south of Montcalm Street and east of storm water retention pond.	No	Yes	Reported spills of PCB-containing oils.	Constituents of concern include PCBs.	GM initiated sampling of PCB-containing soils in August 1985. PCB impacted soils were subsequently removed.	No Further Action is recommended.
AOI W-13: Montcalm Substation						
Substation east of Saginaw Street and north of Montcalm Street.	No	Yes	Transformer oil used at substation. No documented releases.	Constituents of concern include PCBs.	No documented investigations or remedial actions found.	Further Action is recommended.

TABLE 6-6
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

STORAGE TANK SUMMARY - DEMOLITION AREA (DA)

AOI #	Building Association	Tank No.	Date Installed	Type	Size (feet)	Capacity (gallons)	Materials Stored	Status	Construction
W-3	Former Plant 8 (Tank Farm)	8-1		AST		26,600	Diesel Fuel	Removed	Unknown
		8-2		AST		26,600	Line Thinner	Removed	Unknown
		8-3		AST		20,700	Gasoline	Removed	Unknown
		8-4		AST		20,700	Gasoline	Removed	Unknown
		8-5		AST		20,700	Gasoline	Removed	Unknown
		8-6		AST		20,700	Gasoline	Removed	Unknown
		8-7		AST		20,700	EMPTY	Removed	Unknown
		8-8		AST		13,300	Gasoline	Removed	Unknown
		8-9		AST		12,000	Windshield Washer Solvent	Removed	Unknown
W-5	Former Plant 8 (Basement)	8-11		AST		7,400	EMPTY	Removed	Unknown
		8-12		AST		7,400	EMPTY	Removed	Unknown
		8-13		AST		7,400	EMPTY	Removed	Unknown
		8-14		AST		11,300	EMPTY	Removed	Unknown
		8-15		AST		11,300	EMPTY	Removed	Unknown
		8-16		AST		680	EMPTY	Removed	Unknown
		8-17		AST		680	EMPTY	Removed	Unknown
		8-18		AST		680	EMPTY	Removed	Unknown
		8-19		AST		7,400	EMPTY	Removed	Unknown
		8-20		AST		7,400	EMPTY	Removed	Unknown
		8-23		AST		11,300	EMPTY	Removed	Unknown
		8-24		AST		11,300	EMPTY	Removed	Unknown
		8-27		AST		7,400	Weak Metallic Wastewater	Removed	Unknown
		8-28		AST		7,400	Alkali/Oily Wastewater	Removed	Unknown
		8-29		AST		11,300	EMPTY	Removed	Unknown
		8-30		AST		11,300	EMPTY	Removed	Unknown
		8-31		AST		11,300	EMPTY	Removed	Unknown
W-6	Former Plant 8 (Flammable Liquid Storage Building)	FLB-1		AST		22,000	Engine Oil	Removed	Unknown
		FLB-2		AST		22,000	Transmission Fluid	Removed	Unknown
		FLB-3		AST		15,000	Engine Oil	Removed	Unknown
		FLB-4		AST		15,000	Cutting Oil	Removed	Unknown
		FLB-5		AST		15,000	Power Steering Fluid	Removed	Unknown
		FLB-6		AST		15,000	Engine Oil	Removed	Unknown
		FLB-7		AST		15,000	General Purpose Lubricant	Removed	Unknown

TABLE 6-6
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

STORAGE TANK SUMMARY - DEMOLITION AREA (DA)

AOI #	Building Association	Tank No.	Date Installed	Type	Size (feet)	Capacity (gallons)	Materials Stored	Status	Construction
W-6	Former Plant 8 (Flammable Liquid Storage Building)	FLB-8		AST		22,000	Transmission Fluid	Removed	Unknown
		FLB-9		AST		22,000	Hydraulic Oil	Removed	Unknown
		FLB-10		AST		15,000	Mixed Glycol	Removed	Unknown
		FLB-11		AST		15,000	Mixed Glycol	Removed	Unknown
		FLB-12		AST		22,000	Concentrated Glycol	Removed	Unknown
		FLB-13		AST		22,000	Soluble Oil	Removed	Unknown
		FLB-14		AST		15,000	EMPTY	Removed	Unknown
		FLB-15		AST		15,000	EMPTY	Removed	Unknown
		FLB-16		AST		22,000	Mineral Seal	Removed	Unknown
		FLB-17		AST		22,000	Hypoid Gear Oil	Removed	Unknown
W-7	Former Plant 9 (Turbo Tank)	9-1		UST		550	Gasoline	Removed in 1991	Fiberglass
W-8	Former Plant 9 (Basement)	9-2		AST		10,000	Kerosene (Mineral Seal)	Removed	Unknown
		9-3		AST		10,000	Kerosene (Mineral Seal)	Removed	Unknown
		9-4		AST		10,000	Kerosene (Mineral Seal)	Removed	Unknown
		9-5		AST		10,000	Kerosene (Mineral Seal)	Removed	Unknown
		9-6		AST		6,400	Kerosene (Mineral Seal)	Removed	Unknown
		9-7		AST		1,400	EMPTY	Removed	Unknown
		9-8		AST		1,400	EMPTY	Removed	Unknown
		9-9		AST		2,000	EMPTY	Removed	Unknown
		9-10		AST		10,000	Coolant 141-KC	Removed	Unknown
		9-11		AST		10,000	Coolant 141-KC	Removed	Unknown
		9-12		AST		10,000	Coolant 141-KC	Removed	Unknown
		9-13		AST		10,000	Coolant 141-KC	Removed	Unknown

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Surface Soil Analytical Results (Parsons, 1997)								
Volatile Organics								
Acetone	20	13	2.3	360	15,000	42,000	23,000,000	110,000,000
Benzene	20	2	3.1	6.4	100	100	1,000	400,000
2-Butanone (MEK)	20	7	3.5	67	260,000	260,000	27,000,000	27,000,000
1,4-Dichlorobenzene	20	2	2.4	5.6	1,700	1,700	400,000	2,900,000
Ethylbenzene	20	4	2.5	24	1,500	1,500	140,000	140,000
2-Hexanone	20	2	4.0	4.1	20,000	58,000	2,500,000	2,500,000
4-Methyl-2-pentanone (MIBK)	20	2	4.2	16	Not Regulated			
Methylene chloride	20	4	2.8	6.7	Not Regulated			
Tetrachloroethene	20	4	2.8	18	100	100	88,000	88,000
Toluene	20	7	2.7	27	16,000	16,000	250,000	250,000
Trichloroethene	20	1		27	100	100	500,000	500,000
Xylenes (total)	20	6	2.8	79	5,600	5,600	150,000	150,000
Semivolatile Organics								
Acenapthene	19	4	51	36,000	300,000	880,000	41,000,000	200,000,000
Acenaphthylene	20	3	27	2,000	5,900	1,700	1,600,000	8,000,000
Anthracene	20	8	20	21,000	41,000	41,000	230,000,000	1,000,000,000
Benzo(a)anthracene	20	13	24	15,000	NLL	NLL	20,000	100,000
Benzo(a)pyrene	20	12	24	8,600	NLL	NLL	2,000	10,000
Benzo(b)fluoranthene	20	12	46	11,000	NLL	NLL	20,000	100,000
Benzo(ghi)perylene	20	12	20	4,500	NLL	NLL	2,500,000	9,100,000
Benzo(k)fluoranthene	20	10	25	5,300	NLL	NLL	200,000	1,000,000
bis(2-Ethylhexyl)phthalate	20	7	23	1,300	NLL	NLL	2,800,000	10,000,000
Butyl benzyl phthalate	20	9	120	32,000	310,000	310,000	310,000	310,000
Carbazole	20	5	19	11,000	9,400	39,000	530,000	3,700,000
Chrysene	20	14	30	16,000	NLL	NLL	2,000,000	10,000,000
Di-n-butyl phthalate	20	2	39	240	760,000	760,000	760,000	760,000
Dibenz(a,h)anthracene	20	4	23	180	NLL	NLL	2,000	10,000
Dibenzofuran	20	7	18	27,000	ID	ID	ID	ID

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Surface Soil Analytical Results (Parsons, 1997)								
2,4-Dimethylphenol	20	2	120	250	7,400	20,000	11,000,000	56,000,000
Fluoranthene	20	13	30	82,000	730,000	730,000	46,000,000	180,000,000
Fluorene	19	6	78	36,000	390,000	890,000	27,000,000	130,000,000
Indeno(1,2,3-cd)pyrene	20	12	19	3,700	NLL	NLL	20,000	100,000
2-Methylnapthalene	20	15	28	23,000	57,000	170,000	8,100,000	40,000,000
2-Methylphenol	20	2	260	930	7,400	20,000	11,000,000	56,000,000
3-Methylphenol	17	1		400	7,400	20,000	11,000,000	56,000,000
4-Methylphenol	20	2	140	450	7,400	20,000	11,000,000	56,000,000
Naphthalene	20	10	21	97,000	35,000	100,000	16,000,000	80,000,000
Phenanthrene	20	17	41	110,000	56,000	160,000	1,600,000	8,000,000
Phenol	20	3	23	2,100	88,000	260,000	12,000,000	12,000,000
Pyrene	20	15	20	50,000	480,000	480,000	29,000,000	110,000,000
PCBs								
Methoxychlor	16	1		90	16,000	16,000	1,900,000	7,700,000
Aroclor 1248	17	5	470	2,000	NLL	NLL	4,000	20,000
Aroclor 1254	17	4	340	1,100	NLL	NLL	4,000	20,000
Total PCBs	15	6	480	3100	NLL	NLL	4,000	20,000
Dioxins/Furans								
Total TEFs	5	5	2.60E-08	0.000566				
Inorganics								
Aluminum	20	20	438,000	8,500,000	6,900,000*	6,900,000*	50,000,000	660,000,000
Antimony	20	14	494	26,500	500	4,300	180,000	1,200,000
Arsenic	20	20	1,050	67,100	23,000	23,000	7,600	61,000
Barium	20	20	9,740	353,000	1,300,000	1,300,000	37,000,000	250,000,000
Beryllium	19	13	163	805	51,000	51,000	410,000	3,100,000
Cadmium	20	20	46.8	6,090	6,000	6,000	550,000	4,100,000
Calcium	19	19	2,710,000	89,700,000	Not Regulated			
Chromium	20	20	4,480	1,660,000	30,000	30,000	2,500,000	17,000,000
Cobalt	20	18	2,670	69,500	800	2,000	2,600,000	18,000,000

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Surface Soil Analytical Results (Parsons, 1997)								
Copper	20	20	6,690	1,590,000	5,800,000	5,800,000	20,000,000	140,000,000
Cyanide	19	8	310	590	4,000	4,000	12,000	250,000
Iron	20	20	3,390,000	567,000,000	12,000,000*	12,000,000*	160,000,000	1,000,000,000
Lead	20	20	3,320	221,000	700,000	700,000	400,000	900,000
Magnesium	20	20	492,000	12,000,000	8,000,000	22,000,000	1,000,000,000	1,000,000,000
Manganese	20	20	78,500	4,600,000	440,000*	440,000*	25,000,000	170,000,000
Mercury	18	8	59.7	1,140	1,700	1,700	160,000	1,100,000
Nickel	20	20	5,140	601,000	100,000	100,000	40,000,000	270,000,000
Potassium	17	9	558,000	1,270,000	Not Regulated			
Selenium	16	3	515	1,090	4,000	4,000	2,600,000	18,000,000
Silver	17	6	357	1,640	4,500	13,000	2,500,000	17,000,000
Sodium	19	19	109,000	675,000	2,500,000	7,000,000	1,000,000,000	1,000,000,000
Tin	5	3	13,100	84,000	Not Regulated			
Vanadium	20	20	4,740	53,700	72,000	990,000	750,000	10,000,000
Zinc	20	20	11,100	3,640,000	2,400,000	5,000,000	170,000,000	1,000,000,000
Other								
Sulfide	4	1		100,000	Not Regulated			
Total Solids, Percent	19	19	84.1	94.61	Not Regulated			
West Yard - Subsurface Soil Analytical Results (Parsons, 1997)								
Volatile Organics								
Acetone	48	32	2.5	2,200	15,000	42,000	23000000	110,000,000
Benzene	47	1		720	100	100	1,000	400,000
2-Butanone (MEK)	47	27	2.2	1,600	260,000	260,000	27,000,000	27,000,000
Carbon disulfide	48	3	2.6	9.6	16,000	46,000	280,000	280,000
1,4-Dichlorobenzene	48	1		2.7	1,700	1,700	400,000	2,900,000
1,1-Dichloroethane	48	2	16	21	18,000	50,000	890,000	890,000
Ethylbenzene	47	7	4.1	25,000	1,500	1,500	140,000	140,000

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Subsurface Soil Analytical Results (Parsons, 1997)								
2-Hexanone	48	1		2.5	20,000	58,000	2,500,000	2,500,000
4-Methyl-2-pentanone (MIBK)	45	2	3	3.9	Not Regulated			
Methylene chloride	47	6	2.4	25,000	Not Regulated			
Tetrachloroethene	47	8	2.3	7.5	100	100	88,000	88,000
Toluene	48	9	2.4	42,000	16,000	16,000	250,000	250,000
Vinyl chloride	48	2	4	15	40	40	4,000	29,000
Xylenes (total)	48	9	6.8	150,000	5,600	5,600	150,000	150,000
cis-1,2-Dichloroethene	46	2	8.6	16	1,400	1,400	640,000	640,000
Semivolatile Organics								
Acenapthene	29	7	24	14,000	300,000	880,000	41,000,000	200,000,000
Anthracene	33	8	20	11,000	41,000	41,000	230,000,000	1,000,000,000
Benzo(a)anthracene	29	10	42	7,700	NLL	NLL	20,000	100,000
Benzo(a)pyrene	29	6	25	690	NLL	NLL	2,000	10,000
Benzo(b)fluoranthene	29	9	28	8,300	NLL	NLL	20,000	100,000
Benzo(ghi)perylene	29	7	21	4,200	NLL	NLL	2,500,000	9,100,000
Benzo(k)fluoranthene	28	4	36	460	NLL	NLL	200,000	1,000,000
Butyl benzyl phthalate	28	6	130	1,100,000	310,000	310,000	310,000	310,000
Carbazole	28	3	21	110	9,400	39,000	530,000	3,700,000
Chrysene	29	10	47	12,000	NLL	NLL	2,000,000	10,000,000
Di-n-butyl phthalate	28	1		480,000	760,000	760,000	760,000	760,000
Di-n-octyl phthalate	47	1		37,000	100,000,000	140,000,000	6,900,000	28,000,000
Dibenz(a,h)anthracene	28	3	18	250	NLL	NLL	2,000	10,000
Dibenzofuran	27	6	22	13,000	ID	ID	ID	ID
2,4-Dimethylphenol	28	6	24	72,000	7,400	20,000	11,000,000	56,000,000
Fluoranthene	27	13	38	22,000	730,000	730,000	46,000,000	180,000,000
Fluorene	26	10	40	26,000	390,000	890,000	27,000,000	130,000,000
Indeno(1,2,3-cd)pyrene	28	5	27	510	NLL	NLL	20,000	100,000

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Subsurface Soil Analytical Results (Parsons, 1997)								
2-Methylnapthalene	27	17	24	120,000	57,000	170,000	8,100,000	40,000,000
2-Methylphenol	26	6	25	320	7,400	20,000	11,000,000	56,000,000
3-Methylphenol	9	2	54	110	7,400	20,000	11,000,000	56,000,000
4-Methylphenol	28	6	45	70,000	7,400	20,000	11,000,000	56,000,000
Naphthalene	29	13	22	70,000	35,000	100,000	16,000,000	80,000,000
Pentachloroethane	9	1		99	Not Regulated			
Phenanthrene	29	18	23	52,000	56,000	160,000	1,600,000	8,000,000
Phenol	47	3	110	140,000	88,000	260,000	12,000,000	12,000,000
Pyrene	27	13	24	17,000	480,000	480,000	29,000,000	110,000,000
bis(2-Ethylhexyl)phthalate	29	6	24	35,000	NLL	NLL	2,800,000	10,000,000
PCBs								
Aroclor 1248	29	6	830	31,000	NLL	NLL	4,000	20,000
Aroclor 1254	29	4	840	12,000	NLL	NLL	4,000	20,000
Total PCBs	29	6	1,670	43,000	NLL	NLL	4,000	20,000
Dioxins/Furans								
Total TEFs	7	6	7.80E-08	0.00014				
Inorganics								
Aluminum	29	29	625,000	10,800,000	6,900,000*	6,900,000*	50,000,000	660,000,000
Antimony	29	16	341	1,740,000	500	4,300	180,000	1,200,000
Arsenic	29	29	603	35,700	23,000	23,000	7,600	61,000
Barium	29	29	4,590	5,720,000	1,300,000	1,300,000	37,000,000	250,000,000
Beryllium	29	9	163	1,050	51,000	51,000	410,000	3,100,000
Cadmium	29	26	36.8	10,700	6,000	6,000	550,000	4,100,000
Calcium	29	28	1,230,000	425,000,000	Not Regulated			
Chromium	29	29	1,690	1,020,000	30,000	30,000	2,500,000	17,000,000
Cobalt	29	10	3,070	34,600	800	2,000	2,600,000	18,000,000
Copper	29	29	2,790	2,370,000	5,800,000	5,800,000	20,000,000	140,000,000
Cyanide	29	12	380	4,100	4,000	4,000	12,000	250,000
Iron	29	29	2,060,000	376,000,000	12,000,000*	12,000,000*	160,000,000	1,000,000,000

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Subsurface Soil Analytical Results (Parsons, 1997)								
Lead	29	28	711	1,350,000	700,000	700,000	400,000	900,000
Magnesium	29	29	328,000	23,900,000	8,000,000	22,000,000	1,000,000,000	1,000,000,000
Manganese	29	29	32,400	3,900,000	440,000*	440,000*	25,000,000	170,000,000
Mercury	29	6	82.1	2,230	1,700	1,700	160,000	1,100,000
Nickel	29	29	3,060	354,000	100,000	100,000	40,000,000	270,000,000
Potassium	29	4	551,000	2,690,000	Not Regulated			
Selenium	29	7	316	7,670	4,000	4,000	2,600,000	18,000,000
Silver	29	2	886	2,370	4,500	13,000	2,500,000	17,000,000
Sodium	29	29	159,000	2,490,000	2,500,000	7,000,000	1,000,000,000	1,000,000,000
Tin	29	1		51,300	Not Regulated			
Vanadium	29	28	4,620	61,400	72,000	990,000	750,000	10,000,000
Zinc	29	29	3,960	4,040,000	2,400,000	5,000,000	170,000,000	1,000,000,000
West Yard - Groundwater Analytical Results (Parsons, 1997)								
Volatile Organics								
Acetone	18	10	4	8.4	730	2,100	31,000,000	
Benzene	22	9	1	22	5.0	5.0	11,000	
2-Butanone (MEK)	17	1		2.6	13,000	38,000	240,000,000	
Chloroethane	18	10	1.6	24	430	1,700	440,000	
1,1-Dichloroethane	18	9	1.1	30	880	2,500	2,400,000	
1,2-Dichloroethane	18	2	1.3	1.4	5.0	5.0	19,000	
Ethylbenzene	17	1		56	74	74	170,000	
Toluene	17	2	1.1	38	790	790	530,000	
Vinyl chloride	22	10	5	310	2	2	570	
Xylenes (total)	17	2	4.8	170	280	280	190,000	
cis-1,2-Dichloroethene	19	9	1.5	89	70	70	11,000	

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Groundwater Analytical Results (Parsons, 1997)								
Semivolatile Organics								
Anthracene	17	1		2.6	43	43	43	
Benzyl alcohol	7	2	9.8	11	10,000	29,000	44,000,000	
Butyl benzyl phthalate	17	2	4	4.2	1,200	2,700	2,700	
Chrysene	17	1		0.69	5	5	5	
2,4-Dimethylphenol	20	7	2.8	390	370	1,000	520,000	
Fluoranthene	17	1		2.7	210	210	210	
Fluorene	17	2	7.3	10	880	2,000	2,000	
2-Methylnapthalene	21	9	1.7	150	260	750	25,000	
2-Methylphenol	17	3	7.6	49	370	1,000	810,000	
3-Methylphenol	7	2	0.99	1.2	370	1,000	810,000	
4-Methylphenol	17	2	1.1	1.3	370	1,000	810,000	
Naphthalene	17	5	0.58	10	520	1,500	31,000	
Phenanthrene	17	6	0.62	25	52	150	1,000	
Pyrene	17	1		3.6	140	140	140	
bis(2-Ethylhexyl)phthalate	20	4	0.92	16	6.0	6.0	320	
PCBs								
Aroclor 1221	1	1		0.16	0.5	0.5	3.3	
Aroclor 1248	21	7	0.11	37	0.5	0.5	3.3	
Aroclor 1254	21	1		0.35	0.5	0.5	3.3	
Total PCBs	22	8	0.11	37	0.5	0.5	3.3	
Dioxins/Furans								
Total TEFs	23	23	1.30E-07	0.00117				
Inorganics, Filtered								
Aluminum	23	15	100	708	50	50	64,000,000	
Arsenic	17	9	5	29.2	50	50	4,300	
Barium	17	12	206	1,910	2,000	2,000	14,000,000	
Calcium	32	32	10,700	425,000	Not Regulated			
Iron	31	31	100	56,200	300	300	58,000,000	

TABLE 6-7
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-1

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
West Yard - Groundwater Analytical Results (Parsons, 1997)								
Lead	16	1		5.1	0.20	0.20	ID	
Magnesium	18	18	9,340	114,000	400,000	1,100,000	1,000,000,000	
Manganese	31	31	28	2,820	50	50	9,100,000	
Nickel	21	1		104	100	100	74,000,000	
Potassium	29	26	12,800	40,700	Not Regulated			
Sodium	30	30	77,800	1,780,000	120,000	350,000	1,000,000,000	
Zinc	17	6	26	258	2,400	5,000	110,000,000	
Other								
Cyanide	19	7	21	4,500	200	200	57,000	
Sulfide	11	7	0.5	5,000	Not Regulated			

Notes:

Units are ppb (ug/Kg for soil; ug/L for groundwater), unless otherwise noted.

Only constituents with at least one detection are shown on the table.

[1] MDEQ generic drinking water criteria are presented for groundwater.
MDEQ generic drinking water protection criteria are presented for soils.

[2] MDEQ generic groundwater contact criteria are presented for groundwater.
MDEQ generic direct contact criteria are presented for soils.

Shading indicates that at least one sample exceeded the criteria.

TABLE 6-8
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-2

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
Hazardous Waste Storage Pad - Soil (Dames & Moore, 1989)								
Volatile Organics (ug/kg)								
Benzene	88	17	2,000	20,000	100	100	1,000	400,000
Toluene	88	17	2,000	290,000	16,000	16,000	250,000	250,000
Xylenes	88	20	4,000	600,000	5,600	5,600	150,000	150,000
1,1,1-Trichloroethane	88	5	300	410,000	4,000	4,000	460,000	460,000
Methylene Chloride	88	47	2,000	78,000	100	100	1,300,000	2,300,000
Methyl Ethyl Ketone (MEK)	88	35	55,000	770,000	260,000	760,000	27,000,000	27,000,000
Inorganics (ug/kg)								
Lead	88	73	2,000	590,000	700,000	700,000	400,000	900,000
Hazardous Waste Storage Pad - Soil (GTI, 1990a)								
Volatile Organics (ug/kg)								
1,1,1-Trichloroethane	8	3	15	35	4,000	4,000	460,000	460,000
Ethylbenzene	8	7	3.0	85	1,500	1,500	140,000	140,000
Toluene	8	7	6.0	230	16,000	16,000	250,000	250,000
Xylenes	8	8	6.0	300	5,600	5,600	150,000	150,000
Hazardous Waste Storage Pad - Groundwater (Dames & Moore, 1989)								
Volatile Organics (ug/L)								
Benzene	5	2	4.0	9.0	5.0	5.0	11,000	
Toluene	5	1		20	790	790	530,000	
Xylenes	5	1		3.0	280	280	190,000	
Inorganics (ug/L)								
Aluminum	1	1		860	50	50	64,000,000	
Arsenic	1	1		9.0	50	50	4,300	
Barium	1	1		100	2,000	2,000	14,000,000	
Calcium	1	1		63,000	Not Regulated			
Iron	1	1		3,600	300	300	58,000,000	
Lead	5	1		110	0.20	0.20	ID	

TABLE 6-8
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-2

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
Hazardous Waste Storage Pad - Groundwater (Dames & Moore, 1989)								
Inorganics (ug/L)								
Magnesium	1	1		10,000	400,000	1,100,000	1,000,000,000	
Nickel	1	1		30	100	100	74,000,000	
Zinc	1	1		70	2,400	5,000	110,000,000	
Hazardous Waste Storage Pad - Groundwater (GTI, 1990a)								
Volatile Organics (ug/L)								
Benzene	8	4	2.0	110	5.0	5.0	11,000	
Ethylbenzene	7	1		8	74	74	170,000	
Toluene	8	6	3.0	375	790	790	530,000	
Xylenes (total)	8	5	2.0	40	280	280	190,000	

Notes:

Units are ppb (ug/Kg for soil; ug/L for groundwater), unless otherwise noted.
Only constituents with at least one detection are shown on the table.
[1] MDEQ generic drinking water criteria are presented for groundwater.
MDEQ generic drinking water protection criteria are presented for soils.
[2] MDEQ generic groundwater contact criteria are presented for groundwater.
MDEQ generic direct contact criteria are presented for soils.
Shading indicates that at least one sample exceeded the criteria.

TABLE 6-9
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-9

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
Former Plant 6 Foundry - Subsurface Soil (SHA, 1988)								
Volatile Organics (ug/kg)								
Ethylbenzene	25	9	1.0	7.0	1,500	1,500	140,000	140,000
Methylene chloride	25	15	3.0	7.0	Not Regulated			
Toluene	25	11	2.0	60	16,000	16,000	250,000	250,000
Xylenes	25	14	1.0	35	5,600	5,600	150,000	150,000
Semivolatile Organics (ug/kg)								
Acenaphthalene	25	1		3				
bis(2-Ethylhexyl)phthalate	25	4	2.0	10	NLL	NLL	2,800,000	10,000,000
Butyl Isobutyl Phthalate	25	1		20	Not Regulated			
Diethyl Phthalate	25	1		16	110,000	320,000	740,000	740,000
Di-n-butyl phthalate	25	19	2.0	20	760,000	760,000	760,000	760,000
Naphthalene	25	1		48	35,000	100,000	16,000,000	80,000,000
Other (ug/kg)								
Kerosene	25	15	140	1,550	Not Regulated			
Dibasic Esters	25	1		300	Not Regulated			
Formaldehyde	25	1		6.0	26,000	76,000	41,000,000	60,000,000
Hexanedioic Acid/Dioctyl Ester	25	4	2.0	50	Not Regulated			
Former Plant 6 Foundry - Groundwater (SHA, 1988)								
Volatile Organics (ug/L)								
Benzene	26	1		10	5.0	5.0	11,000	
Chloroform	26	1		55	100	100	150,000	
1,1-Dichloroethane	26	2	5.0	25	880	2,500	2,400,000	
Ethylbenzene	26	3	12	200	74	74	170,000	
Methyl chloride	26	3	370	2,700	Not Regulated			
Trans 1,2-Dichloroethene	26	2	1,000	1,540	100	100	220,000	
Toluene	26	9	3.0	225	790	790	530,000	
1,1,1-Trichloroethane	26	1		20	200	200	1,300,000	
Trichloroethene	26	4	4.0	530	5.0	5.0	37,000	
Xylenes	26	7	4.0	3,700	280	280	190,000	

See Notes, Page 2.

TABLE 6-9
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

HISTORICAL DATA SUMMARY - AOI W-9

Constituent	Number of		Concentration (ppb)		Drinking Water Criteria[1]		Direct Contact[2]	
	Samples	Detects	Minimum	Maximum	Residential	Industrial	Residential	Industrial
Former Plant 6 Foundry - Groundwater (SHA, 1988)								
Semivolatile Organics (ug/L)								
Anthracene	26	4	80	17,000	43	43	43	
Benzo(a)pyrene	26	2	1,100	1,100	5.0	5.0	5.0	
bis(2-Ethylhexyl)phthalate	26	13	4.0	6,600	6.0	6.0	320	
Chrysene	26	2	1,900	4,600	5.0	5.0	5.0	
Naphthalene	26	7	27	230,000	520	1,500	31,000	
Pentachlorophenol	26	1		1,450	1.0	1.0	200	
Phenol	26	11	22	40,000	4,400	13,000	29,000,000	
Pyrene	26	1		1,300	140	140	140	
Other (ug/L)								
Kerosene	24	11	125	289,000	Not Regulated			
Dibasic Esters	26	1		1,000	Not Regulated			

Notes:

Units are ppb (ug/Kg for soil; ug/L for groundwater), unless otherwise noted.

Only constituents with at least one detection are shown on the table.

[1] MDEQ generic drinking water criteria are presented for groundwater (June 2000 criteria revision).
MDEQ generic drinking water protection criteria are presented for soils (June 2000 criteria revision).

[2] MDEQ generic groundwater contact criteria are presented for groundwater (June 2000 criteria revision).
MDEQ generic direct contact criteria are presented for soils (June 2000 criteria revision).

Shading indicates that at least one sample exceeded the criteria.

TABLE 6-28
GENERAL MOTORS CORPORATION
PONTIAC, MICHIGAN

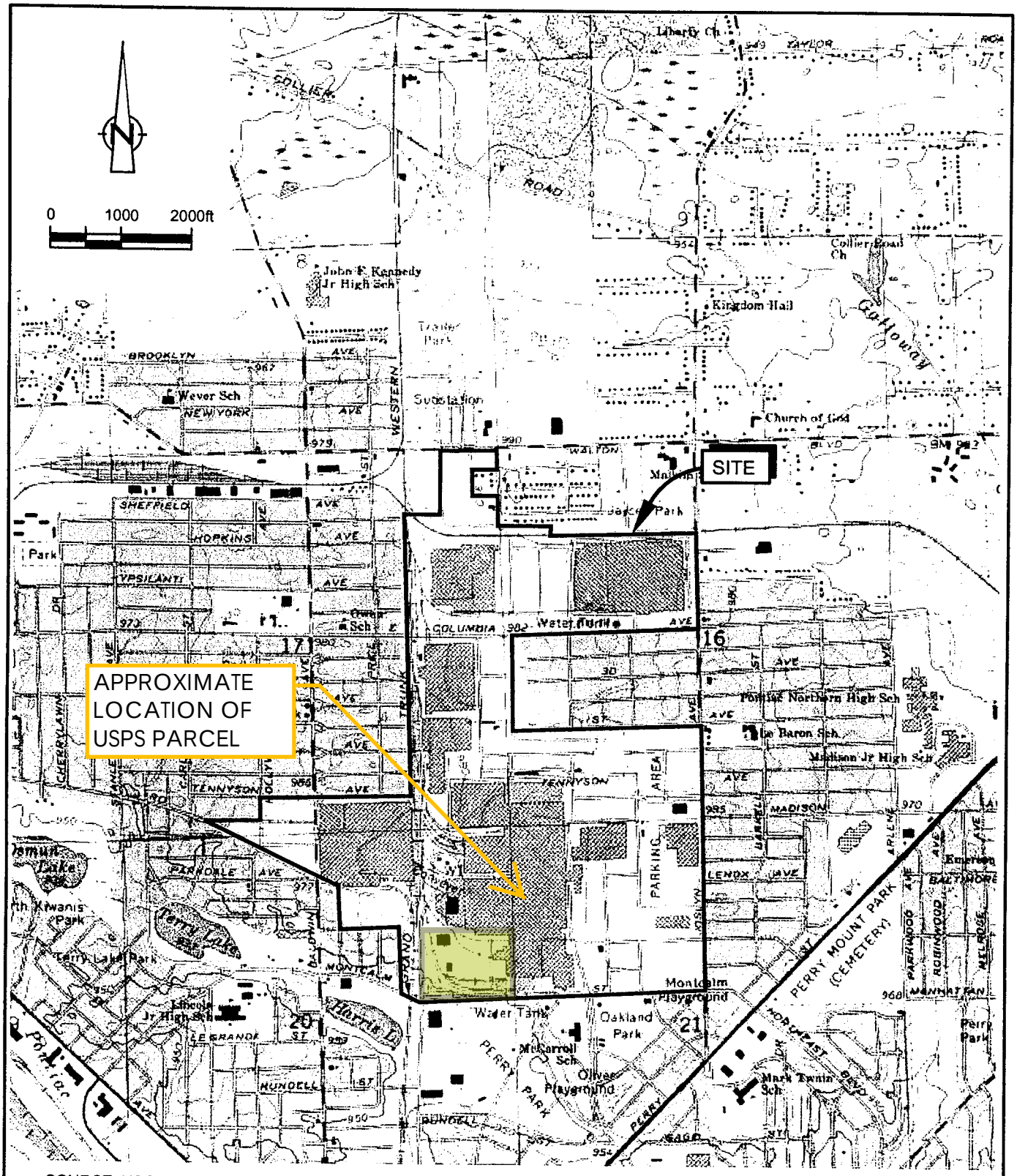
CURRENT CONDITIONS REPORT - PONTIAC NORTH CAMPUS

AREAS OF INTEREST - SITE STORM SEWER SYSTEM

Location	Previously Identified	Active	Description of Areas	Description of Concerns	Previous Investigations/Actions	Future Actions and/or Interim Measures
AOI ST-1: Storm Sewer Outfall 001						
Montcalm Storm; runs from center of Engine Plant 9 south, west of the old foundry, across Montcalm Ave. to Storm Water Retention Pond.	Yes	Yes	Sitewide storm sewer system.	Multiple documented spills with releases to sewer: PCBs, cyanide, metals, hydrocarbons, and solvents from nearly all plant locations.	Storm sewer cleaning program initiated February 5, 2000 and completed September 2, 2000. Resulted in removal of approximately 200 cubic yards of material. Cleaning activities of the stormwater pond, conducted September 26 - October 1, 2000, resulted in the removal of approximately 300 cubic yards of sediment.	Further action is recommended.

13 soil
16 surface soil

26 soil
5 surface
- 6.3 h sample



SOURCE: USGS QUADRANGLE MAP;
PONTIAC NORTH, MICHIGAN

PONTIAC
MICHIGAN

ENCORE

figure 1-1

SITE LOCATION
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

17487-03(001)GN-WA008 JAN 18/2001

Operational Area	Facility Reference Number
CPC Pontiac Fiero Assembly Plant	MID005356910
GMC Central Foundry Division-Pontiac Plant	MID085470102
CPC-Pontiac	MID005356886
GMC Warehousing and Distribution Division	MID076331289

N

0 400 800ft

LEGEND

- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- FACILITY BOUNDARY
- FOOTPRINT OF FORMER STRUCTURE

CPC PONTIAC FIERO ASSEMBLY PLANT
PLANT 17
(MID005356910)

APPROXIMATE USPS PARCEL

CPC-PONTIAC PLANT
(MID005356886)

GMC CENTRAL FOUNDRY DIVISION - PONTIAC PLANT
(MID085470102)

GMC WAREHOUSING AND DISTRIBUTION DIVISION
(MID076331289)

BALDWIN AVENUE

MONTCALM STREET EAST

COLUMBIA AVENUE EAST

WALTON BLVD.

JOSLYN AVENUE

MONTCALM

PLANT 12

PLANT 15

PLANT 25

PLANT 33

PLANT 49

PLANT 11

PLANT 5 & 23

PLANT 56 (OLD PLT 2)

FORMER PLANT 8

FORMER PLANT 9

FORMER PLANT 6

FORMER PLANT 18

ELPO BLDG

POWER TRAIN HQ BLDG

POWERTRAIN ENGINEERING

EMISSIONS CONTROL BUILDING

ST. CLAIR STREET

YOUNG STREET

WING STREET

PORTLAND STREET

BEVERLY AVENUE EAST

CORNELL AVENUE EAST

RUTGERS AVENUE EAST

FAIRMONT AVENUE EAST

STRATHMORE AVENUE EAST

LONGFELLOW AVENUE EAST

LAUREL AVENUE

IVY AVENUE

FIRST AVENUE

SECOND AVENUE

THIRD AVENUE

FOURTH AVENUE

LOWELL STREET

KENNETT AVENUE

RADNOR AVENUE

MARKLE AVENUE

LENOX AVENUE

WESTBROOK AVENUE

LARAMON AVENUE

MADISON AVENUE

MANSFIELD AVENUE

TEMPLTON AVENUE

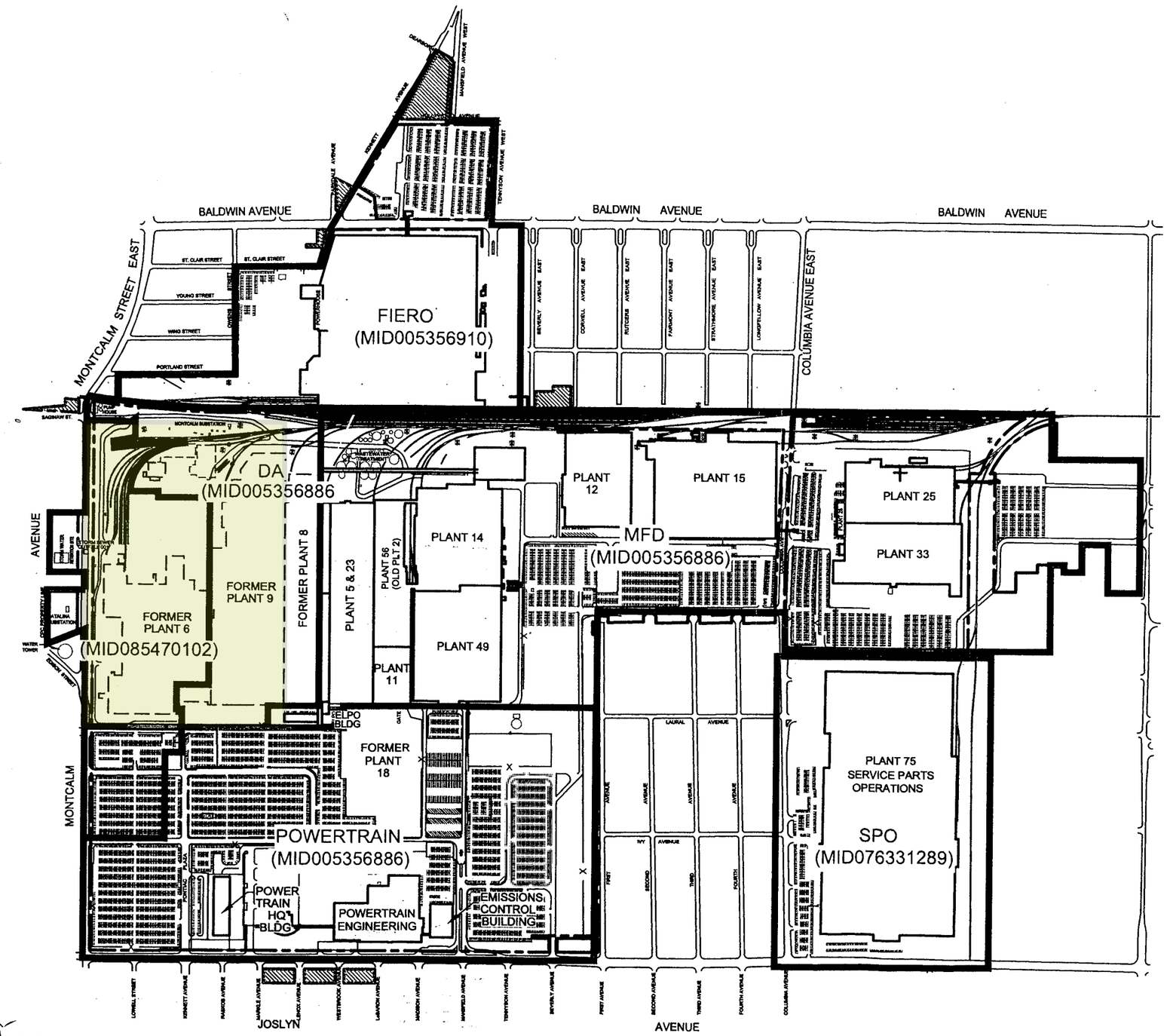
BEVERLY AVENUE

ENCORE

figure 1-2

SITE FACILITIES
PONTIAC NORTH CAMPUS
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

17487-03(001)GN-WA012 JAN 30/2001



N

0 400 800ft

LEGEND

- FOOTPRINT OF FORMER STRUCTURE
- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- OPERATIONAL AREA BOUNDARY
- FACILITY BOUNDARY
- COMMON OPERATIONAL AREA AND FACILITY BOUNDARY

FIERO (FORMER PONTIAC FIERO ASSEMBLY)
DA (DEMOLITION AREA)
MFD (METAL FABRICATION DIVISION)
POWERTRAIN
SPO (SERVICE PARTS OPERATIONS)

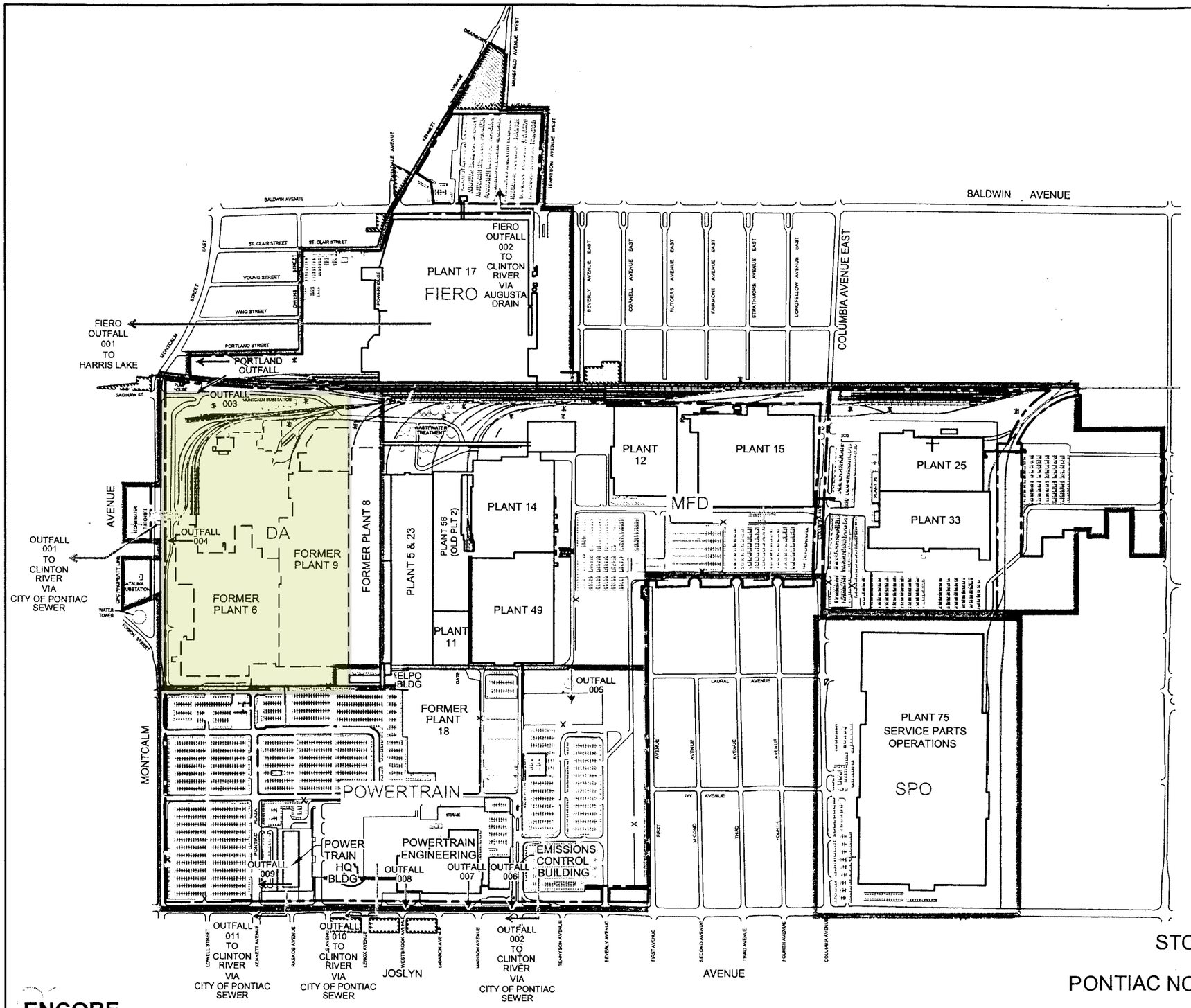
Operational Area	Facility USEPA ID Number
Fiero	MID005356910
Demolition Area (DA)	MID005356886
	MID085470102
Metal Fabrication Division (MFD)	MID005356886
Powertrain	MID005356886
	MID085470102
Service Parts Operations (SPO)	MID076331289

figure 1-4

SUMMARY OF SITE
OPERATIONAL AREAS AND FACILITIES
PONTIAC NORTH CAMPUS
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-WA011 JAN 30/2001



LEGEND

- FOOTPRINT OF FORMER STRUCTURE
- PROPERTY BOUNDARY
- RAILROAD TRACKS
- FENCE
- AREA BOUNDARY
- STORM SEWER OUTFALL
- SANITARY SEWER OUTFALL

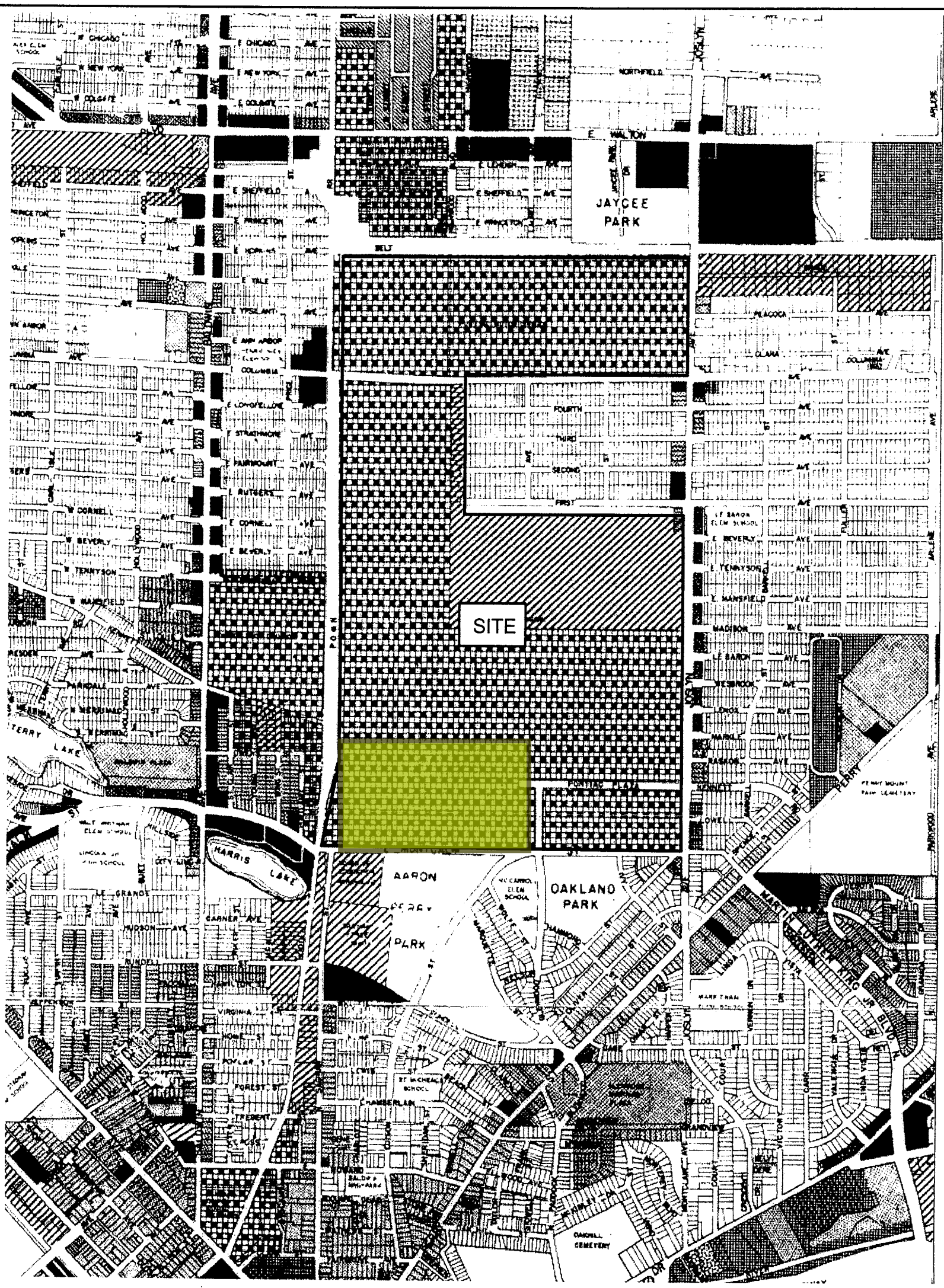
FIERO (FORMER PONTIAC FIERO ASSEMBLY)
DA (DEMOLITION AREA)
MFD (METAL FABRICATION DIVISION)
POWERTRAIN
SPO (SERVICE PARTS OPERATIONS)

figure 2-1

STORM & SANITARY SEWER OUTFALLS
STORM SEWER IM
PONTIAC NORTH CAMPUS, PONTIAC, MICHIGAN
General Motors

ENCORE

17487-02(003)GN-WA011 AUG 13/2001



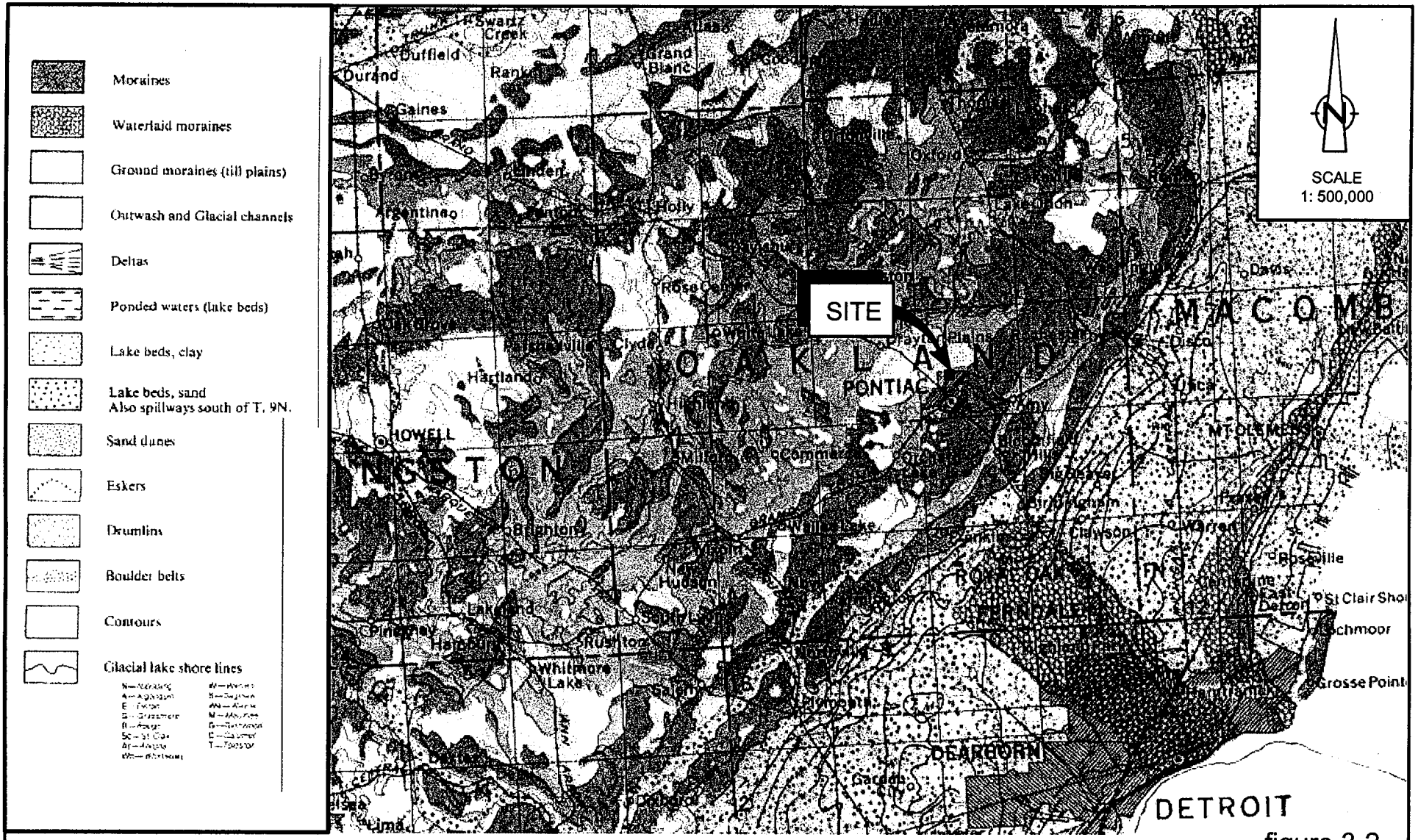
SOURCE: CITY OF PONTIAC PLANNING DIVISION;
COMMUNITY DEVELOPMENT DEPT. - D.B.

figure 3-1

CITY OF PONTIAC LAND USE MAP
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-DE006 JAN 18/2001

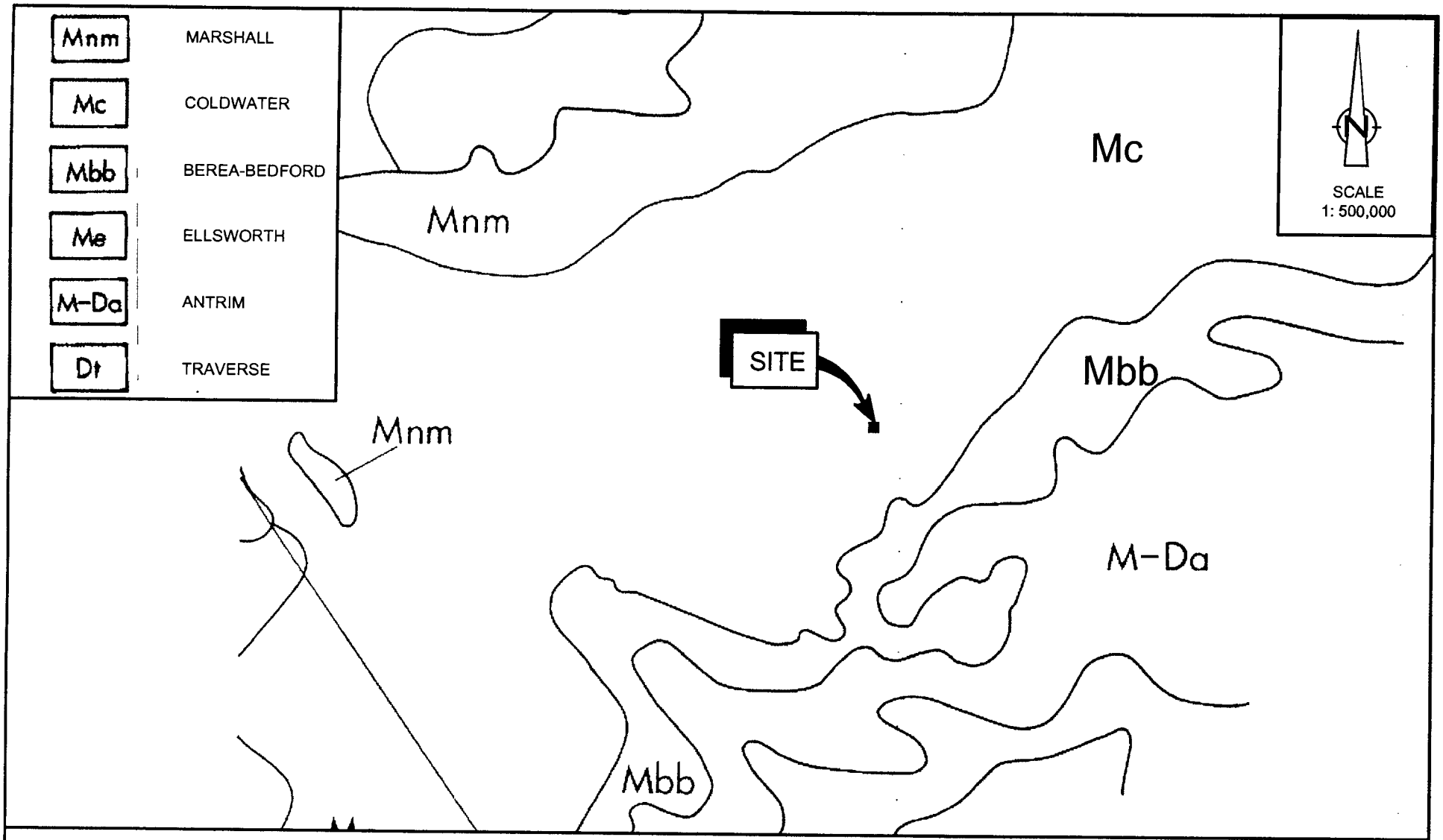


SOURCE: HYDROGEOLOGIC ATLAS OF MICHIGAN, 1955
WESTERN MICHIGAN UNIVERSITY,
DEPARTMENT OF GEOLOGY

figure 3-2

REGIONAL SURFICIAL GEOLOGY
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

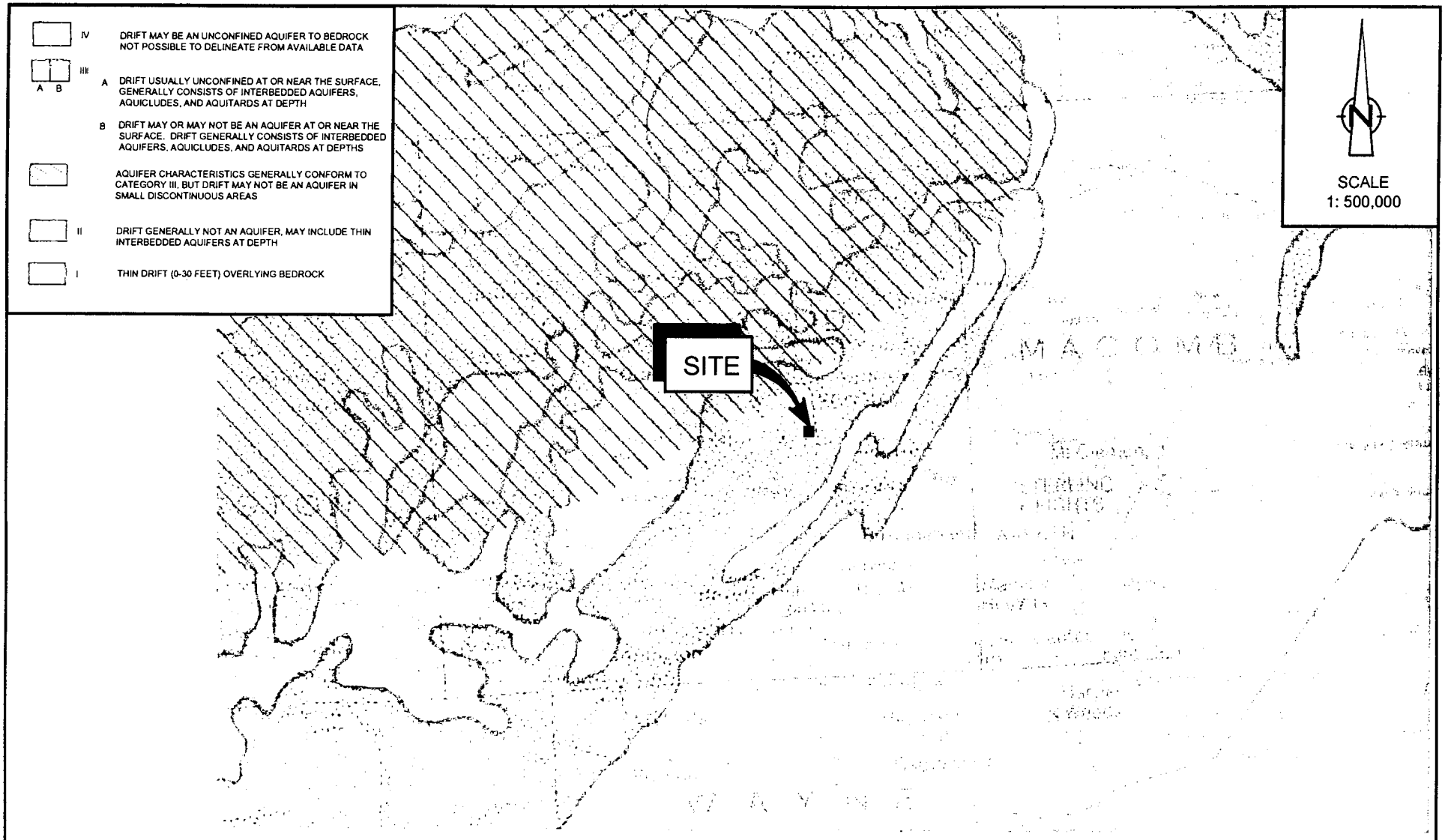


SOURCE: HYDROGEOLOGIC ATLAS OF MICHIGAN, 1981
WESTERN MICHIGAN UNIVERSITY,
DEPARTMENT OF GEOLOGY

figure 3-3
REGIONAL BEDROCK GEOLOGY
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-DE005 JAN 18/2001

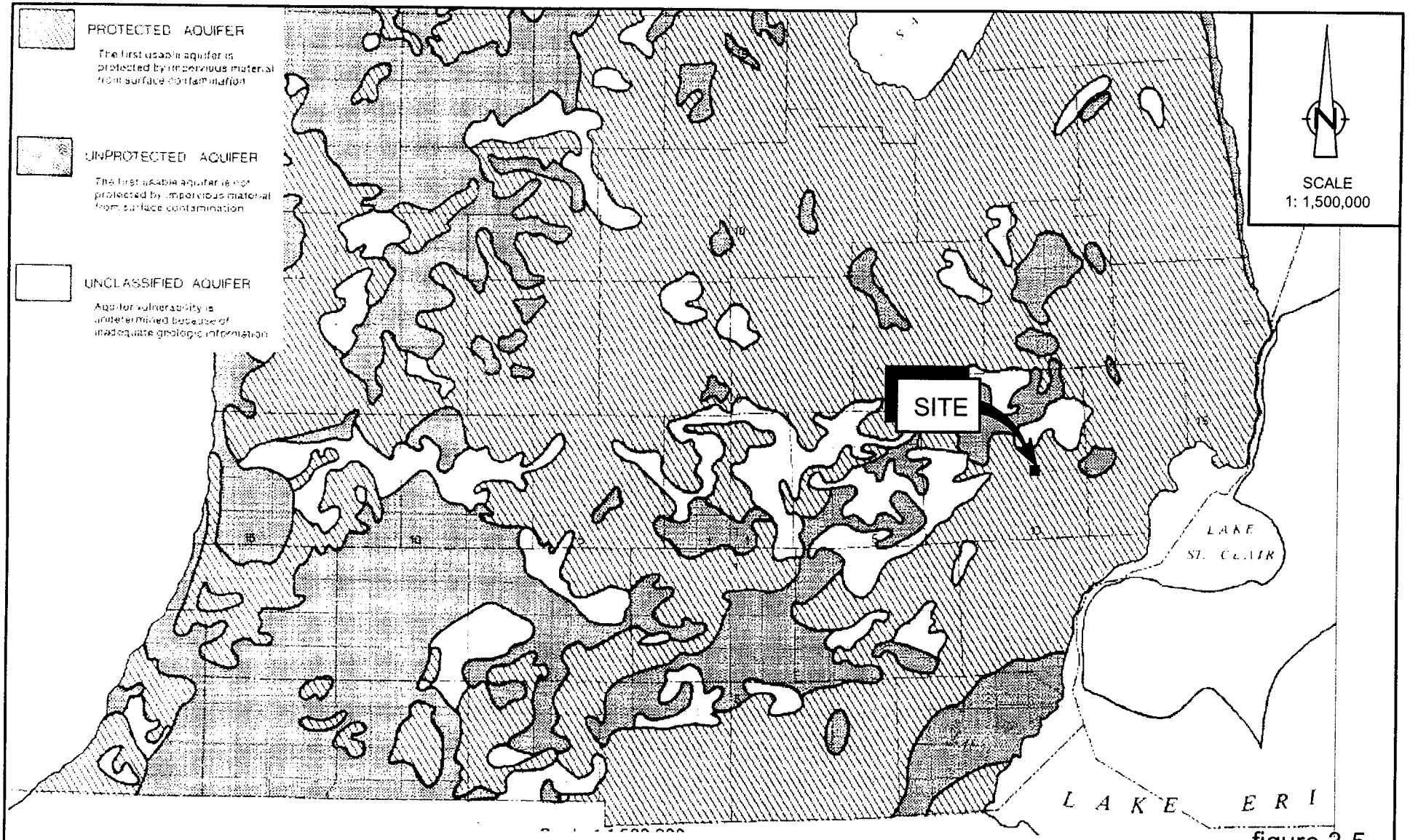


SOURCE: HYDROGEOLOGIC ATLAS OF MICHIGAN, 1981
WESTERN MICHIGAN UNIVERSITY,
DEPARTMENT OF GEOLOGY

figure 3-4

AQUIFER CHARACTERIZATION OF THE GLACIAL DRIFT
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

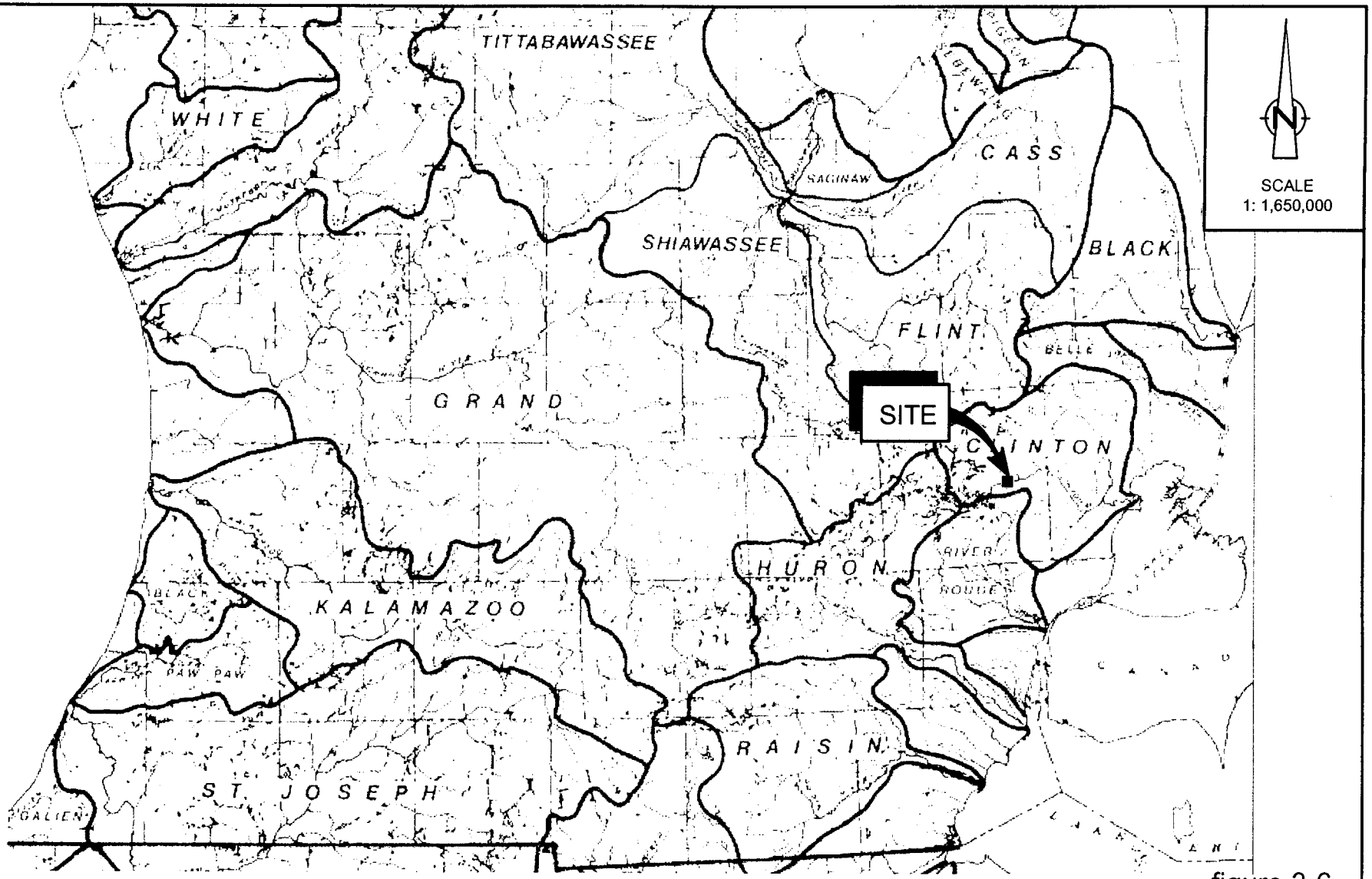


SOURCE: HYDROGEOLOGIC ATLAS OF MICHIGAN, 1981
WESTERN MICHIGAN UNIVERSITY,
DEPARTMENT OF GEOLOGY

figure 3-5

AQUIFER VULNERABILITY TO SURFACE CONTAMINATION
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

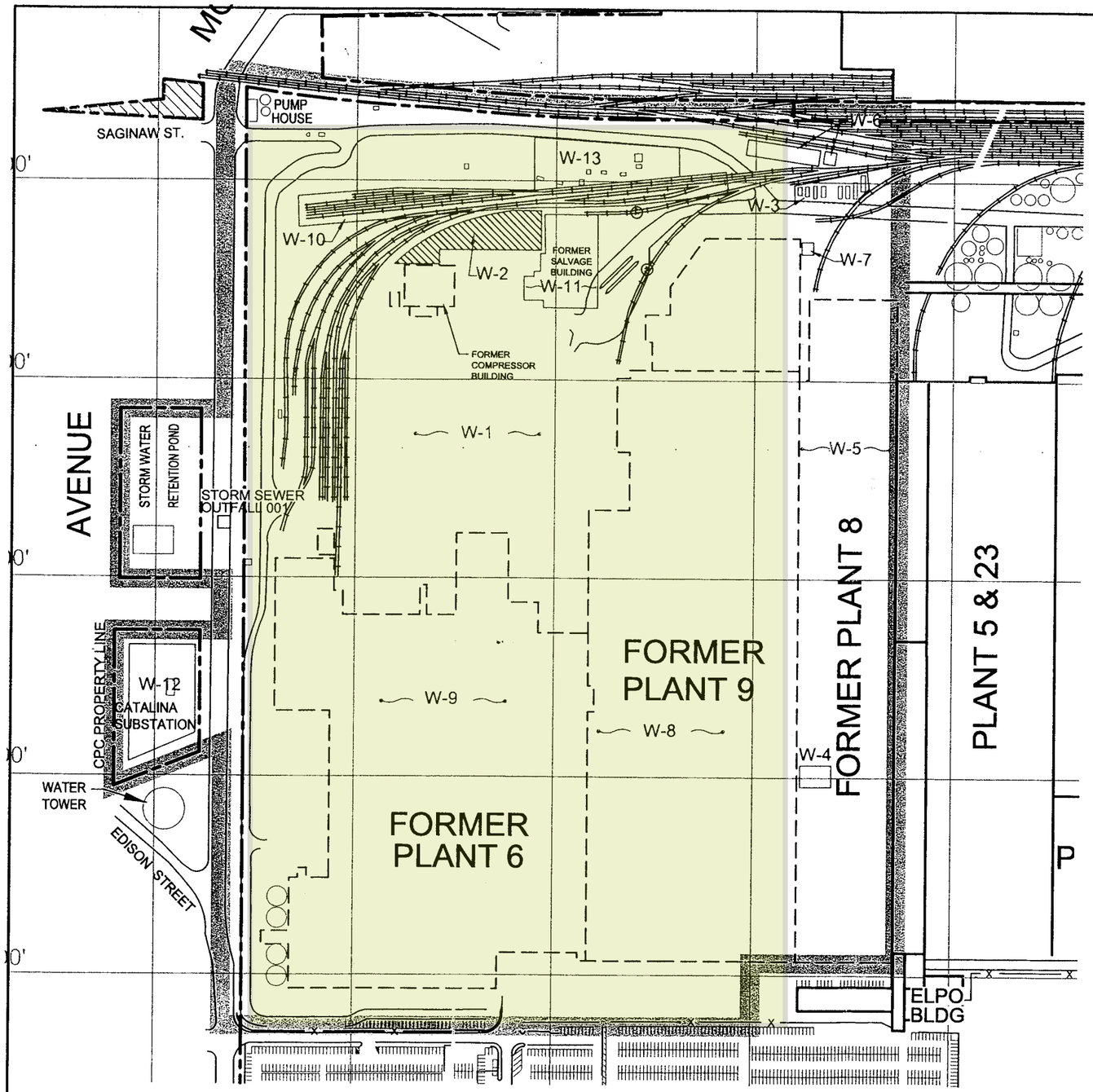


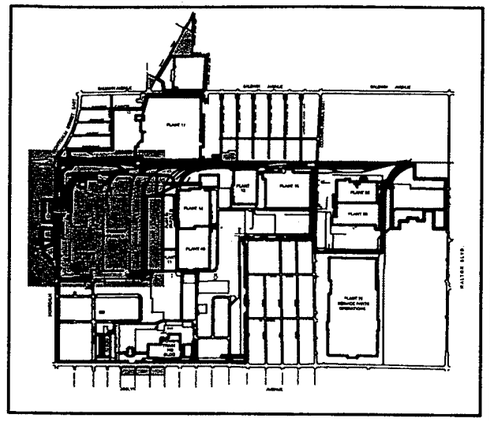
SOURCE: HYDROGEOLOGIC ATLAS OF MICHIGAN, 1980
WESTERN MICHIGAN UNIVERSITY,
DEPARTMENT OF GEOLOGY

figure 3-6

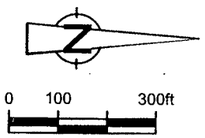
RIVER BASINS
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE





KEY PLAN



LEGEND

	PROPERTY BOUNDARY
	RAILROAD TRACKS
x	FENCE
W-3	AREA OF INTEREST
	OPERATIONAL AREA BOUNDARY

AOI DESCRIPTION

W-1 - WEST YARD
W-2 - FORMER HAZARDOUS WASTE STORAGE PAD
W-3 - FORMER PLANT 8 FLAMMABLE LIQUID STORAGE TANK FARM
W-4 - TRANSFORMER SUBSTATION D-1
W-5 - FORMER PLANT 8 BASEMENT AST AREA
W-6 - FORMER PLANT 8 FLAMMABLE MATERIAL STORAGE BUILDING
W-7 - FORMER PLANT 9 TURBO TANK
W-8 - FORMER PLANT 9 BASEMENT AST AREA
W-9 - FORMER CENTRAL FOUNDRY (PLANT 6) RESIN SPILL AND UST
W-10 - RAILROAD MARSHALLING AREA DRAINAGE SYSTEM
W-11 - SALVAGE YARD SUMP DRAIN
W-12 - CATALINA SUBSTATION
W-13 - MONTCALM SUBSTATION

NOTE: THERE IS NO SPECIFIC LOCATION FOR AOI W-5, W-8, AND W-11.

figure 6-2

AREAS OF INTEREST
PONTIAC NORTH CAMPUS - DEMOLITION AREA
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-WA006 JAN 30/2001

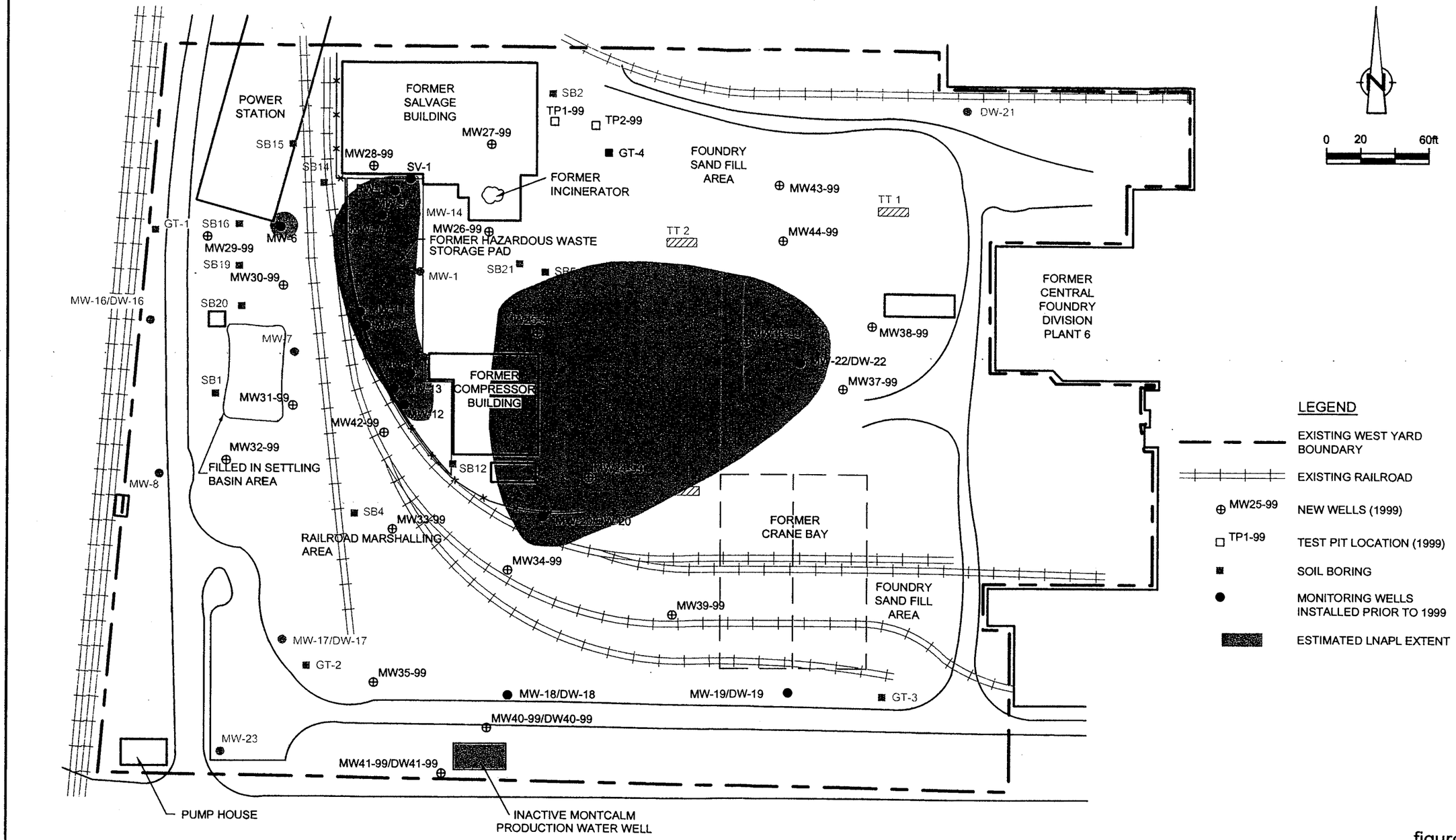


figure 6-3

CURRENT ESTIMATED EXTENT OF LNAPL
WEST YARD, PONTIAC NORTH CAMPUS
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-WA007 JAN 26/2001

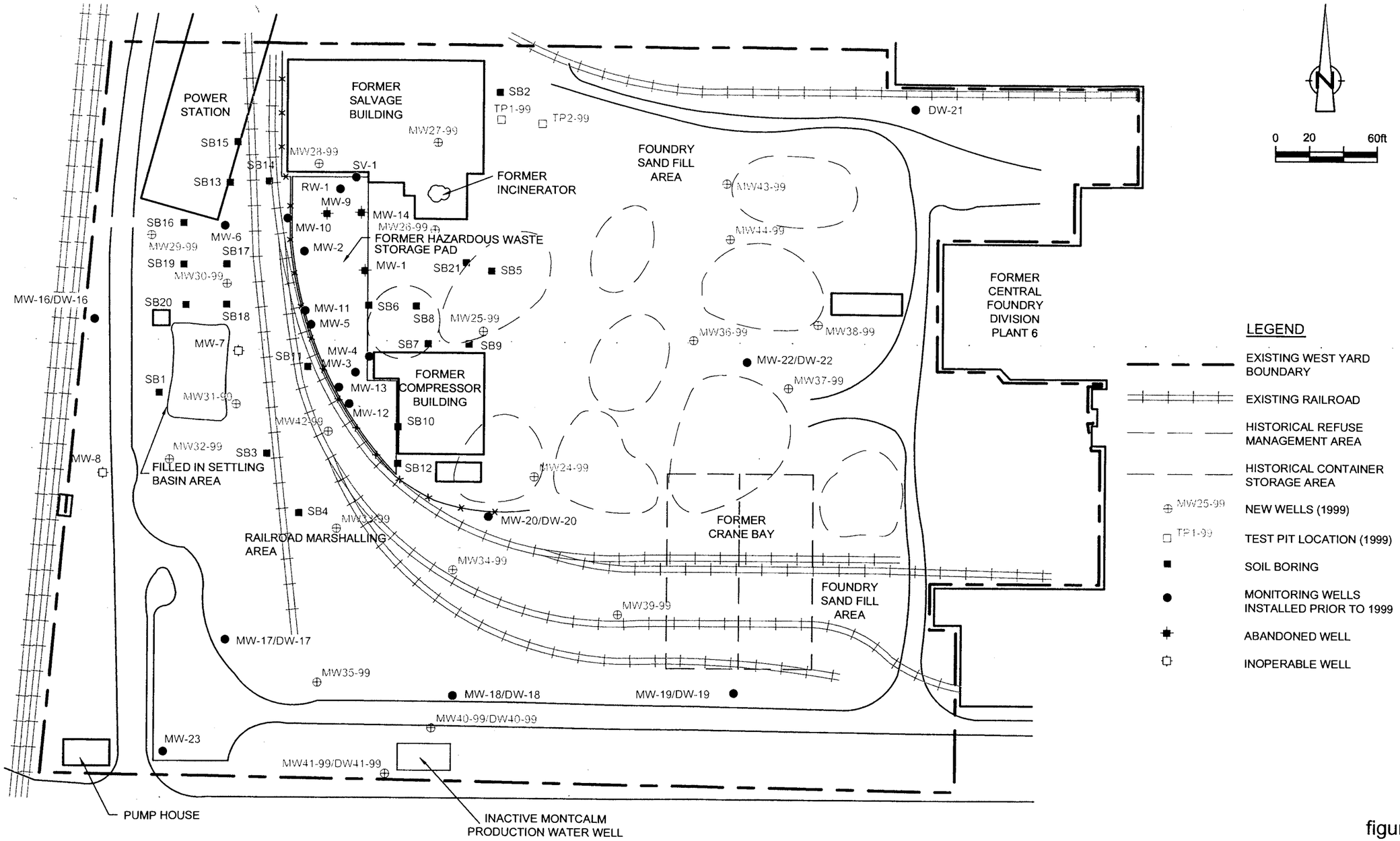


figure 6-4

SOIL BORING AND MONITORING WELL LOCATIONS
WEST YARD, PONTIAC NORTH CAMPUS
CURRENT CONDITIONS REPORT
PONTIAC, MICHIGAN
General Motors

ENCORE

17487-03(001)GN-WA009 JAN 26/2001

Topographic Map, Sanborn Map, and Aerial Photograph Review

Topographic Map Review

Historical U.S. Geological Survey (USGS) topographic maps for the Pontiac North Quadrangle were reviewed to evaluate past conditions at the Site. USGS topographic maps from 1943 (USGS, 1943), 1952 (USGS, 1952), 1968 (USGS, 1968), and 1983 (USGS, 1983) were reviewed.

1943 Topographic Map

The 1943 map illustrates the location of buildings that correspond to the following current site buildings:

- Plants 1 and 11 (Heat Treat);
- Plant 2;
- Plant 5;
- Plant 6 (Central Foundry Division Plant);
- Plant 8;
- Plant 9 (CPC Engine Operations);
- Plant 14;
- Plant 17 (CPC Fiero Assembly); and
- Plant 18 (CPC Engine Operations eastern portion).

The topographic map also identifies a wetland area at the location where current Plants 51, 55, and 75 are located.

1952 Topographic Map

The 1952 map generally illustrates the same information as provided on the 1943 map. However, the 1952 map shows the addition of four new buildings that include the following:

- Engineering North Building;
- Compressor Building;
- Plant 12; and
- Plant 15.

The wetland area at the location where Plants 51, 55, and 75 are currently located is still present.

1968 Topographic Map

The 1968 map illustrates the same information as provided on the 1952 map, except for the addition of the following buildings:

- Administration Building;
- Portion of a building located immediately west of Plant 9;
- Engineering North Building (Southern portion);
- Plant 16;
- Plant 18 (Western portion);
- Plant 49;
- Plant 51; and
- Plant 75.

Because of poor map quality, topographic information could not be obtained from the map for review.

1983 Topographic Map

The 1983 topographic map illustrates the same Site conditions (e.g., Site structures, water tanks, parking areas, conveyor, and railroad tracks) that currently exist at the Site (see Figure 1-2). No storage areas, ponds, or excavation areas were identified on the map.

Topography in the area of the Site is relatively flat with an elevation between approximately 970 feet above mean sea level (amsl) at the southeast corner of the Site to 980 feet amsl at other Site areas. A topographic low (approximately 960 feet amsl) is identified northeast of current Plant 49 and extends north to First and Second avenues.

Sanborn Fire Insurance Map Review

Sanborn Fire Insurance maps assist in the identification of historical land use and commonly indicate the existence and location of ASTs and USTs, structures, improvements, and Site operations. Sanborn maps were reported to be available for the Site for the years 1950 and 1970. However, the 1970 Sanborn map is labeled as "No Longer Corrected"; therefore, this map was not reviewed in detail.

The 1950 Sanborn map indicated that the Plant 2 and Plant 5 area was occupied by the Pontiac Motor Division. These buildings were identified as Plant 10 and used for the storage and shipping of automobiles. Additionally, several railroad tracks enter the west side of Plant 2. No USTs or ASTs were identified.

Aerial Photograph Review

Aerial photographs were reviewed to document the general development of the Site and properties in the vicinity of the Site and to identify potential on-site solid waste disposal areas. Aerial photographs of the Site and surrounding areas were obtained from GM for the years 1937, 1940, 1966, 1970, 1975, 1980, 1985, 1988, 1990, and 1997.

The 1937 and 1940 aerial photographs show the Plant 12 area as vacant property with little activity. The surrounding land use to the north, east, and west was vacant or residential. The land use to the south was industrial and included the portions of the Site including the Foundry, Plant 2, Plant 5, Plant 8, and Plant 9. The current location of the WWTP is occupied by an oval test track. Additionally, several railroad tracks enter Plant 2 on the west side and there appears to be extensive activity in the West Yard, southwest of the MFD area (within the DA).

In the 1966, 1970, and 1975 aerial photographs, Plant 12 had been constructed, with both of the additions. Additionally, the majority of the Site had been constructed including the WWTP, Plant 14, Plant 15, Plant 16, and Plant 75. The railroad tracks entering the west side of Plant 2 have been removed with the exception of one railroad track that enters between Plant 2 and Plant 5. In the West Yard, the Salvage Building and the Compressor Building were constructed, and the Foundry has undergone an expansion. The 1970 aerial photograph shows the construction of the Administration Building and Plant 25. The density of the residential development around the Site had increased from previous aerial photographs.

In the 1980, 1985, 1988, and 1990 aerial photographs, the Site appears generally as it did in the earlier photographs. These photographs show the Site at its peak, as far as buildings and floor space. The 1985 photograph shows Plant 33 as an addition to Plant 25.

In the 1997 aerial photograph, the Foundry, Salvage, and Compressor Buildings in the DA have all been demolished.

Appendix D

D-1 Part A Permit Application (November 1980) (GM, 1980f)
D-2 Letter to USEPA, re: Withdrawal of Part A Permit Application (GM, 1982b)
D-3 Letter to GM, re: Withdrawal of Part A (Non-Hazardous Waste) (USEPA, 1983)
D-4 Letter to GM re: Foundry Waste Classification (MDNR, 1983c)
D-5 Letter to GM, re: MID 085470102 (MDNR, 1983d)

D-1

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F MI D 0 8 5 4 7 0 1 0 2

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		N/A
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: GMC CENTRAL FOUNDRY DIV., PONTIAC PLANT

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 HORENZIAK CHRIS PROJ ENGINEER	313 857 6435

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 PO BOX 900

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 PONTIAC	MI	48056

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 701 GLENWOOD

B. COUNTY NAME

OAKLAND

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 PONTIAC	MI	48056	

CONTINUE ON REVERS

AIR POLLUTION PERMITS

PERMIT NO.

15-67
16-67
231-69
21-70
42-71
240-71
143-72
191-72
85-73
105-73
226-73
238-73
255-73
316-73
37-74
254-74
200-75
419-75
229-76
381-77
382-77
512-77
848-77
100-78
101-78
233-78
460-78
491-78
508-78
103-78
1045-78
10-79
258-79
344-79
367-79
EPA-5-A 79-18
666-79
697-79
802-79
486-80

Please print or type in the unshaded areas only
(Fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F M I D 0 8 5 4 7 0 1 0 2

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*: YR. 68 MO. – – DAY – –

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN: YR. MO. DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE FILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G	
X-2	T03	20	E	
1	S01	150	Y	
	T04	150	Y	
3				
4				
5				
6				
7				
8				
9				
10				

ntinued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): MID085470102

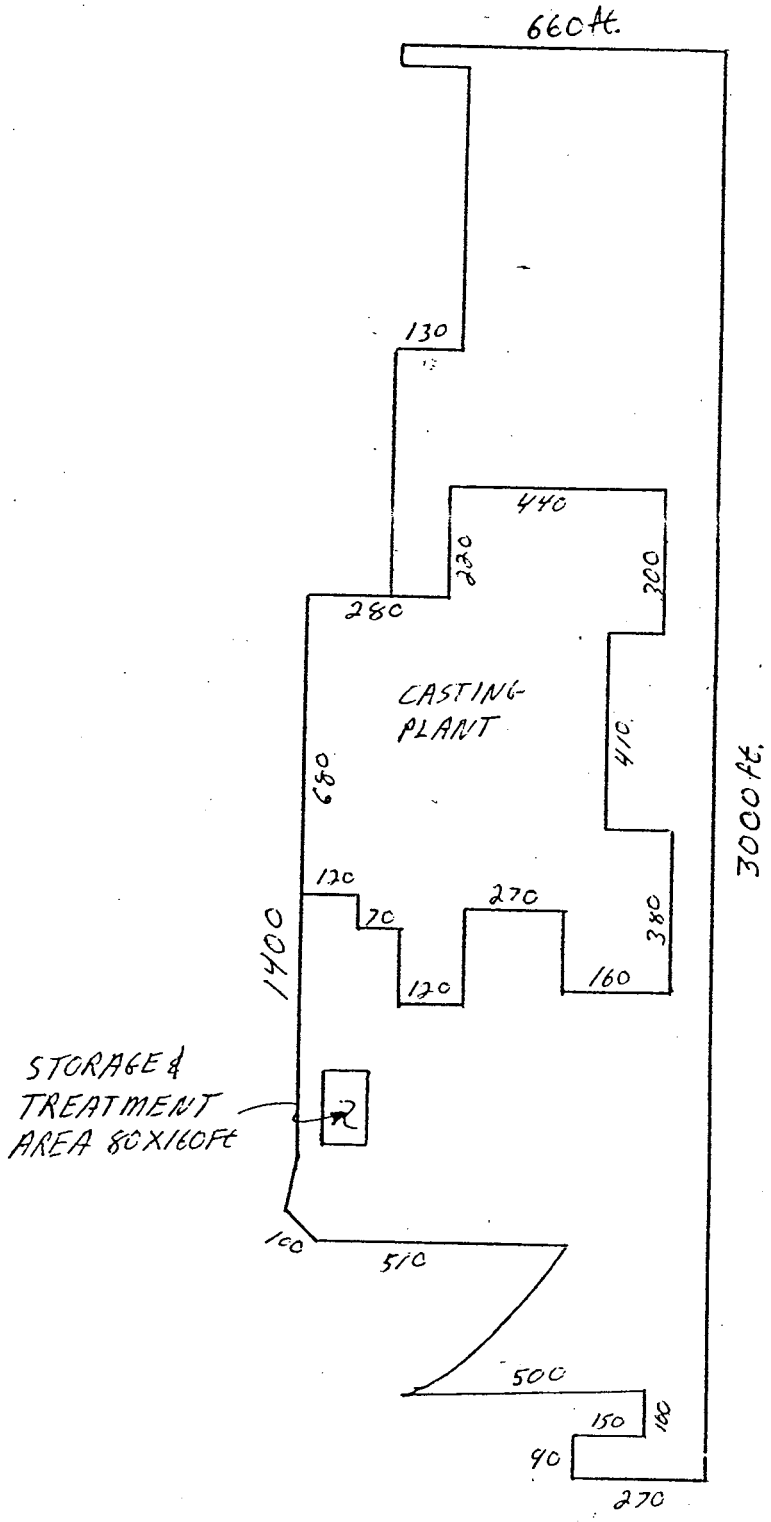
FOR OFFICIAL USE ONLY: W | DUP | 2 | DUP

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D006	11762	T	S01 T04	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Form Approved OMB No. 158-S80004

V. FACILITY DRAWING *(see page 4)*



SCALE: 1 INCH = 400 FEET

D-2

Division of General Motors Corporation
Divisional Offices
77 W. Center St., Box 1629
Saginaw, Michigan 48605

T. R. Wiltse
General Manager

July 12, 1982

Valdas Adamkus
Regional Administrator
U.S. EPA, Rgion V
230 South Dearborn Street
Chicago, Illinois 60604

Dear Mr. Adamkus:

A Part A - RCRA permit application was filed on November 17, 1980, for the following facility:

GMC Central Foundry Division - Pontiac Plant
701 Glenwood Avenue
Pontiac, Michigan 48056
ID # MID085470102

The only waste listed on the attached application (code D006) is dust collected in baghouses on the facility's electric arc melt furnaces. At the time of filing, the dust appeared to be hazardous under the D006 code.

On July 28, 1980, an EPA contractor visited our facility to collect samples of wastes which included the dust described above. The attached letter of February 13, 1981, from David Friedman, Manager Waste Analysis Program, U.S. EPA, Washington, D.C., to Robert Herr, the Plant Manager for the facility at that time, states: "The samples collected at your foundry did not meet the definition of an Extraction Procedure Toxicity hazardous waste (40 CFR Part 261.24)." Our data in the attached consultant's report on May 20, 1982 shows that the quality of the dust was similar to the previous EPA findings.

Based on the above information, we request that the subject application be withdrawn.

Very truly yours,

T. R. Wiltse

BCC: J.B. MEDVED
W. COLLINSON, GMEAS
W. FORD, CFD PONTIAC

Please print or type in the unshaded areas only
(Unshaded areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA — EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE PERMIT APPLICATION
Consolidated Permits Program
(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F M I D 0 8 5 4 7 0 1 0 2 (YR/A/C: 1)

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*: YR. 6 8 | MO. - 1 - | DAY - -

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN: YR. | MO. | DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.
1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR OR GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP (YR/A/C: 1)

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 1	150	Y	
2	T 0 4	150	Y	
3				
4				
5				
6				
7				
8				
9				
10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T 0 4 Physical Treatment

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER – Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

ntinued from page 2.
OTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): M I D 0 8 5 4 7 0 1 0 2

FOR OFFICIAL USE ONLY: W | DUP | T/A | C | 2 | DUP

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D006	11762	T	S01 T04	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

CONTINUE ON REVERSE

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. *(enter from page 1)*

F	M	I	D	0	8	5	4	7	0	1	0	2	T/N	C
														6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, ...atment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
42 33 18 N	083 16 05 W

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
T.R. Wiltse	T.R. Wiltse	11-17-80

X. OPERATOR CERTIFICATION

...rtify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached ...uments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the ...mitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
N/A		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF SOLID WASTE

Feb 13 1981

OFFICE OF WATER
AND WASTE MANAGEMENT

Mr. Robert Herr
Central Foundry Division
701 North Glenwood
Pontiac, MI 48056

Dear Mr. Herr:

On July 28, 1980 our contractor visited your company's foundry at 701 North Glenwood, Pontiac, Michigan 48056 and collected samples of

A. Dry Solids from quencher equipped Cupola Venturi
B. Dry Solids from Electric Arc baghouse
C. Dry Solids from quencher equipped Electric Arc Venturi.

These samples were collected for use in determining if emmissions control residuals from gray and ductile iron foundries are hazardous wastes within the meaning of Section 3001 of the Resource Conservation and Recovery Act of 1976 (PL 94-580).

Upon analyzing these samples we obtained the results shown in the attachment. The samples collected at your foundry did not meet the definition of an Extraction Procedure Toxicity hazardous waste (40 CFR Part 261.24).

A report is being prepared summarizing the results of this sampling program. This report will not identify which specific foundries were sampled. When the report is ready for public distribution, I will have a copy sent to you for your comments.

Again let me thank you for the assistance and cooperation you gave us in this study. If you have any questions concerning these results or if I can assist you in any other way, please feel free to call me at 202-755-9187.

Sincerely,

David Friedman

David Friedman
Manager
Waste Analysis Program
Waste Characterization Branch
Hazardous and Industrial Waste Division (WH-565)

Enclosure

DATA FROM CENTRAL FOUNDRY

	Composition (mg/Kg)			EP Extract Concentration (mg/L)		
	(A)	(B)	(C)	(A)	(B)	(C)
Aluminum	>60	4621	>60	0.45	22.6	0.54
Arsenic	67.2	299	519	0.33	1.99	0.44
Boron	BD	1323	BD	0.41	4.26	BD
Barium	75.9	96.4	963	0.56	0.69	0.39
Beryllium	1.29	BD	5.60	BD	BD	BD
Calcium	7291	12097	BD	122	146	41.8
Cadmium	42.2	134.13	3.60	0.381	1.319	0.23
Cobalt	BD	109	43.3	BD	0.37	BD
Chromium	165	1548.23	425.63	0.049	0.097	0.069
Copper	265	>30	1.38	BD	BD	BD
Iron	>3000	BD	>30	3.97	BD	>30
Magnesium	2225	2452	>30	13.6	13.3	2.57
Molybdenum	BD	BD	BD	0.34	BD	BD
Nickel	33.4	367	35.5	0.24	0.72	0.50
Lead	2648	6213.53	95.93	0.51	1.69	BD
Antimony	505	201	400	0.70	8.70	2.44
Vanadium	7.29	31.6	7.33	BD	0.55	BD
Zinc	>30	>30	555	>30	12.1	9.82

Clayton Environmental Consultants, Inc.

ARC FURNACE BAGHOUSE DUST EP TOXICITY STUDY

CENTRAL FOUNDRY DIVISION
GENERAL MOTORS CORPORATION
Pontiac, Michigan

CEC Job No. 11823-381-EMS

May 20, 1981

ARC FURNACE BAGHOUSE DUST EP TOXICITY STUDY

CENTRAL FOUNDRY DIVISION
GENERAL MOTORS CORPORATION
Pontiac, Michigan

CEC Job No. 11828-381-EMS

Clayton Environmental Consultants, Inc.

1.0 INTRODUCTION

The General Motors Corporation (GMC) retained Clayton Environmental Consultants, Inc. (CEC) to conduct an Extraction Procedure (EP) Toxicity Evaluation Study on two hopper dust catches from the west baghouse which services the five arc melt furnaces and surrounding areas at the Central Foundry Division (CFD), Pontiac, Michigan facility. The purpose of the project was to determine the EP Toxic metals content within the dust collected by the baghouse.

The testing program consisted of collecting a representative dust sample from each baghouse hopper catch during the third working day of each week and mixing the two samples into a single sample in a ratio determined by CFD. The single sample was then analyzed with reference to the U.S. Environmental Protection Agency (EPA) Test Procedures found in the Federal Register, May 19, 1980. Subsequently the analysis was expanded to include additional toxic substances referenced in Michigan Act 64 Rules, February 5, 1981. The sampling program was to have lasted four consecutive weeks, but due to the foundry not operating for one week, the sampling program lasted five weeks.

Ms. Patricia A. Brogan of CEC conducted the sampling on April 1, 15, and 29, 1981, and Mr. Kris Simonian of CEC conducted the sampling on April 8, 1981. Technical assistance and coordination was provided by Mr. Chris Horenziak, GMC, Central Foundry Plant Engineering.

2.0 PRESENTATION OF RESULTS

Table 2.1 presents the EP and Michigan Toxic contaminant concentrations for the samples acquired from the west baghouse at the East and West hopper catches and mixed in a ratio of 1 East: 2 West. Concentrations are expressed as parts per million (ppm). EP Toxic metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Michigan Act 64 Rules adds zinc, copper, and cyanide as contaminants.

In all the samples, arsenic, chromium, lead, mercury, silver and cyanide were less than the analytical limit of detection (LOD). Since total chromium, tested below the LOD, the samples were not analyzed for hexavalent chromium, as per the instructions of Mr. Joe Chu of the General Motors Corporation Environmental Services Staff. The barium concentration was 22, 4.7, 3.2, and 6.1 ppm; the selenium concentration was 0.02 ppm in three tests and below the LOD in one test; the copper concentration was 0.1 ppm in one test and below the LOD in three tests; the zinc concentration was 0.44, 23, 16, and 20 ppm; the cadmium concentration was 0.18, 0.17, 0.37 and 1.2 ppm. The cadmium concentration of 1.2 exceeds the U.S. EP Toxic metal limit. In no other case was the US or Michigan Toxic contaminant allowable limit exceeded.

TABLE 2.1 EP TOXIC CONTAMINANTS OF BAGHOUSE SAMPLES (ppm)

Sample Number	Date 1981	As	Ba	Cd	Cr	Pb	Hg	Sc	Ag	Cu[a]	Zn[a]	Cyanide(s)[a]
1	4-1	<0.01	22	0.18	<0.2	<0.2	<0.01	0.02	<0.05	<0.1	0.44	<0.05
2	4-8	<0.01	4.7	0.17	<0.2	<0.2	<0.01	0.02	<0.05	<0.1	23	<0.05
3	4-15	<0.01	3.2	0.37	<0.2	<0.2	<0.01	<0.01	<0.05	0.1	16	<0.05
4	4-29	<0.01	6.1	1.2	<0.2	<0.2	<0.01	0.02	<0.05	<0.1	20	<0.05
EP and Michigan Toxic Contaminant Allowable Limit		5.0	100	1.0	5.0	5.0	0.2	1.0	5.0	100	500	20

Facility: General Motors Corporation, Central Foundry Division, Pontiac, Michigan.

[a]Unique to Michigan Toxic Contaminant Standards.

3.0 DESCRIPTION OF FACILITY

The Central Foundry Division of General Motors Corporation at its Pontiac, Michigan facility, has five electric arc furnaces which are used to melt scrap metal. Gases from the five furnaces and the surrounding areas are exhausted into a baghouse collection system through a common duct. The duct has a damper which separates the gases from the three furnaces in the west area of the building from gases from the two furnaces in the east area. When the damper is open, waste gases from all five furnaces mix, enter the baghouse system together, and eventually the dust is collected in either of two hoppers, East or West. However, the damper is usually closed, in which case the waste exhaust dust from the three west furnaces collects in the West baghouse hopper, and the dust from the two east furnaces collects in the East baghouse hopper.

4.0 SAMPLING AND ANALYTICAL PROCEDURES

Two representative samples of baghouse dust were collected on the third working day of each week, one from the baghouse East hopper and one from the baghouse West hopper, for four weeks. The samples were collected in clean glass jars with Teflon lined lids. In the laboratory, the two samples were mixed in a ratio of 1 East: 2 West, as per the instructions of Mr. Chris Horenziak, GMC, Central Foundry Plant Engineering. Each sample for metal was extracted for 24 hours in water maintained at pH 5, filtered, and digested in acid as per EP Extraction Procedure Toxicity 40 CFR 261.24. The sample was then analyzed for metal components by atomic absorption spectroscopy. The sample to be analyzed for cyanide was processed in the same manner through to the filtering step and was then analyzed by a colorimetric procedure.

This report prepared by:

Patricia A. Brogan
Technical Writer

Kristopher Simonian
Environmental Technician

Timothy J. Palmer
Group Leader
Emission Measurement Services

This report reviewed by:

Richard J. Walcott Date: May 28, 1981
Assistant Manager IH Services

LABORATORY ANALYSIS REPORT

Submitted to: General Motors Corporation
Central Foundry Division
One Pontiac Plaza
Pontiac, Michigan 48056
Attn: Chris Horenziak

Report date: 24 November 1980

Certified by:

Arthur Mitchell
Manager of Inorganic Studies

Nancy F. Enloe
Corporate Quality Control Manager

Sample received: 20 October 1980

ERG project number: 7011

Results are shown on the following page.

ENVIRONMENTAL RESEARCH GROUP, INC. · 117 N. FIRST · P.O. BOX 322
ANN ARBOR · MICHIGAN 48107 TELEPHONE 313/662-3104

ERG sample number:	AA55153	
Sample description:	Arc Melt Furnace Dust 10/17/80	
Parameters and units	Results	detection limit
silicon (mg/kg)	69,000	
iron (mg/kg)	200,000	
cadmium (mg/kg)	24	
chromium (mg/kg)	1,400	
nickel (mg/kg)	410	
silver (mg/kg)	24	
manganese (mg/kg)	25,000	
magnesium (mg/kg)	1,500	
zinc (mg/kg)	5,000	
aluminum (mg/kg)	3,900	
tin (mg/kg)	470	
beryllium (mg/kg)	ND	1.0
arsenic (mg/kg)	61	
copper (mg/kg)	4,800	
Total	311.589 g/kg	

All results are reported on a dry weight basis.

ND = non-detectable

24,5 Tons/day

CLOW
HYDRO RESEARCH SERVICES
Water Management Division
Clow Corporation

General Motors Corporation
Central Foundry Division
Pontiac Plant
P.O. Box 900
Pontiac, MI 48056
Attn: Mr. Chuck Peters

December 22, 1980

Additional work done on sample received 11-12-80.

Arc Dust

HYDRO NO:	43607A	43607
CUST. ID:	80-SW905 Waste as received, mg/kg	EPA Leachate Procedure 80-SW905, mg/l
Arsenic, As	73	< 0.0005
Barium, Ba	81	0.10
Cadmium, Cd	81	0.65
Chromium, Total, Cr	1,200	< 0.002
Lead, Pb	11,000	0.40
Mercury, Hg	0.10	< 0.0002
Selenium, Se	< 0.1	0.0095
Silver, Ag	36	< 0.002

100 grams of sample was leached into 1600 mls of deionized water and brought to a final volume of 2000 mls. Final pH after the addition of 29 mls of 0.5N acetic acid was 5.1.

CLOW
HYDRO RESEARCH SERVICES
Water Management Division
Clow Corporation
408 Auburn Avenue
Pontiac, MI 48058
313 334-1630
313 334-4747

Same this report

General Motors Corporation
Central Foundry Division
Pontiac Plant
P.O. Box 900
Pontiac, MI 48056
Attn: C. Peters

Date: 7-24-80

Arc Dust

EPA Leachate Procedure

HYDRO NO:	39947	39948	39949	39950
CUST. ID:	SW 901-80	SW 902-80	SW 903-80	SW 904-80
Samples received	7-9-80	7-9-80	7-10-80	7-10-80
Arsenic, As, ug/l	< 0.8	< 0.8	< 0.8	< 0.8
Barium, Ba, mg/l	0.15	0.10	0.10	0.04
Cadmium, Cd, mg/l	< 0.002	< 0.002	< 0.002	< 0.002
Chromium, Total, Cr, mg/l	< 0.002	< 0.002	< 0.002	< 0.002
Lead, Pb, mg/l	< 0.02	< 0.02	< 0.02	< 0.02
Selenium, Se, ug/l	7.3	8.6	3.5	< 0.5
Mercury, Hg, ug/l	< 0.2	< 0.2	< 0.2	< 0.2

Linda Carey/Manager
Analytical Services

CFD - PONTIAC

SUMMARY OF LEACHING TESTS[1] AND TOTAL COMPOSITIONAL ANALYSIS

Parameter	USEPA Limit (mg/l)	Furnace Dust (RMT Sample)		Furnace Dust SW 901-80		Furnace Dust SW 902-80		Furnace Dust Mixture[2] SW 903-80		System Sand SW 904-80		Vacuum Belt Cake (EPA Sample)[3]	Arc Dust (EPA Sample)[3]	Slag Waste (EPA Sample)[3]	Composite (EPA) Sample)[3]
		Prien & Newhof 10/1/79	RMT 8/25/80	Clow 7/24/80	RMT 8/25/80	Clow 7/24/80	RMT 8/25/80	Clow 7/24/80	RMT 8/25/80	Clow 7/24/80	RMT 8/25/80	RMT 9/18/80	RMT 9/18/80	RMT 9/18/80	RMT 9/18/80
Arsenic	5.0	<0.002	-	<0.8	-	<0.8	-	<0.8	-	<0.8	-	-	-	-	-
Barium	100.0	0.41	-	0.15	-	0.10	-	0.10	-	0.04	-	-	-	-	-
Cadmium	1.0	1.35	1.78	<0.002	1.41	<0.002	1.43	<0.002	.72	<0.002	0.06	0.62	1.95	0.03	0.03
Chromium	5.0	<0.03	-	<0.002	-	<0.002	-	<0.002	-	<0.002	-	-	-	-	-
Lead	5.0	0.33	2.1	<0.02	0.6	<0.02	1.5	<0.02	3.6	<0.02	0.4	2.4	1.3	<0.1	<0.1
Mercury	0.2	0.0025	-	<0.0002	-	<0.0002	-	<0.0002	-	<0.0002	-	-	-	-	-
Selenium	1.0	<0.002	-	0.0073	-	0.0086	-	0.0035	-	<0.5	-	-	-	-	-
Silver	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	-	5.1	5.17	-	5.14	-	5.04	-	5.0	-	4.6	4.75	4.97	5.20	4.98
% Solids	-	-	99.7	-	99.7	-	99.7	-	99.3	-	94.3	60.0	98.7	85.2	97.4
Ttl Cadmium[4]	-	-	106 mg/kg	-	88.5 mg/kg	-	74.1 mg/kg	-	62.3 mg/kg	-	1.77 mg/kg	38 mg/kg	136 mg/kg	1.4 mg/kg	1.7 mg/kg
Total Lead[4]	-	-	7872 mg/kg	-	6723 mg/kg	-	6751 mg/kg	-	7069 mg/kg	-	186 mg/kg	2995 mg/kg	7860 mg/kg	104 mg/kg	211 mg/kg

(1) Leaching tests conducted according to 40 CFR 261 Appendix II.
(2) Mixture of furnace dust and system sand.
(3) Samples collected by USEPA on 8/18/80.
(4) Total lead and cadmium given as dry weight basis.

Residuals Management Tech.
October 1, 1979
79167

AFS TEST RESULTS

GMCF - PONTIAC

#4 - FURNACE DUST

PARAMETER (mg/l)	DAY 1		DAY 3		DAY 6	
	No pH	pH 5	No pH	pH 5	No pH	pH 5
Arsenic	< 0.002	< 0.002	-	-	-	-
Barium	0.38	1.35	-	0.70	-	0.38
Cadmium	1.72	6.69	< 0.01	0.53	< 0.01	0.06
Chromium	< 0.02	< 0.02	-	-	-	-
Lead	0.14	21.0	0.12	1.03	< 0.03	< 0.03
Mercury	0.0088	0.0021	0.0042	0.0027	< 0.0002	< 0.0002
Selenium	< 0.002	< 0.002	-	-	-	-
Cyanide	< 0.01	0.01	-	-	-	-
Zinc	16.3	167	< 0.01	25.8	< 0.01	3.05
Manganese	34.7	75.5	1.12	24.5	0.14	8.67
Copper	0.06	0.12	-	-	-	-
Nickel	0.09	1.01	-	0.17	-	< 0.03
Iron	26.1	534	0.11	154	0.07	3.21
Fluoride	31.0	55.0	14.5	26.5	20.0	16.4
Chlorides	560	553	56.2	49.0	53.8	12.2
pH	5.5	5.0	7.1	5.1	7.8	5.6

Residuals Management Tech.
October 1, 1979
79167

EP TEST RESULTS

GMCF - PONTIAC

#4 - FURNACE DUST

PARAMETER (mg/l)	No pH	pH 5
Arsenic	< 0.002	< 0.002
Barium	0.25	0.41
Cadmium	0.77	1.35
Chromium	< 0.03	< 0.03
Lead	< 0.04	0.33
Mercury	0.0008	0.0025
Selenium	< 0.002	< 0.002
pH	5.8	5.1

D-3

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

Received your info & folder W.C.C

REPLY TO ATTENTION OF:

RCRA ACTIVITIES

MAR 29 1983

Mr. T. R. Willis, General Manager
GMC Central Foundry Division
P. O. Box 1629
Saginaw, Michigan 48605

RE: Withdrawal of Part A
(Non-Hazardous Waste)
FACILITY NAME: GMC Central Foundry Division-Pontiac Pla
USEPA ID No.: MID 085 470 102

Dear Mr. Willis:

This to acknowledge that the United States Environmental Protection Agency (USEPA) has completed it review of your Part A Hazardous Waste Permit Application and your letter of July 12, 1982, requesting the withdrawal of your permit application. According to the information which you have submitted, the wastes which are treated, stored or disposed at your facility are not defined as a hazardous waste in 40 CFR 261.3. It is the opinion of this office, based on the information submitted that your facility is not required to have a hazardous waste permit under Section 3005 of the Resource Conservation and Recovery Act at this time. Please be advised that you must still comply with any applicable State and local requirements.

You will retain your USEPA Identification number if you notified that the facility is a generator or transporter of a hazardous waste.

Please contact the Technical, Permits and Compliance Section at (312) 353-2197 for assistance if you have any questions. Please refer to "Withdrawal of Part A (Non-Hazardous Waste)," in all telephone contacts and correspondence.

Sincerely yours,

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

cc: Chris Horenziak, Project Engineer
MDNR

APPROVED
APPROVED AS NOTED
REVIEWED
RETN'D FOR CORRECTION
MAR 31 1983
CENTRAL FOUNDRY DIVISION G.M.
BY

D-4

JUL 1 1983

STATE OF MICHIGAN

NATURAL RESOURCES COMMISSION
JACOB A. HOEFER
E. M. LAITALA
HILARY F. SNELL
PAUL N. WENDLER
HARRY H. WHITELEY

James J. Blanchard, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING
BOX 30028
LANSING, MI 48909
HOWARD A. TANNER, Director

Groundwater Quality Division
Detroit District Office
1120 S. State Fair Ave.
Detroit, MI 48203
(313) 368-3335

June 29, 1983

M. T. Tahy
Central Foundry
Div. of GM
Pontiac Plant
P.O. Box 900
Pontiac, MI 48056

RE: GM Foundry Waste Classification

Dear M. T. Tahy:

A partial review has been conducted of your waste characterization study Act 641, Rule 103(h)(viii) reads:

> (h) "Inert materials" means substances that will not decompose, dissolve, or in any other way form a contaminated leachate upon contact with water or other liquid perculating through them when disposed of on land and includes all of the following:
>
> (viii) Other materials designated by the director
> Rule 105 (b)(ii) classifies landfills

"Type III" means an on-land disposal facility designed and operated to accomodate large volumes of certain solid waste having minimal potential for groundwater contamination.

Section 7(1) "Solid waste" means garbage, rubbish, ashes, incinerator ash, incinerator residue, street cleanings, municipal and industrial sludges, solid commercial and solid industrial waste and animal waste, but does not include human body waste, liquid or other waste regulated by statute, ferrous or nonferrous scrap directed to a scrap metal processor or to a reuser of ferrous or nonferrous products, and slag or slag products directed to a slag processor or to a reuser of slag or slag products.

Section 6(4) "Slag" means the non metallic product resulting from melting or smelting operations for iron or steel.

Based on the above definitions, and your waste characterization, the following are classified:

TYPE II

Wastewater Treatment Sludge
Miscellaneous Sweepings and Cleanings (composite)
Cold Box Core Waste (cured)
Hot Box Core Waste (cured)

Cold Box Core Waste (uncured)
Hot Box Core Waste (uncured)
Spent Furnace & Ladle Refactories

TYPE III

Cupola Bottom Drop
Popcorn Slag
Composite Furnace & Ladle Slag

Slags can be exempted from Act 641 regulations by directing it to a slag processor or a reuser of slag or slag products. Type III wastes may be disposed of in a Type III Landfill specifically designed for that waste or a Type II Landfill.

INERT

Finishing Hopper Sand
Finishing Room Scrap Pit
Block Shakeout Hopper Sand
Power-free Hopper Sand

The Arc Melt Emission Control Dust is a listed hazardous waste under Act 64. Its classification number is K061. Unless this material has been exempted by DNR Hazardous Waste Division it must be disposed of as a hazardous waste as defined by Act 64.

As per our conversation, June 24, 1983, you were referred to Joan Peck, Hazardous Waste Division, to further discuss their designation of your waste.

All wastes classified as a Type III must be tested annually or after any change in process chemistry. Results must be submitted to this office for review. Also, include in these results, the name and location of the Type III Landfill accepting these wastes.

For further correspondence contact me at my office (313) 368-3335.

Very truly yours,
GROUNDWATER QUALITY DIVISION

H. Shakir

Hakim Shakir, Supervisor
DETROIT DISTRICT OFFICE

HS:pf
cc: Dave Dennis
Ron Grimes
Lynne King
Ken Burda
Joan Peck

D-5

Chris

STATE OF MICHIGAN

URAL RESOURCES COMMISSION
ACOB A. HOEFER
M. LAITALA
HILARY F. SNELL
PAUL H. WENDLER
HARRY H. WHITELEY

James J. Blanchard, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING
BOX 30028
LANSING, MI 48909

Hazardous Waste Division
Detroit District Office
1120 W. State Fair Ave.
Detroit, MI 48203
(313) 368-3335

July 11, 1983

File GMP
CFD-
Pontiac

GMC Central Foundry Div.
Pontiac Plant
701 Glenwood
Pontiac, MI 48056

EPA ID No: MID 085470102

Attention: Bill Ford, Environmental Coordinator

Dear Mr. Ford:

This letter is to confirm our telephone conversation of July 6, 1983.

The last DNR staff inspection was conducted at your facility on August 18, 1982 to evaluate for compliance to the Resource Conservation and Recovery Act (RCRA) as amended. At that time it was verified that the company had submitted a request for withdrawal of your Part A Hazardous Waste Permit Application on July 12, 1982. Based on the information submitted, it was acknowledged by the U.S. EPA that, in their opinion your facility is not required to have a permit under Section 3005 of RCRA at this time. We have a copy of this acknowledgement on file. You stated during our phone conversation that there has been no change in hazardous waste activity at your facility since the time of your permit withdrawal. It was indicated that you do not generate, treat store nor dispose of any other hazardous waste at this site. Therefore, staff of the Michigan Department of Natural Resources will not be conducting the 1983 annual compliance inspection.

Please be advised, however, that if your facility at any time in the future generates a regulated quantity of hazardous waste as per 40 CFR Part 261 you are subject to full regulation under Parts 262 through 265 and Parts 122 and 124 of Chapter I and the notification requirements of Section 3010 of RCRA, as applicable. Also, your last waste analysis was done, according to our records in July 1980. This analysis should be repeated as necessary to ensure that it is accurate and up to date. It should also be repeated when there is reason to believe that the process or operation generating the waste or the wastestream has changed.

If you hve questions and/or concerns regarding the above matter or hazardous waste management in general please feel free to contact me at (313) 368-3335.

Sincerely,
HAZARDOUS WASTE DIVISION

Laura L. Lodisio

Laura L. Lodisio
DETROIT DISTRICT OFFICE

LLL:pf
cc: U.S. EPA J. Bohunsky K. Burda

Appendix E

E-1 Notification of Hazardous Waste Activity (GM, 1980b)
E-2 Part A Permit Application (November 1980) (GM, 1980g)
E-3 Letter to USEPA, re: Notification of Hazardous Waste (GM, 1980i)
E-4 Letter to USEPA, re: Petition to Delist Wastewater Sludge (GM, 1981b)
E-5 Letter to GM, re: Temporary Delisting of Wastewater Sludge (GM, 1982a)
E-6 Letter to GM, re: Interim Status Acknowledgement (USEPA, 1982b)
E-7 Part A Permit Application (September 1982) (GM, 1982c)
E-8 Letter to GM, re: Redesignation of Waste (MDNR, 1983a)
E-9 Part A Permit Application (March 1984) (GM, 1984a)
E-10 Part A Permit Application (June 1985) (GM, 1985b)
E-11 Part A Permit Application (January 1986) (GM, 1986a)
E-12 Part A Permit Application (March 1986) (GM, 1986d)
E-13 Part A Permit Application (April 1986) (GM, 1986f)
E-14 Letter to GM, re: Intent to Deny Petition to Delist Wastewater Sludge (USEPA, 1986)
E-15 Part A Permit Application (September 1986) (GM, 1986h)
E-16 Letter to USEPA, re: MID 005356886 (GM, 1986i)
E-17 Letter to USEPA, re: MID 005356886 (GM, 1987a)
E-18 Part A Permit Application (August 1987) (GM, 1987f)
E-19 Letter to USEPA, re: MID 005356886 (GM, 1987h)

E-1

PONTIAC

GM

263

November 18, 1980

EPA Regional Administrator
United States Environmental
Protection Agency, Region V
230 South Dearborn Street
Chicago, Illinois 60604

Re: Notification of Hazardous Waste
Activity for Pontiac Motor Division
One Pontiac Plaza
Pontiac, Michigan 48053
EPA ID No. MID005356886

Dear Sir:

Subsequent to our submission to your office of EPA Form 8700-12 on August 12, 1980, it has come to our attention that certain information was inadvertently omitted from our Notification of Hazardous Waste Activitiey (EPA Form 8700-12).

Pursuant to advice General Motors received from EPA personnel in Washington, we are requesting that the EPA Form 8700-12 submitted for the facility identified above be modified to reflect the hazardous waste activities shown below. Please note that this facility has been assigned an EPA identification number.

The following information was inadvertently omitted:

Part 261. - Subpart D - Lists of Hazardous Wastes.
Waste Type F012 should have been included on the notification.

Please incorporate this additional information on EPA Form 8700-12 for this facility. If you have any questions, please contact M. A. Cunningham at (313) 857-1115.

W. E. HOGLUND
General Manager

KJM/rgvg

NOV 19 1980

E-2

PONTIAC

November 18, 1980

United States Environmental
Protection Agency, Region V,
230 South Dearborn Street
Chicago, Illinois 60604

In accordance with Regulations Promulgated under Section 3001 of the Resource Conservation & Recovery Act of 1976, attached is the RCRA Hazardous Waste Permit Application - Part A - for Pontiac Motor Division of General Motors Corp. The EPA I.D. number for this facility is MID005356886.

Any questions regarding the Permit Application should be addressed to Mr. M. A. Cunningham of our Plant Engineering Department. His telephone number is (313) 857-1115.

W. E. HOGLUND
General Manager

print or type in the unshaded areas only. Fill in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6 D

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
C. Is this a facility which currently results in discharges to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		N/A
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X		X
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: GMC PONTIAC MOTOR DIVISION PONTIAC

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 CUNNINGHAM MICHAEL ASST SUPT	313 857 1115

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 1 PONTIAC PLAZA

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 PONTIAC	MI	48053

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 1 PONTIAC PLAZA

B. COUNTY NAME

OAKLAND

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 PONTIAC	MI	48053	

CONTINUE ON REVERSE

CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3465 (specify) AUTOMOTIVE JOB STAMPINGS	C 7311 (specify) ASSEMBLY OF PASSENGER CARS
C. THIRD	**D. FOURTH**
14 (specify) MOTOR VEHICLE PARTS + ACCESSORIES	C 7 (specify)

II. OPERATOR INFORMATION

A. NAME: GMC PONTIAC MOTOR DIVISION PONTIAC

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC (other than federal or state); O = OTHER (specify)
P (specify)

D. PHONE (area code & no.): C A 313 857 1115

E. STREET OR P.O. BOX: PONTIAC PLAZA

F. CITY OR TOWN: PONTIAC

G. STATE: MI

H. ZIP CODE: 48053

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): T I N/A	D. PSD (Air Emissions from Proposed Sources): C T I 9 P N/A
B. UIC (Underground Injection of Fluids): T I U N/A	E. OTHER (specify): C T I 9 (specify) SEE ATTACHED LIST
C. RCRA (Hazardous Wastes): T I P N/A	E. OTHER (specify): C T I 9 (specify)

M. Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

I. NATURE OF BUSINESS (provide a brief description)

ASSEMBLY OF PASSENGER CARS AND MANUFACTURE OF MOTOR VEHICLE PARTS AND COMPONENTS

II. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
J.E. HOGLUND DIVISION MANAGER	W E Hoglund	11/18/80

COMMENTS FOR OFFICIAL USE ONLY

PONTIAC MOTOR DIVISION

LIST OF AIR POLLUTION PERMITS

Michigan Permit Number:

20-80	299-79	470-78	43-77
46-80	300-79	554-78	51-77
47-80	641-79		94-77
820-80	704-79		169-77
	874-79		184-77
	901-79		185-77
			270-77
			270-77A
251-76	179-75	291-74	442-77
254-76	217-75	394-74	473-77
293-76			662-77
293-76A			663-77
294-76			664-77
359-76			665-77
			666-77
			667-77
93-73	97-72	20-70	668-77
386-73	232-72		669-77
431-73			670-77
			671-77
			672-77
			673-77
			674-77
			677-77
			691-77

(All areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

												T/A	C
1	F	M	1	D	0	0	5	3	5	6	8	8	6		1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
23	24 - 29	

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☒ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)* (71)

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	26		
15	73 74	75 76	77 78

☐ 2. NEW FACILITY *(Complete item below.)* (71)

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY
73 74	75 76	77 78

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☐ 1. FACILITY HAS INTERIM STATUS (72)

☐ 2. FACILITY HAS A RCRA PERMIT (73)

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

| | | | | | | | | | | | |

nued from the front.

PROCESSES (continued)

SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04- BARREL WASHING

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				Included with above

nued from page 2.
E: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY		
1 1 0 0 0 5 3 5 6 8 8 6	T/A C: 1	W	T/A C: 2	DUP
		DUP		

DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F001	30	T	S01 S04 T02	
2	F002	4937	P	S01	
3	F003	4937	P	S01	
4	D001				INCLUDED WITH ABOVE
5	F005				INCLUDED WITH ABOVE
6	F006	12,000	T	S01 S04 T02	
7	F012				INCLUDED WITH ABOVE
8	F018				INCLUDED WITH ABOVE
9	F007	748,000	T	S01 T01 S04	
10	F008	500	T	S01 S04 T02	
11	F009	235,500	T	S01 S04 T01	
12	F010	12	T	S01 S04 T02	
13	F011	5	T	S01 T01	
14	F017	700	T	S01 S02 S04 000	
15	D002	89,760	P	T01	
16	P030	450	T	S04 T04 T01	
17	P029				INCLUDED WITH ABOVE
18	P106				INCLUDED WITH ABOVE
19					
20					
21					
22					
23					
25					
26					

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

...ued from the front.

D. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

LINE 14: T01 T02

EPA I.D. NO. *(enter from page 1)*

F M I D 0 0 5 3 5 6 8 8 6 | T/A: | C: 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
42 38 02 N	083 17 05 W

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
W. E. HOGLUND GENERAL MANAGER	WEH	11/18/80

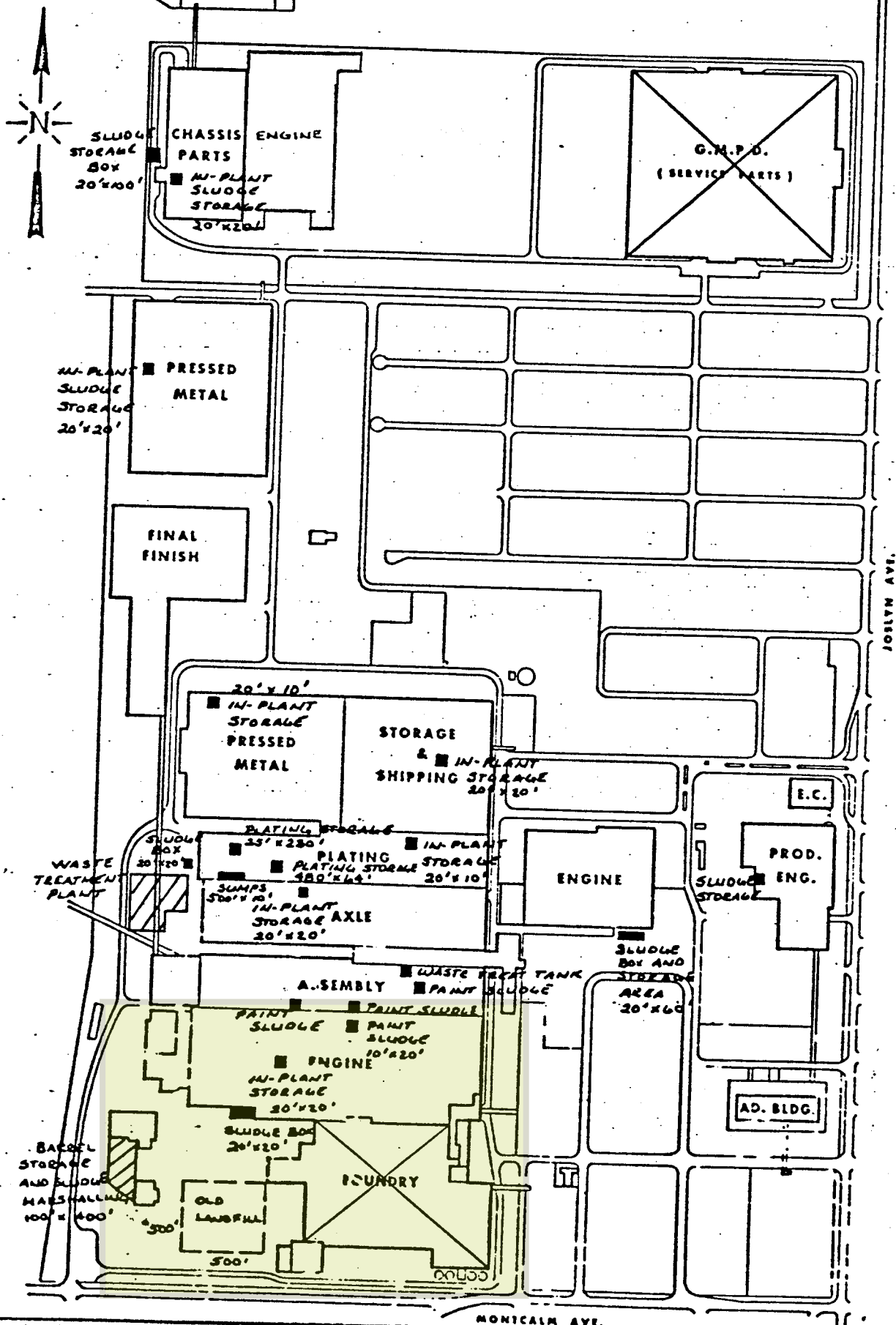
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED

Form Approved OMB No. 158-S80004

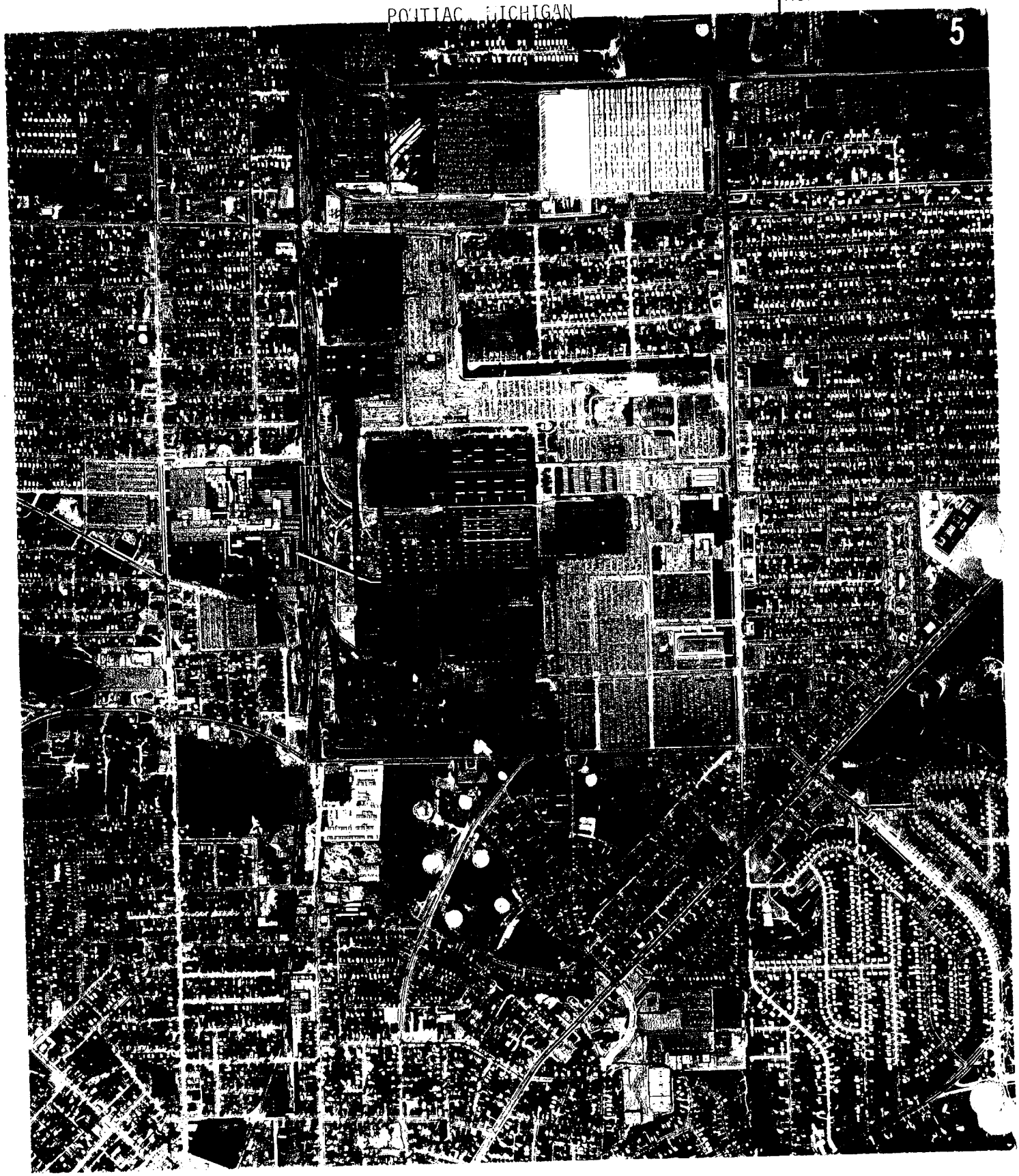
FACILITY DRAWING (see page 4)



PONTIAC MOTOR DIVISION

PONTIAC, MICHIGAN

NORTH



E-3

)NTIAC

August 8, 1980

United States Environmental
Protection Agency, Region V
RCRA Activities
P. O. Box 7861
Chicago, Illinois 60680

In accordance with regulations promulgated under Section 3001 of the Resource Conservation and Recovery Act of 1976, attached is the Notification of Hazardous Waste Activity - EPA Form 8700-12, for Pontiac Motor Division of General Motors Corporation.

Please call us at the telephone number listed below if you require further information.

M. A. Cunningham

M. A. CUNNINGHAM, P.E.
Assistant Superintendent
Plant Engineering Design
(313) 857-1115

D. G. Upton

D. G. UPTON
General Manufacturing Manager

AUG 12 1980

PONTIAC MOTOR DIVISION
GENERAL MOTORS CORPORATION

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

ADDITIONAL DESCRIPTION OF HAZARDOUS WASTES

C. Commercial Chemical Product Hazardous Wastes

U075	U135	U188
U080	U146	U196
U117	U151	U211
U121	U154	U220
U122	U159	U226
U123	U161	U228
U128	U165	U229
U134	U169	U239

AUG 12 1980

E-4

file GMP
Pontiac Mot

THE MARK OF GREAT CARS

September 15, 1981

Ms. Anne M. Gorsuch
Administrator
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

RE: PETITION TO DELIST WASTEWATER SLUDGE

Dear Ms. Gorsuch:

A petition for a regulatory amendment is hereby made to exclude the wastewater treatment sludge produced at our Pontiac plant from listing as a hazardous waste. The informational requirements for the petition as set forth in 40 CFR Part 260 Subpart C (45 FR 33073, May 19, 1980) are addressed in the attached report. This petition to delist the sludge is based upon the determination that this particular material does not meet the criteria under which it was listed.

The waste requested for delisting is wastewater treatment sludge from electroplating operations identified as EPA Hazardous Waste Number F006. The basis for listing as indicated in Appendix VII of Part 261 (45 FR 33131, May 19, 1980) is the presence of cadmium, chromium, nickel, and cyanide (complexed). As shown in Table 1 of the accompanying report, the concentrations of these constituents is well below the levels utilized for determining Extraction Procedure (DP) Toxicity.

The certification statement required for the petition is attached. If you have any questions, or require additional information, please feel free to contact me at any time. We appreciate your prompt consideration in this matter.

Sincerely,

Valory Strausser

Valory Strausser
Plant Engineering-Design

VS/rgvg

PETITION FOR EXCLUSION

WASTE WATER TREATMENT SLUDGE F006

PONTIAC MOTOR DIVISION
GENERAL MOTORS CORPORATION

August 25, 1981

PETITION FOR EXCLUSION

I N D E X

	Page
Certification Statement	1
General Information	2 - 13
Plating Information	14
EPA Leachate Analysis Table	15
Total Analysis Table	16
Clow's Field Notes	17 - 20
Clow's Methodology	21
Clow's Personnel	22 - 24
Clow's Instrumentation	25 - 27
Analytical Results	28 - 35

CERTIFICATION STATEMENT*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

By _____
Plant Manager

*The source of the statement is 40 CFR Part 260 Subpart C Section 260.22(i)(12) (45 FR 33077, May 19, 1980).

GENERAL INFORMATION

The purpose of this report is to petition to exclude F006 Wastewater Treatment sludge generated from electroplating operations at Pontiac Motor Plant, One Pontiac Plaza, Pontiac, Michigan, from being listed as a Hazardous Waste.

Pontiac Motor Plant is engaged in automobile manufacturing and assembly. EPA Permit number is MID 005356886.

The Laboratory that completed the sampling and analysis of the waste F006 was Hydro Research Services, Clow Corporation, Water Management Division. Items such as: (1) names, (2) qualifications of personnel, (3) dates of sampling and testing, (4) sampling methods, (5) sampling handling and preparation, (6) analytical methods, (7) instruments, (8) and results can be found on the information sheets provided by Clow. Pages 28-35.

The sludge requested for exclusion from a hazardous classification results from the treatment of three waste water streams at Pontiac's Wastewater Treatment Plant.

The sludge is a clay-like gray material with a slight greenish tint. The percent solids is 35%. The sludge is uniformly homogeneous, because of the small particle size and the use of large volume holding tanks with mixing before vacuum filtering.

The basis for listing F006 is code (T) from Appendix VII, 40 CFR Part 261, RCRA.

F006 - Cadmium
Chromium
Nickel
Cyanide (complexed)

The average volume generated

Per month - 770 yd^3

Per year - 9,210 yd^3

The maximum volume generated

Per month - 1,110 yd^3

Per year -13,320 yd^3

Disposal Site Information

The disposal site used prior to November 19, 1980 for the F006 waste was Wayne Disposal, Dearborn, Michigan. The disposal site that Pontiac Motor Division uses presently for the F006 is Wayne Disposal. The disposal site for the F006 waste if the petition is granted will be Wayne Disposal.

The Industrial Waste Treament Plant began operation in 1957. Currently, volumes treated are 1.3 million gallons per day. Influent to the plant is separated into the following systems: *

CYANIDE
METALLIC-ACID
ALKALI-OILY

1. CYANIDE SYSTEM

Cyanide is oxidized to CO_2 and N_2 by alkaline chlorination using sodium hypochlorite. The pH is maintained between 9 and 10 with lime slurry. The suspended solids and metal hydroxides are precipitated in the final clarifiers.

2. METALLIC ACID SYSTEM

Influent is a mixture of copper, nickel and chromium plating wastes. Hexavalent chromium is reduced with liquid SO_2 at a pH of 2.5 to 3.0. The pH is raised to 9.5 to 10 with slime slurry in batch treatment tanks and then pumped to final clarifier for precipitation of metal hydroxides. A coagulant aid is added in line. The acid and alkali Solutions from plating are present along with painting booth waste water.

3. ALKALI-OILY SYSTEM

All solutions from parts washers and central coolant systems are treated with acid, alum, caustic and coagulant aid to remove all contaminants and oil from waste water. The oil that is removed from the system is contained in a floc which is treated to remove all oil. This oil can be reused again for manufacturing plant processes. Current volumes of the oil being reclaimed are 100,000 gallons per month. This method of oil reclamation is unique in that no sludge is formed for disposal and all chemicals used in treatment are recycled.

*Pages 3-13 are excerpted from Pontiac Motor Division's Operating Manual for Industrial Waste Treatment Plant 1980

ERAL INFORMATION

4. FINAL TREATMENT SYSTEM

Consists of three final clarifiers and sludge blending tanks and vacuum filters. Clear effluent is discharged to the Metallic system and sludge is hauled to state approved local landfill site.

AVERAGE VOLUME OF WASTES TREATED PER MONTH

Cyanide	3,000,000	Gallons
Metallic-Acid	13,000,000	"
Alkali-Oily	9,000,000	"
	25,000,000	Gallons per Month

CHEMICALS USED TO TREAT WASTEWATER PER MONTH

Lime Slurry	175,000 Gals.	Liquid Caustic	20,000 Lb
Sodium Hypochlorite	25,000 "	Sulphur Dioxide	18,000 "
Sulphuric Acid	15,000 "	Coagulant Aid	250 "
Alum	22,000 Lbs		

E-5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF SOLID WASTE

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Ms. Valory Strausser
Plant Engineering-Design
Pontiac Motor Division
General Motors Corporation
One Pontiac Plaza
Pontiac, MI 48053

Dear Ms. Strausser,

The purpose of this letter is to indicate that the initial review of the delisting petition submitted by the Pontiac Motor Division has been completed. The Agency's Office of Solid Waste has indicated in the enclosed memorandum that the treatment sludge previously categorized as EPA Hazardous Waste No. F006, generated at your Pontiac facility is considered non-hazardous under the conditions specified. A copy of this memorandum has been sent to the Regional Office of Enforcement. Any additional letters of confirmation may be obtained from Mr. Phil Kaplan in the Regional Office. The temporary exclusion will appear in the Federal Register in mid-March.

Sincerely yours,

William G. Sproat, Jr.
Environmental Scientist
Hazardous and Industrial Waste Division

E-6

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
111 West Jackson Blvd.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:
RCRA ACTIVITIES

JUN 14 1982

Mr. Michael Cunningham
Assistant Superintendent
GMC Pontiac Motor Division
One Pontiac Plaza
Pontiac, Michigan 48053

RE: Interim Status Acknowledgement USEPA ID No. MID005356886
FACILITY NAME: GMC Pontiac Motor Division

Dear Mr. Cunningham:

This is to acknowledge that the U.S. Environmental Protection Agency (USEPA) has completed processing your Part A Hazardous Waste Permit Application. It is the opinion of this office that the information submitted is complete and that you, as an owner or operator of a hazardous waste management facility, have met the requirements of Section 3005(e) of the Resource Conservation and Recovery Act (RCRA) for Interim Status. However, should USEPA obtain information which indicates that your application was incomplete or inaccurate, you may be requested to provide further documentation of your claim for Interim Status. Our opinion will be reevaluated on the basis of this information.

As an owner or operator of a hazardous waste management facility, you are required to comply with the interim status standards as prescribed in 40 CFR Parts 122 and 265, or with State rules and regulations in those States which have been authorized under Section 3006 of RCRA. In addition, you are reminded that operating under interim status does not relieve you from the need to comply with all applicable State and local requirements.

The printout enclosed with this letter identifies the limit(s) of the process design capacities your facility may use during the interim status period. This information was obtained from your Part A Permit application. If you wish to handle new wastes, to change processes, to increase the design capacity of existing processes, or to change ownership or operational control of the facility, you may do so only as provided in 40 CFR Sections 122.22 and 122.23.

As stated in the first paragraph of this letter, you have met the requirements of 40 CFR Part 122.23; your facility may operate under interim status until such time as a permit is issued or denied. This will be preceded by a request from this office or the State (if authorized) for Part B of your application. Please contact Arthur Kawatachi of my staff at (312) 886-7449, if you have any questions concerning this letter or the enclosure.

Sincerely,

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

6/14/82

Enclosure
cc: W.E. Hoglund, Gen. Mgr.

F — No file A-

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER → MID005356886 REACKNOWLEDGEMENT

GMC PONTIAC MOTOR DIV
1 PONTIAC PLAZA
PONTIAC MI 48053

INSTALLATION ADDRESS →

1 PONTIAC PLAZA
PONTIAC MI 48053

EPA Form 8700-12B (4-80)

10/03/81

Please print or type with ELITE type (12 characters/inch) in the unshaded areas only. GSA No. 0246-EPA-OT

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION EPA I.D. NO.

I. NAME OF INSTALLATION

II. INSTALLATION MAILING ADDRESS

III. LOCATION OF INSTALLATION

PLEASE PLACE LABEL IN THIS SPACE

000392 AUG 12 80

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act).*

DETACH

FOR OFFICIAL USE ONLY

COMMENTS: C

INSTALLATION'S EPA I.D. NUMBER: F MID005356886 T/A 2 C 1

APPROVED: A

DATE RECEIVED (yr., mo., & day): 800812

~~GENERAL MOTORS CORP~~ GMC PONTIAC MOTOR DIV.

I. NAME OF INSTALLATION

PONTIAC MOTOR DIVISION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 3 ~~ONE~~ ONE PONTIAC PLAZA, ~~PLT ENG DES~~

CITY OR TOWN: 4 PONTIAC

ST.: MI

ZIP CODE: 48053

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: 5 SAME AS ABOVE

CITY OR TOWN: 6

ST.:

ZIP CODE:

IV. INSTALLATION CONTACT

NAME AND TITLE *(last, first, & job title)*: 2 CUNNINGHAM, MICHAEL, ASST. SUPT.

PHONE NO. *(area code & no.)*: 313 857 1115

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: 8 GENERAL MOTORS CORPORATION

B. TYPE OF OWNERSHIP *(enter the appropriate letter into box)*: M

F = FEDERAL
M = NON-FEDERAL

VI. TYPE OF HAZARDOUS WASTE ACTIVITY *(enter "X" in the appropriate box(es))*

- [X] A. GENERATION
- [X] B. TRANSPORTATION *(complete item VII)*
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION *(transporters only — enter "X" in the appropriate box(es))*

- [ ] A. AIR
- [ ] B. RAIL
- [X] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER *(specify):*

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION *(complete item C)*

C. INSTALLATION'S EPA I.D. NO.: MIDD053568B6

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

EPA Form 8700-12 (6-80)

AUG 12 1980

CONTINUE ON REVERSE

D. – FOR OFFICIAL USE ONLY

S W | MID005356886 | F/A | C

IX. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous waste from non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F001	F002	F003	F005	F006	F007
7	**8**	**9**	**10**	**11**	**12**
F008	F009	F010	F011	F017	F018

08 21 1980

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary. (continued on attached sheet

31	32	33	34	35	36
P012	P015	P022	P029	P030	P098
37	**38**	**39**	**40**	**41**	**42**
P105	P106	P116	P119	P120	P121
43	**44**	**45**	**46**	**47**	**48**
U002	U012	U031	U044	U070	U107

D. LISTED INFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

[X] 1. IGNITABLE (D001) [X] 2. CORROSIVE (D002) [X] 3. REACTIVE (D003) [X] 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
D. G. Upton	D. G. Upton General Manufacturing Manager	August 8, 1980

E-7

PONTIAC

September 13, 1982

RECEIVED
SEP 23 1982
WASTE MANAGEMENT BRANCH
EPA, REGION V

Mr. Joe M. Boyle
Waste Management Branch
U.S. EPA Region V
111 West Jackson Blvd.
Chicago, Ill. 60604

SUBJECT: MID005356886

G, T, TSD, BA

The Pontiac Motor Plant (E.P.A. facility I.D. No. MID005356886) is requesting to modify its part "A" RCRA Hazardous Waste permit application. The following points should be deleted from the original part "A" application and changes included:

III. Processes:

S01 - 220,100 gallons delete. This is caused by the removal of paint sludge from hazardous classification. The area remaining is the barrel storage area 45,000 gal.

S02 - 496,700 gallons delete. This figure included waste treatment tanks.

S04 as follows: 7,507,000 gals.

A. 3,858,000 gal. old sludge consolidation area no longer used.
B. Sumps incorrectly described as surface impoundments 3,419,000 gal.
C. Sludge consolidation waste pile area, 240,000 gal. (F006 temporary exclusion - see attached EPA letter).

T01 - 3,000,000 gal./day is the figure for the waste treatment plant exempt by rule.

T02 - 100,000 gal./day sumps were incorrectly described as surface impoundments. Also this figure includes the old sludge area no longer used.

T004 - 500 gal./day delete. Treatment is in process that goes to waste treatment plant.

IV. Description of Hazardous Wastes:
(F001, F002, F003 and F005)
All solvents are intermixed and disposed as D001.
F006 is excluded, see attached.
F012 included in F006.
F017 delisted.
F018 delisted.

RECEIVED 9/28/82

IV. Description of hazardous wastes (continued)

F007 is in process to W.T.
F008 material does not fit F008 description or any other hazardous characteristics.
F009 in process to W.T.
F011 in process to W.T.
D002 in process to W.T.
P030 in process to W.T.
P029 in process to W.T.
P106 in process to W.T.

Hazardous wastes generated at Pontiac Motor Division include:
D001 waste solvent of various make up.

Attached for your records is the part "A" application form 3510-1 and 3510-3. If you have any questions, please contact Valory Strausser (313) 857-2286.

Valory Strausser

Valory A. Strausser
Plant Engineering Design
Pontiac Motor Division

Att. 3510-1
3510-3
EPA letter

VAS/rab/bgs

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters per inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F	M	I	D	0	0	5	3	5	6	8	8	6	

I. LABEL ITEMS

II. EPA I.D. NUMBER

III. FACILITY NAME

IV. FACILITY MAILING ADDRESS

V. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any question, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column. If the supplemental form is attached, if you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2B)	X		N.A.
C. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		YES
D. Do you or will you inject at this facility industrial or municipal effluent or hazardous fluids or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
E. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act, and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	ATTACHED
G. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
H. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
I. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
J. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
K. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 | SKIP | P O N T I A C M O T O R D I V I S I O N O F G. M. C.

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 V A L O R Y S T R A U S S E R E N G I N E E R	3 1 3 8 5 7 2 2 8 6

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	
3 O N E P O N T I A C P L A Z A	

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 P O N T I A C	M I	4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	
5 O N E P O N T I A C P L A Z A	

RECEIVED 9/23/82

B. COUNTY NAME				
O A K L A N D				
C. CITY OR TOWN	**D. STATE**	**E. ZIP CODE**	**F. COUNTY CODE** (if known)	
6 P O N T I A C	M I	4 8 0 5 3	0 6 3	

EPA Form 3510-1 (6-80)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST: 3710 (specify) MOTOR VEHICLES & EQUIPMENT

B. SECOND: (specify)

C. THIRD: (specify)

D. FOURTH: (specify)

VIII. OPERATOR INFORMATION

A. NAME: PONTIAC MOTOR DIVISION OF G.M.C.

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
[ ] FEDERAL [ ] STATE [ ] PRIVATE [ ] PUBLIC (other than federal or state) [ ] OTHER (specify) (specify) PRIVATE

D. PHONE NO. (area code & no.): [X] 313 857 2286

E. STREET (P.O. box, RFD #, etc.): ONE PONTIAC PLAZA

F. CITY OR TOWN: PONTIAC

G. STATE: MI

H. ZIP CODE: 48053

I. INDIAN LAND: Is the facility located on Indian land? [ ] YES [X] NO

IX. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to surface water): MI0042412

B. UIC (Underground Injection of Fluids): N/A

C. RCRA (Hazardous Wastes): N/A

D. AIR EMISSIONS from Proposed Sources: N/A

E. OCEAN DUMPING: N/A

F. OTHER (specify): (specify)

G. OTHER (specify): MID005356886

H. OTHER (specify): (specify)

X. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XI. NATURE OF BUSINESS (provide a brief description)

PONTIAC MOTOR DIVISION, PONTIAC IS A MANUFACTURER OF AUTOMOBILE COMPONENTS INCLUDING ENGINES, REAR AXLES, SHEET METAL STAMPINGS, AND THERMOPLASTIC MOLDINGS. ALL COMPONENTS ARE USED FOR THE MANUFACTURING AND ASSEMBLY OF AUTOMOBILES.

XII. CERTIFICATION (Agreement and Signature)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
D. G. UPTON GEN. MANUFACTURING MGR.	D G Upton	9-16-82

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (6-80) REVERSE

(fill-in areas are spaced for elite type, i.e., 12 [illegible] /inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

6	F	M	I	D	0	0	5	3	5	6	8	8	6	T/A
1	2											13	14

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
23	24 - 29	

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)* (71)

C 8 (15) — YR. (73 74) MO. (75 76) DAY (77 78) — FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

☐ 2. NEW FACILITY *(Complete item below.)* (71)

YR. (73 74) MO. (75 76) DAY (77 78) — FOR NEW FACILITIES PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☒ 1. FACILITY HAS INTERIM STATUS (72)

☐ 2. FACILITY HAS A RCRA PERMIT (73)

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided, Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

P C — DUP — T/A C — 1 (1 2 | 13 14 15)

LINE NUMBER	A. PROCESS CODE (from list above) (16 - 18)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify) (19 - 27)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code) (28)	FOR OFFICIAL USE ONLY (29 - 32)
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 1	45,000	G	
2				
3				
4				
5				
6				
7				
8				
9				
10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE, INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above, (2) Enter "000" in the extreme right box of Item IV-D(1), and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)														FOR OFFICIAL USE ONLY												
W	M	I	D	0	0	5	3	5	6	8	8	6	T/A 1	C	W	D	U	P					T/A 2	C	DUP	

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	500	T	S01				
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

M I D 0 0 5 3 5 6 8 8 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail)

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures, existing storage, treatment and disposal areas, and sites of future storage, treatment or disposal areas (see instructions for more detail)

VII. FACILITY GEOGRAPHIC LOCATION

A. LATITUDE (degrees, minutes, & seconds)	B. LONGITUDE (degrees, minutes, & seconds)
4 2 3 8 0 2 N	0 8 3 1 7 0 5 W

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

☐ B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

C. NAME OF FACILITY'S LEGAL OWNER	D. PHONE NO. (area code & no.)

E. STREET OR P.O. BOX	F. CITY OR TOWN	G. ST.	H. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
D.G. UPTON Manuf. Manager	D G Upton	9-16-82

X. OPERATOR CERTIFICATION

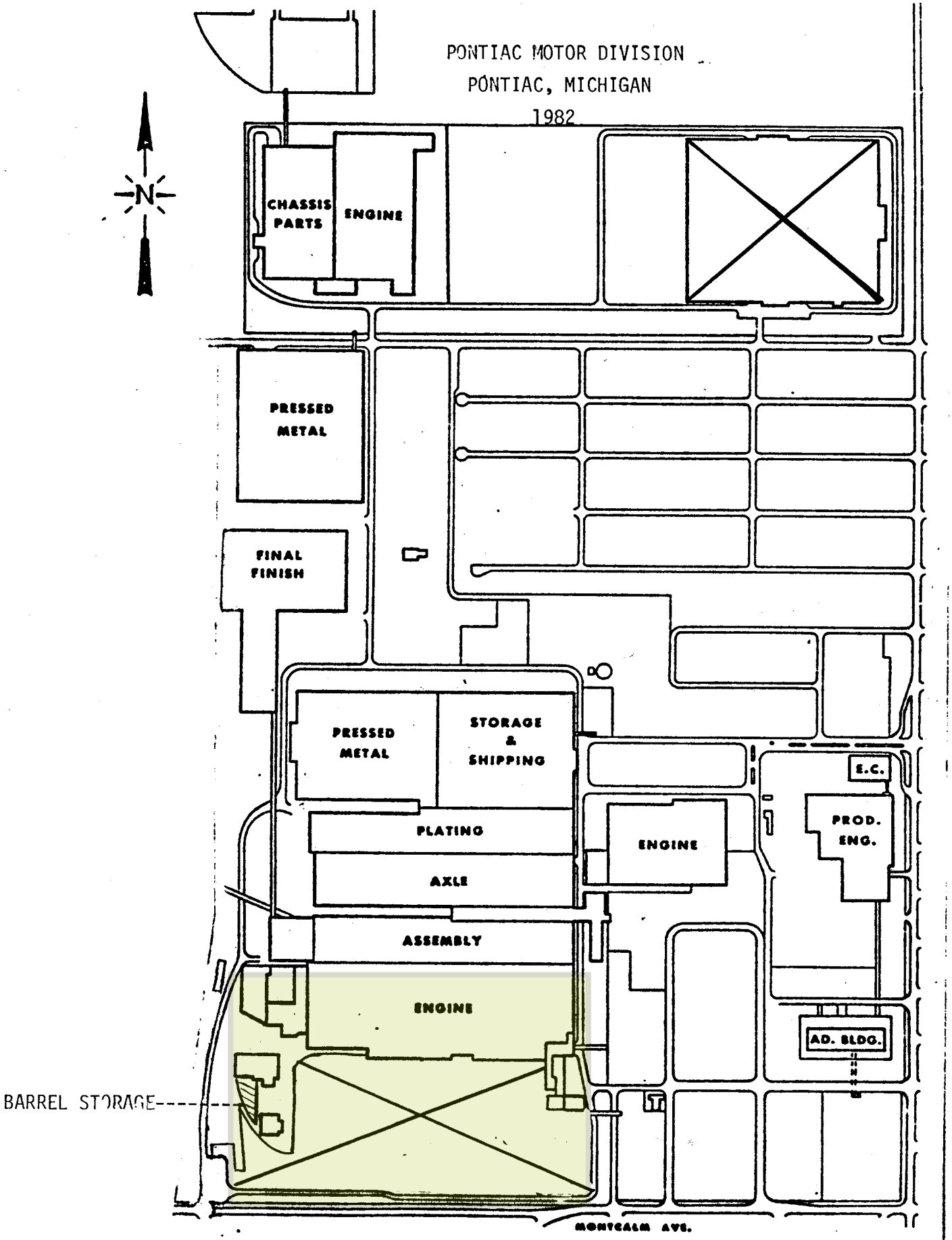
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

Continued from page 4.

V. FACILITY DRAWING (see page 4)

Form Approved OMB No. 158-S80004



E-8

NATURAL RESOURCES COMMISSION
JACOB A. HOEFER
ROBERT HOLMES
E. M. LAITALA
HILARY F. SNELL
PAUL H. WENDLER
HARRY H. WHITELEY

STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING
BOX 30028
LANSING, MI 48909
James F. Cleary, Acting Director

June 23, 1983

Ms. V. A. Strausser
Plant Engineering Design
Pontiac Motor Division
One Pontiac Plaza
Pontiac, Michigan 48053

Dear Ms. Strausser:

Enclosed is a copy of your Michigan redesignation for waste generated at your facility.

If you have questions, please call me at (517) 373-2730.

Sincerely,

Joan H. Peck

Joan H. Peck
Hazardous Waste Division

Enclosure

R1026

APPROVED

6-10 83

MICHIGAN NATURAL RESOURCES COMMISSION

EXECUTIVE ASSISTANT

emorandum to the Natural Resources Commission:

Re: Pontiac Motor Division, GMC
Hazardous Waste Redesignation

On January 18, 1982, Pontiac Motor Division, General Motors Corporation, petitioned the Department to "delist" their electroplating wastewater treatment sludges. Additional information was submitted on March 1, 1982 and April 8, 1982.

Currently both the state and federal hazardous waste regulations consider this general waste type to be hazardous by definition. A company, however, may get its waste exempted from this general classification if it demonstrates that its specific waste does not possess the characteristics which originally caused the overall waste class to be considered hazardous.

In response to the company's petition, the U.S. Environmental Protection Agency granted Pontiac Motor Division a temporary delisting on November 22, 1982. MDNR staff has also reviewed the redesignation request and agrees that the waste may be redesignated. Therefore, it is recommended that the Commission also grant a temporary redesignation pursuant to MAC R 299.6204 subject to the following conditions:

1. This temporary redesignation will remain in effect until modified by the commission pursuant to a change or final decision on the company's delisting petition by the U.S. EPA or until this redesignation is modified by the commission for cause pursuant to condition number 11.

2. Only F006 sludge (wastewater treatment sludges from electroplating operations) generated on site is subject to this redesignation.

3. If a managed listed hazardous waste is mixed with the redesignated sludge, the entire mixture must be managed as a hazardous waste.

4. The sludge will be considered hazardous if:

   a) The sludge exhibits the characteristic of EP toxicity, ignitability, corrosivity or reactivity.

   b) The waste is infectious or severely toxic.

5. If the waste is not hazardous by condition 4, but is a notification waste, it must be managed according to R 299.6203(2)(a).

6. If the redesignated waste is to be disposed of in a Michigan landfill, it must go to a properly licensed facility.

7. Pontiac Motors shall keep all laboratory records on material subject to this redesignation at the facility. Such records shall be retained for a minimum of 3 years and shall be made available for review by the Director or his authorized representative upon request.

8. Pontiac Motors shall keep daily records of the volume of redesignated sludge sent for disposal and the disposal facility location.

9. Pontiac Motors shall comply with the conditions specified in the temporary delisting granted by EPA on November 22, 1982.

10. Pursuant to the Act and the Administrative Rules, DNR employees shall be permitted to reasonably stop and obtain samples of sludge from any vehicle which has been loaded with waste material, is on-site, and is in the process of departing from the company premises.

    If a test conducted on 1) a sample of sludge taken from any departing truck which is not carrying a valid 1979 PA 64 manifest indicating that the shipment is hazardous or 2) a sample from a batch of sludge which has been redesignated as nonhazardous shows that the sludge is hazardous by the definition in condition 4 above, then those tests shall be evidence that the company has violated Act 64 and this redesignation.

11. The Director may suspend, modify or revoke the redesignation after reasonable notice and hearing pursuant to Act 306 of the Public Acts of 1969, as amended, if the Director finds the company has not complied with the above conditions of the redesignation or if additional information indicates the redesignated waste stream is hazardous for reasons not considered in the original listing. Failure to comply with the conditions of this redesignation by the company may also constitute a violation of Act 64, P.A. 1979, as amended.

Delbert Rector

Delbert Rector, Chief
Hazardous Waste Division

I have analyzed and discussed this recommendation with the Deputy Directors and staff, and we concur.

James F. Clumy

Howard A. Tanner
Director

ACTING

E-9

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four—digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four—digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non—listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non—listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non—listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non—listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)															FOR OFFICIAL USE ONLY														
W	M	I	D	0	0	5	3	5	6	8	8	6	T/A	C	W												T/A	C	
														1														2	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D001	350	T	S01				
2	D001	150	T	S02				
3	D001	1350	T	S02				
4								
5								
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EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

(enter "A", "B", "C", etc. behind the "3" to identify photocopied pages)

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS W(3 (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	M	I	D	0	0	5	3	5	6	8	8	6	T/A	6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)							LONGITUDE (degrees, minutes, & seconds)							
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
4	2	3	8	0	2	N	0	8	3	1	7	0	5	W

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
D.D. Cambell	D.D. Campbell	6/27/85

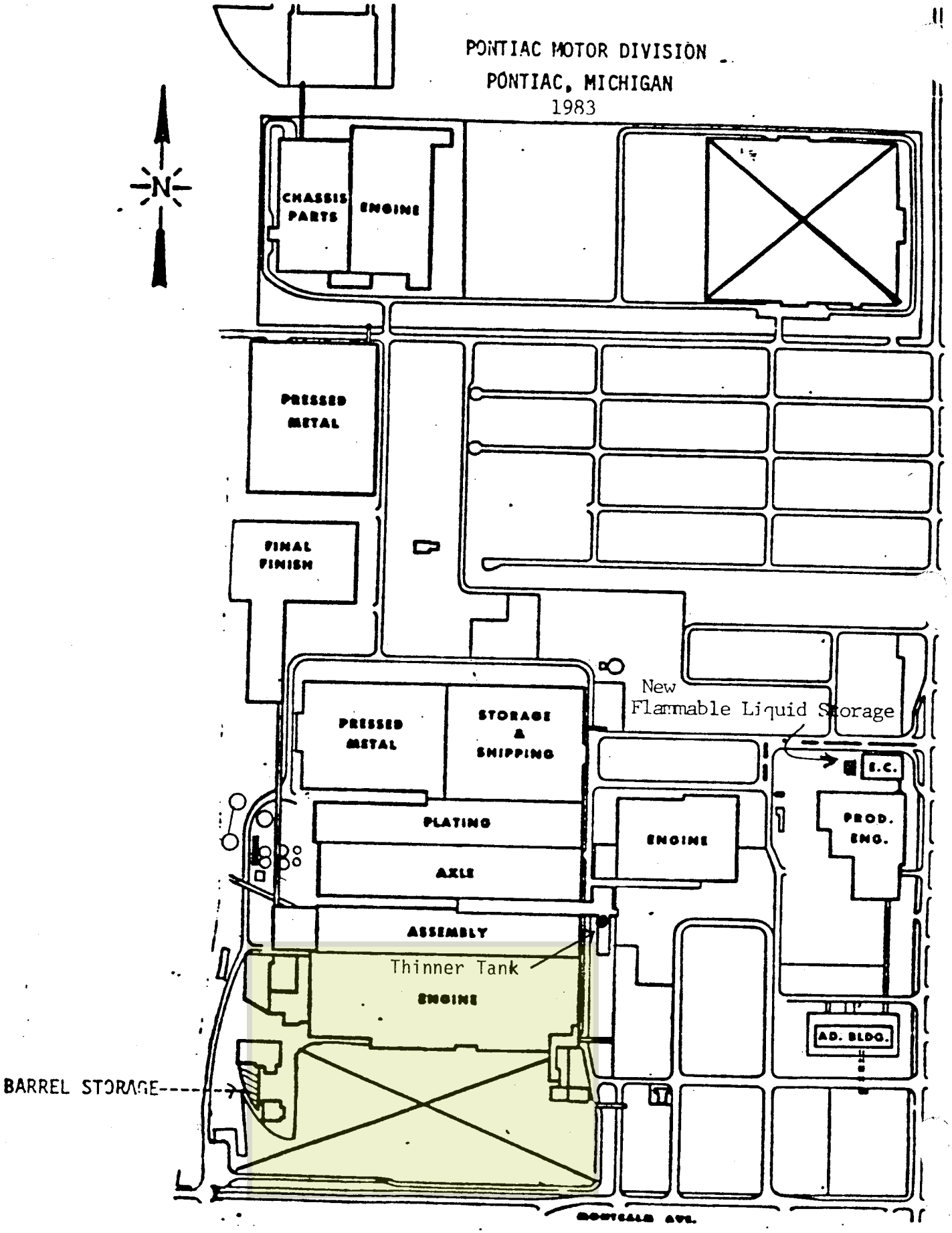
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

V. FACILITY DRAWING *(see page 4)*

Form Approved OMB No. 158-S80004



PONTIAC

GM

March 28, 1984

Mr. J. Boyle
U. S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

SUBJECT: MODIFICATIONS TO "PART A" PERMIT

The Pontiac Motor Plant, Pontiac, Michigan, EPA I.D. No. MID 085356886 G,TRS,TSD, is requesting to modify the "Part A" RCRA Hazardous Waste Permit Application.

The major change that causes the necessity of permit modification is construction of a new 950 gallon bulk ignitable liquid storage tank.

The construction and utilization of this tank is necessary to comply with Michigan DNR state regulations.

This closed ignitable liquid storage tank will meet 40 CFR 265.17 requirements and all National Fire Protection Association Codes. Attached is the modified RCRA Form 3510-3. If there are any questions, please call Valory Strausser at (313) 857-2286.

Valory Strausser

VALORY A. STRAUSSER
Environmental Engineer

Enclosures

cc: R. L. Kieft, PMD
L. F. Charla, GM Legal
A. Howard, Mich. DNR
W. Collinson, EAS

RECEIVED
APR 03 1984
WASTE MANAGEMENT BRANCH

RECEIVED
4/4/84
EPA RAIU

Unit—all areas are spaced for elite type, i.e., 12 cpi [illegible]/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F	M	T	D	0	0	5	3	5	6	8	8	6

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8			

☐ 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

☒ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES — CODES AND DESIGN CAPACITIES

A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY — For each process entered in column A enter the capacity of the process.

1. AMOUNT — Enter the amount.

2. UNIT OF MEASURE — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER (the volume that would cover one hectare to a depth of one meter)
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR OR GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(specify)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	W
METRIC TONS PER HOUR	X
GALLONS PER HOUR	H
LITERS PER HOUR	I
ACRES	A
ACRE-FEET	B
HECTARES	Q
HECTARE-METER	F

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks on-site which can hold 400 gallons and 20 gallons. The facility also has the capacity to treat up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY (1) AMOUNT (specify)	B. (2) UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 1	45,000	G	
2	S 0 2	950	G	
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY (1) AMOUNT (specify)	B. (2) UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES

For listed hazardous wastes: For each listed hazardous waste entered in column A, select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION — If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

a. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.

b. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(1) on that line enter "included with above" and make no other entries on that line.

c. Repeat step b for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3 and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03 D80	
X-2	D002	400	P	T03 D80	
X-3	D001	100	P	T03 D80	
X-4	D002				included with above

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)															FOR OFFICIAL USE ONLY														
W	M	I	D	0	0	5	3	5	6	8	8	6			1	W													2	
1	2										13	14	15			1	2										13	14	15		

DUP DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				2. PROCESS DESCRIPTION (If a code is not entered in D(1))
	23 - 26	27 - 34	35	27 - 28	29 - 30	31 - 32	33 - 34	
1	D 0 0 1	350	T	S 0 1				
2	D 0 0 1	150	T	S 0 2				
3								
4								
5								
6								
7								
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21								
22								
23								
24								
25								
26								

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

(enter "A", "B", "C", etc. behind the "3" to identify photocopied pages)

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTE (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

I. EPA I.D. NO. (Enter from page 1)

2.	M	I	D	0	0	5	3	5	6	8	8	6

V. FACILITY DRAWING

All existing facilities must be included in the space provided on page 5. Scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
42 38 02 N	083 17 05 W

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

☐ B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
D.G. Upton, Gen. Manuf. Mgr.	D.G. Upton	3-28-84

X. OPERATOR CERTIFICATION

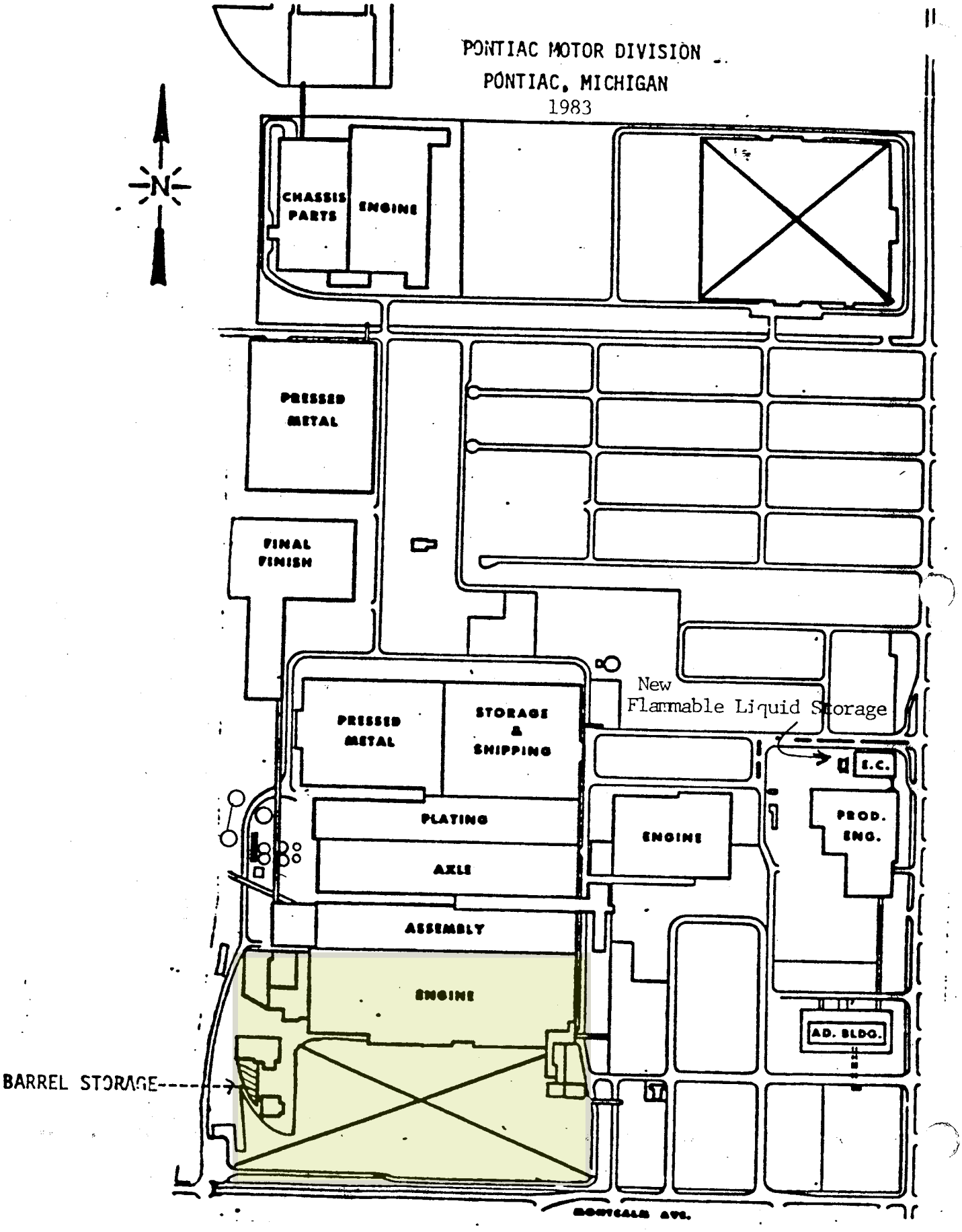
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

Continued from page 4.

Form Approved OMB No. 158-S80004

V. FACILITY DRAWING *(See page 4)*



E-10

Chevrolet·Pontiac·Canada Group
Pontiac Engine & Axle Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

RECEIVED
JUL 03 1985
SOLID WASTE BRANCH
U.S. EPA, REGION V

U.S. E.P.A.
Region 5 RCRA Activities
230 S. Dearborn St.
Chicage, Ill. 60604

June 26, 1985

G, TRS, TSD, PA

The attached is a revised "Part A" RCRA Permit application for CPC Pontiac, MID 005356886. The change is due to the January 4, 1985 amendments dealing with the redefining of recycled wastes as hazardous.

The addition is indicated on pages 1 and 3 of Form 3. There is storage of 7,000 gallons. And the annual amount generated is 1,350 tons of flammable liquid which is reclaimed.

Please note the name change. This occured with the reorganization of General Motors Corporation.

Valory Strausser
Sr. Plant Wngineer Environmental

RECEIVED
JUL 8 1985
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

cc: R.L. Kieft
W.J. Collinson - EAS
L.R. Minkwic

(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

EPA

ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provi ...ffi it in the designated space. Review th ...n ation carefully; if any of it is incorre ...t through it and enter the correct data ...n appropriate fill—in area below. Also, if any o the preprinted data is absent *(the area to th left of the label space lists the informatio that should appear)*, please provide it in th proper fill—in area(s) below. If the label i complete and correct, you need not complet Items I, III, V, and VI *(except VI-B, whic must be completed regardless)*. Complete a Items if no label has been provided. Refer t the instructions for detailed item descrip tions and for the legal authorizations unde which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACH
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)	X			B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)				D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: C P C - P O N T I A C O F G E N E R A L M O T O R S C O R P .

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 V A L O R Y S T R A U S S E R S R . E N G I N E E R	3 1 3 8 5 7 2 2 8 6

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 O N E P O N T I A C P L A Z A

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 P O N T I A C	M I	4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 O N E P O N T I A C P L A Z A

B. COUNTY NAME

O A K L A N D

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 P O N T I A C	M I	4 8 0 5 3	0 6 3

CONTINUE ON REVERSE

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3710 (specify) MOTOR VEHICLES & EQUIPMENT	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

II. OPERATOR INFORMATION

A. NAME

CPC - PONTIAC OF GENERAL MOTORS CORP.

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL M = PUBLIC (other than federal or state)
S = STATE O = OTHER (specify)
P = PRIVATE

(specify) PRIVATE

D. PHONE (area code & no.) A 313 857 2286

E. STREET OR P.O. BOX

ONE PONTIAC PLAZA

F. CITY OR TOWN PONTIAC

G. STATE MI

H. ZIP CODE 48053

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	D. PSD (Air Emissions from Proposed Sources)
9 N MI0042122	9 P N/A
B. UIC (Underground Injection of Fluids)	**E. OTHER** (specify)
9 U N/A	9 (specify)
C. RCRA (Hazardous Wastes)	**E. OTHER** (specify)
9 R MID005356886	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

C.P.C.- PONTIAC, IS A MANUFACTURER OF AUTOMOBILE COMPONENTS INCLUDING ENGINES, REAR AXLES, SHEET METAL STAMPINGS, AND THERMOPLASTIC MOLDINGS. ALL COMPONENTS ARE USED FOR THE MANUFACTURING AND ASSEMBLY OF AUTOMOBILES.

XIII. CERTIFICATION (see instructions)

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
D. D. CAMPBELL V. P. GROUP DIRECTOR- OPERATIONS CPC	X D. D. Campbell	4/27/85

COMMENTS FOR OFFICIAL USE ONLY

(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F M I D 0 0 5 3 5 6 8 8 6

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

C 8 — FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)* — YR. | MO. | DAY

☐ 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN — YR. | MO. | DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

X 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES — CODES AND DESIGN CAPACITIES

A. PROCESS CODE — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.

1. AMOUNT — Enter the amount.
2. UNIT OF MEASURE — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G	
X-2	T03	20	E	
1	S01	45,000	G	
2	S02	950	G	
3	S02	7,000	G	
4				
5				
6				
7				
8				
9				
10				

E-11

Chevrolet·Pontiac·Canada Group
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

January 21, 1986

United States E.P.A.
Region 5, R.C.R.A. Activities
230 S. Dearborn Street
Chicago, Il 60604

The attached is a revised "Part A" R.C.R.A. permit application for C.P.C. - Pontiac, MID005356886. Two changes require that we revise our Part A. The first change is due to the December 31, 1985 amendments to 40 CFR Part 261 dealing with the revisions to the solvent listings. (§261.31 - Hazardous Waste from non-specific sources, F001-F005.) The second change is an addition of a new waste stream that will be generated but not stored for longer than 90 days.

The changes in the Part A application are indicated on Pages 1 and 3 on Form 3.

Dale G. Gossiaux

Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

cc: R.L. Kieft
W.J. Collinson - E.A.S.
L.R. Minkwic - C.P.C. Staff

KEN
RICH TRAUB EPA REGION V
ORIG: PART B FILE

Chevrolet-Pontiac-Canada Group
General Motors Corporation
One Pontiac P
Pontiac, Michigan 48

January 21, 1986

Michigan Department of Natural Resources
Office of Hazardous Waste Management
Box 30028
Lansing, Michigan 48909

The attached is a revised "Part A" R.C.R.A. permit application for C.P.C. - Pontiac, MID005356886. Two changes require that we revise our Part A. The first change is due to the December 31, 1985 amendments to 40 CFR Part 261 dealing with the revisions to the solvent listings. (§261.31 - Hazardous Waste from non-specific sources, F001-F005.) The second change is an addition of a new waste stream that will be generated but not stored for longer than 90 days.

The changes in the Part A application are indicated on Pages 1 and 3 on Form 3.

Dale G. Gossiaux

Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

cc: R.L. Kieft
W.J. Collinson - E.A.S.
L.R. Minkwic - C.P.C. Staff

12. WASTE DIV
JAN 86 3: 2

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characte).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL — EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

LABEL ITEMS

- I. EPA I.D. NUMBER
- III. FACILITY NAME
- V. FACILITY MAILING ADDRESS
- VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		N.A.
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: C P C - P O N T I A C O F G E N E R A L / M O T O R S C O R P

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 G O S S I A U X , D A L E S R . E N G I N E E R	3 1 3 8 5 7 2 2 8 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 O N E P O N T I A C P L A Z A

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 P O N T I A C	M I	4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 O N E P O N T I A C P L A Z A

B. COUNTY NAME

O A K L A N D

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 P O N T I A C	M I	4 8 0 5 3	0 6 3

CONTINUE ON REVERS

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3710 (specify) Motor Vehicles and Equipment	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

C.P.C. - PONTIAC OF GENERAL MOTORS CORP

B. Is the name listed in Item VIII-A also owner? * YES — NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL; S = STATE; P = PRIVATE; M = PUBLIC (other than federal or state); O = OTHER (specify)

P (specify)

D. PHONE (area code & no.) A 313 857 2287

E. STREET OR P.O. BOX

ONE PONTIAC PLAZA

F. CITY OR TOWN

PONTIAC

G. STATE MI

H. ZIP CODE

IX. INDIAN LAND

Is the facility located on Indian lands? — YES — NO (X)

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water) 9 N MI0042 12	**D. PSD** (Air Emissions from Proposed Sources) 9 P N/A
B. UIC (Underground Injection of Fluids) 9 U N/A	**E. OTHER** (specify) 9 (specify)
C. RCRA (Hazardous Wastes) 9 R MID005356886	**E. OTHER** (specify) 9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

C.P.C. - Pontiac is a manufacturer of automobile components, including engines, rear axles, sheet metal stampings and thermoplastic moldings. All components are used for the manufacturing and assembly of automobiles.

WASTE DIV

JAN 86 3 : 2

XIII. CERTIFICATION (see instructions)

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
James B. Darnell, Manager, Engine Ops.	X [signature]	1/[illegible]

COMMENTS FOR OFFICIAL USE ONLY

C

Fill-in areas are spaced for elite type. Form approved OMB No. 158-S30004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

- [ ] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*
- [ ] 2. NEW FACILITY *(Complete item below.)*

C 8

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

FOR NEW FACILITIES: PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

- [X] 1. FACILITY HAS INTERIM STATUS
- [ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	S01	45,000	G		7				
2	S02	950	G		8				
3	S02	7,000	G		9				
4	S01	30	Y		10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

1. WASTE DIS

JAN 86 3: 2

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W M I D 0 0 5 3 5 6 8 8 6	W DUP 2 DUP

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F 0 0 5	350	T	S 0 1	
2	D 0 0 1	150	T	S 0 2	
3	F 0 0 5	1,350	T	S 0 2	
4	F 0 0 1	Included with Line 1, above	T	S 0 1	
5	D 0 0 8	120	T	S 0 1	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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21					
22					
23					
24					
25	WASTE DIT				
26					

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

IV. DESCRIPTION OF HAZARDOUS W[illegible]ES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

F M I D 0 0 5 3 5 6 8 8 6 T/A C 1 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
4 2 3 8 0 2 N	0 8 3 1 7 0 5 W

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
	G		

IX. OWNER CERTIFICATION

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
James B. Darnell, Manager, Eng. Ops.	X [signature]	1/[illegible]/86

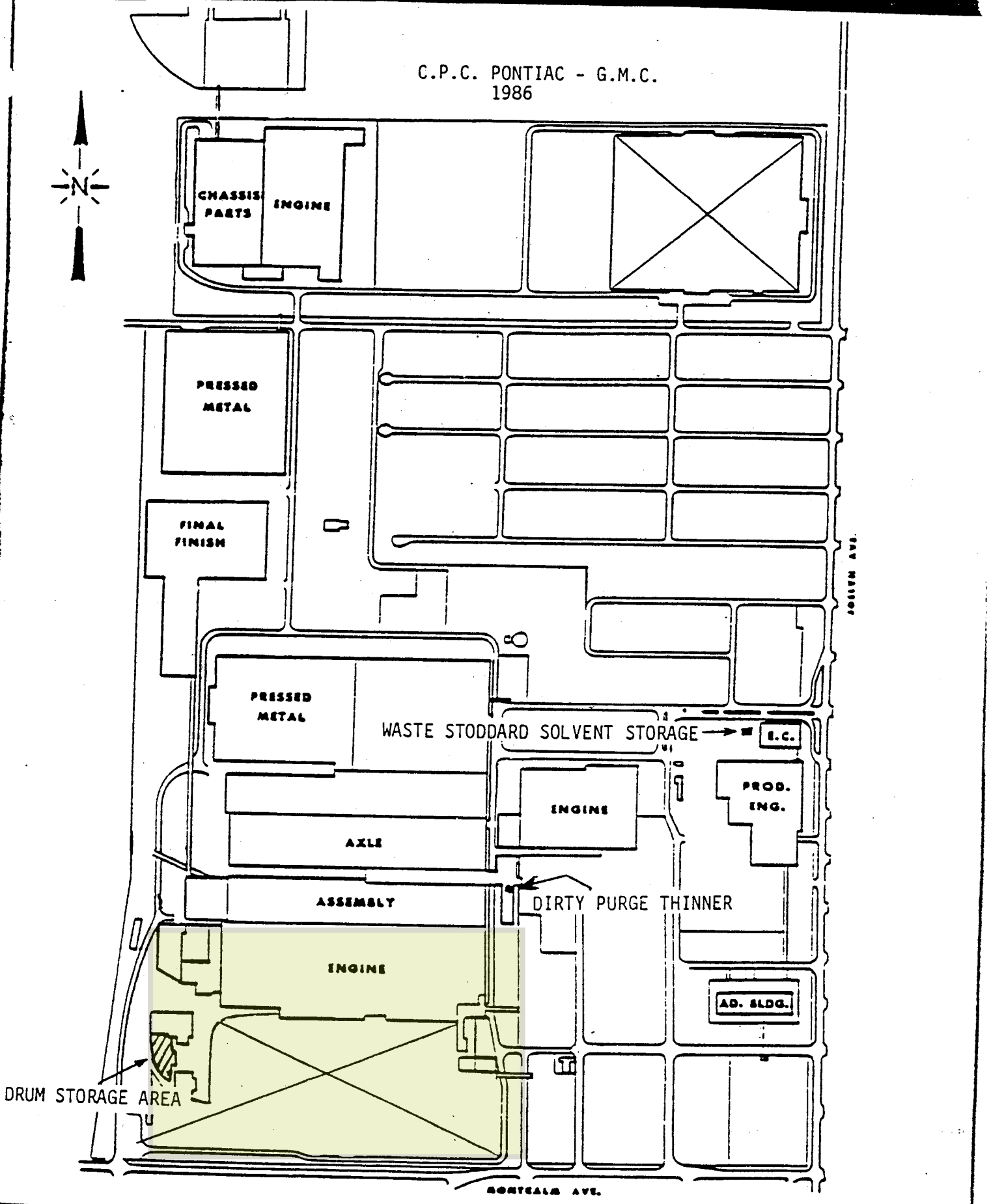
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

V. FACILITY DRAWING (see page 4)

Form Approved OMB No. 158-S80004



E-12

Chevrolet-Pontiac-Canada Group
Pontiac Engine & Axle Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

March 12, 1986

United States E.P.A.
Region 5, R.C.R.A. Activities
230 S. Dearborn St.
Chicago, IL 60604

Atten: G. Seals

Dear Ms. Seals:

Per your request from our telephone conversation of March 7, 1986, please find attached a revised "Part A" R.C.R.A. permit application for C.P.C. - Pontiac, MID005356886.

The revisions being made can be found on page 1 of form 3. Line 1 now reads, S01; 51,000; G and line 2 now reads, S02; 7,950; G.

The revised line 1 was made by combining the former lines 1 and 4 and the revised line 2 was made by combining the former lines 2 and 3 from our most recent revision to the Part A. (January, 1986).

Please note, however, per our conversation, that 6,000 "Gallons" of the waste in the revised line 1 is a solid waste that we previously reported as 30 cubic yards. We converted the 30 cubic yard figure into gallons by using an approximate conversion factor of 200 gallons per cubic yard.

If there are any questions regarding this revision, please contact me at (313) 857-2287.

Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

attach.

cc: R.L. Kieft
W.J. Collinson - E.A.S.
L.R. Minkwic - C.P.C. Staff
Mich. D.N.R., Office of Hazardous
Waste Management

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6 1

COMMENTS

ED APPLICATION

...ropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or ... this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's ... item I above.

...CATION *(place an "X" below and provide the appropriate data)*

...ING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

MO. | DAY

☐ 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR. | MO. | DAY

...ED APPLICATION *(place an "X" below and complete Item I above)*

☐ ... FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

...OCESSES – CODES AND DESIGN CAPACITIES

...OCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

...PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	O
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	S01	51,000	G		7				
2	S02	7,950	G		8				
3					9				
4					10				

E-13

Chevrolet-Pontiac-Canada Group
Pontiac Engine & Axle Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

April 29, 1986

RECEIVED
MAY 01 1986
SOLID WASTE BRANCH
U.S. EPA, REGION V

United States E.P.A.
Region 5, R.C.R.A. Activities
230 S. Dearborn Street
Chicago, IL 60604

Atten: G. Seals

Dear Ms. Seals:

Per our telephone conversation of April 21, 1986, please find a revised "Part A" R.C.R.A. permit application for C.P.C. - Pontiac, MID005356886.

This revision is being made because 6,000 gallons of waste identified on the March 12, 1986 revision should not have been added to line 1 on page 1 of Form 3. The current "Process Design Capacity" of our container storage area is adequate to handle this new waste along with the wastes currently being generated.

The March 12, 1986 revision was intended to notify your office of a new waste being generated. It was not intended to be a request to increase the "Process Design Capacity" of the container storage area. I am sorry for any confusion and inconvienence this may have caused.

In this corrected revision, 6,000 gallons of S01 "Process Design Capacity" as noted on page 1 of Form 3, has been deleted to correct the error.

If there are any questions regarding this revision, please contact me at (313) 857-2287. Thank you.

Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

attach.

cc: Michigan D.N.R., Office of Hazardous
Waste Management

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F	M	I	D	0	0	5	3	5	6	8	8	6	T/A	C
1	2											13	14	D

GENERAL INSTRUCTIONS

If a preprinted label has been provided affix it in the designated space. Review the information carefully; if any of it is incorrect cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		N.A.	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: C P C - P O N T I A C O F G E N E R A L M O T O R S C O R P.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 G O S S I A U X , D A L E S R . E N G I N E E R	3 1 3 | 8 5 7 | 2 2 8 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 O N E P O N T I A C P L A Z A

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 P O N T I A C	M I	4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 O N E P O N T I A C P L A Z A

B. COUNTY NAME: O A K L A N D

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 P O N T I A C	M I	4 8 0 5 3	0 6 3

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3710 (specify) Motor Vehicles and Equipment	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME

CPC-PONTIAC OF GENERAL MOTORS CORP.

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC (other than federal or state)
O = OTHER (specify)

P (specify)

D. PHONE (area code & no.) A 313 857 2287

E. STREET OR P.O. BOX

ONE PONTIAC PLAZA

F. CITY OR TOWN

PONTIAC

G. STATE MI

H. ZIP CODE 48053

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water) N MI0042122	**D. PSD** (Air Emissions from Proposed Sources) 9 P N/A
B. UIC (Underground Injection of Fluids) U N/A	**E. OTHER** (specify) 9 (specify)
C. RCRA (Hazardous Wastes) MID005356886	**E. OTHER** (specify) 9 (specify)

XI.

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

C.P.C.-Pontiac is a manufacturer of automoblie components, including engines, rear axles, sheet metal stampings and thermoplastic moldings. All components are used for the manufacturing and assembly of automobiles.

XIII. CERTIFICATION (see instructions)

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete and is made on behalf of General Motors Corporation.

PRINT/TYPE NAME	TITLE	SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE
James B. Darnell	Mgr. Engine Operations	James B Darnell	4/24/86
d W. Ableson	Mgr. G-Car and Pressed Metal	Donald W. Ableson	4/22/86

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (6-80) REVERSE

FORM 3 RCRA

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

Form Approved OMB No. 158-S80004

I. EPA I.D. NUMBER

F M I D 0 0 5 3 5 6 8 8 6

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[ ] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C 8 | YR. | MO. | DAY

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) ON WHICH BEGAN OR EXPECTED TO BEGIN OPERATION

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[X] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR OR GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided: Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C | DUP | T/A | C | 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G	
X-2	T03	20	E	
1	S01	45,000	G	
2	S02	7,950	G	
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** — Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** — For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

...acility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W M I D 0 0 5 3 5 6 8 8 6 — T/A: — C: 1	W — DUP — T/A: — C: 2 — DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	F 0 0 5	350	T	S 0 1	
2	D 0 0 1	150	T	S 0 2	
3	F 0 0 5	1,350	T	S 0 2	
4	F 0 0 1	Included with line 1, above.	T	S 0 1	
5	D 0 0 8	120	T	S 0 1	
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

												T/A	C
F	M	I	D	0	0	5	3	5	6	8	8	6	6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground–level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
42 38 02 N	083 17 05 W

VIII. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code & no.)
C E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
C F	C G		

IX. OWNER CERTIFICATION

This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete and is made on behalf of General Motors Corporation.

PRINT/TYPE NAME	TITLE	SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE
James B. Darnell	Mgr. Engine Operations	James B. Darnell	4/24/86
Donald W. Ableson	Mgr. G-Car and Pressed Metal	Donald W. Ableson	4/22/86

X. OPERATOR CERTIFICATION

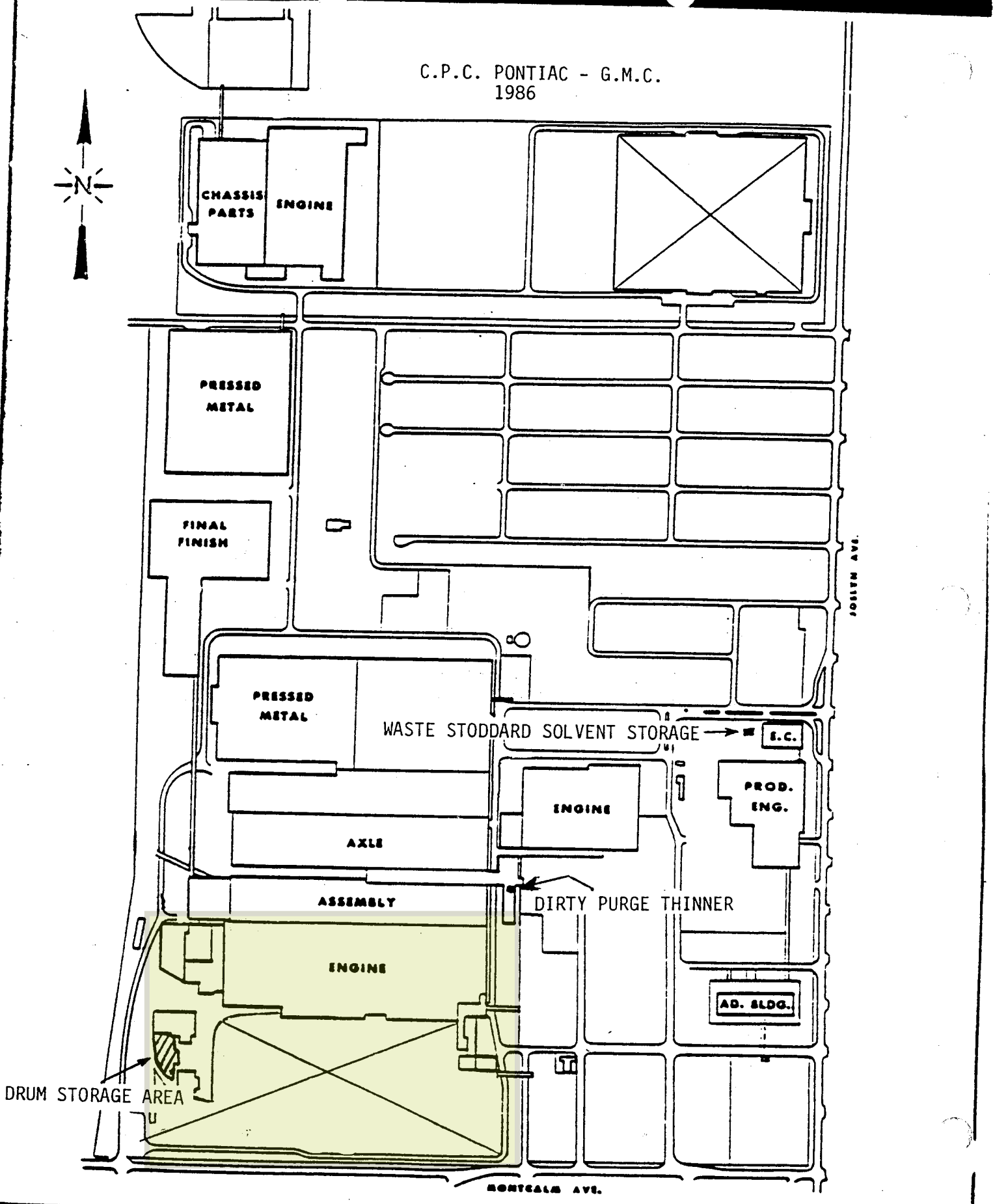
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

Continued from page 4.

V. FACILITY DRAWING (See page 4)

Form Approved OMB No. 158-S80004



E-14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED
PLANT ENGINEERING
DES...
APR 1 1 22 PM '86

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONS

Mr. Dale G. Gossiaux
Senior Environmental Engineer
Chevrolet-Pontiac-Canada Group
Pontiac Motor Plant
One Pontiac Plaza
Pontiac, Michigan 44004

Dear Mr. Gossiaux:

The Characterization and Assessment Division (CAD) has completed its review of Chevrolet-Pontiac-Canada Group's (CPC) petition requesting the exclusion of electroplating waste (EPA Hazardous Waste No. F006) generated at your Pontiac, Michigan facility. Based on the data presented in your petition, however, CAD will recommend to the Assistant Administrator for Solid Waste and Emergency Response that CPC's petition be denied, and that your temporary exclusion be withdrawn.

CPC originally submitted its petition to delist its electroplating waste on September 15, 1981. Based on our review of your petition at that time, the Agency granted a temporary exclusion to CPC on November 22, 1982. This decision was based on what was then believed to be sufficient immobility of the listed hazardous constituents in the waste.

As as result of the Hazardous and Solid Waste Amendments of 1984 (HSWA), the Agency is now required to consider all toxicants and factors that may cause the waste to be hazardous. In addition to these changes, the Agency has also developed new tools to evaluate the environmental impact of the leaching of toxicants from wastes. The Vertical and Horizontal Spread (VHS) model (see 50 FR 7896-7900, February 26, 1985 and 50 FR 48886-48967, November 26, 1985) is one of the tools used by the Agency in making delisting decisions regarding leachable toxicants contained in a waste. The VHS model sets up a sliding regulatory scale which is based on the volume of waste generated and the reported extract data. It predicts the concentration of each toxicant at a compliance point located 500 feet from the disposal site. The Agency considers the hazards presented by the waste by comparing the concentrations of the toxicants predicted at the compliance point by the VHS model with a regulatory standard for each toxicant.

The CAD has evaluated the nickel leachate data obtained from samples of your electroplating waste collected between September 6, 1985 and September 27, 1985, which you claim to be representative of the variability of the waste, using the VHS model. Based on the maximum annual volume of waste generated at CPC, reported as 2943 cubic yards/year, the maximum nickel extract levels that could be exhibited by the waste without failing the VHS model would be 2.52 ppm. Any nickel extract concentrations above this level would generate a nickel concentration greater than the Agency's Interim Standard for nickel of 0.350 at the compliance point.[1/] All nickel extract values reported by CPC fail the VHS model by generating nickel concentrations at the compliance point in excess of the regulatory standard, (i.e., above 0.35 ppm). In addition, the mean as well as the upper limit of the ninety-five percent confidence interval of the nickel extract levels, (calculated as 8.7 and 11.4 ppm, respectively), also generate compliance point values in excess of the interim standard. These compliance point values were 1.2 and 1.61 ppm, respectively. The Agency has previously stated that during the interim period a petition would not be denied based soley on the waste's nickel content. In this case, however, the levels of leachable nickel are so high that we believe our decision would not change when a final regulatory standard for nickel is adopted.

We, therefore, conclude that CPC's waste could present significant hazard to both human health and the environment. The CAD believes that the waste should, therefore, be considered hazardous, and again subject to regulation under 40 CFR Parts 262 through 266 and the permitting standards of 40 CFR Part 270.

The CAD will recommend to the Assistant Administrator for Solid Waste and Emergency Response that a notice withdrawing the temporary exclusion previously granted, and denying the petition be published in the Federal Register. It is our policy, however, to give petitioners the option of withdrawing their petition instead of publishing a negative finding in the Federal Register. If you prefer this option, you will need to send us a letter withdrawing your petition within two weeks from the date of today's correspondence. The letter should indicate that the waste is considered hazardous and will be managed as such.

1/ The Agency previously used 0.632 mg/l as the nickel standard; however, a number of problems were found with the study from which this number was calculated (see 50 FR 20247, May 15, 1985). The Agency is in the process of conducting a study on the reproductive effects of nickel in rats. This study, once completed, will be used to determine an allowable daily intake value and a regulatory standard for nickel.

If your petition is not withdrawn, a denial decision will be proposed in the Federal Register. During this interim period, your temporary exclusion will remain in effect. However, when a final decision is published, your temporary exclusion will terminate, and the facility will lose interim status 12 months from the effective date of that decision, unless you submit a complete Part B permit application and certify that you are in compliance with all ground water monitoring and financial responsibility requirements.

If you have any questions regarding any of the above, please contact Mr. Myles Morse of my staff at (202) 382-4788.

Sincerely,

Eileen Claussen, Director
Characterization, and
Assessment Division

E-15

Chevrolet·Pontiac·Canada Group
Pontiac Engine & Axle Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

September 30, 1986

RECEIVED
OCT 06 1986
SOLID WASTE BRANCH
U.S. EPA, REGION V

RECEIVED
OCT 07 1986
SWD - AIS
U.S. EPA, REGION V

U.S. E.P.A.
Region 5 [redacted]
230 S. Dearbron Street
Chicago, IL 60604

Atten: G. Seals

Dear Ms. Seals:

Attached please find a revised Part A Hazardous Waste Permit Application for C.P.C. - Pontiac, MID005356886.

Also attached please find a letter from Karl E. Bremer, Chief Technical Programs Section stating that we had incorrectly placed a 950 gallon storage tank on the Part A permit application.

This revision is being made to correct that error. The changes being made are as follows:

Line 2 of Page 1 of Form 3 should now read 7,000 gallons instead of 7,950 gallons, and,

Page 3 of Form 3 should now have D001 deleted.

If there are any questions regarding this matter, please contact me at (313) 857-2287.

Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux,
Sr. Environmental Engineer
Plant Engineering - Design

Attach. (2)

cc: Michigan D.N.R., Hazardous Waste Division

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characte[illegible]ch).

Form Approved OMB No. 158-R0175

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. GENERAL

PA I.D. NUMBER

F M I D 0 0 5 3 5 6 8 8 6

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided it in the designated space. Review the information carefully; if any of it is incorrect, through it and enter the correct data in appropriate fill—in area below. Also, if any the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill—in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters** of the U.S.? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters** of the U.S. other than those described in A or B above? (FORM 2C)	X		N.A.
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X		X
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: C P C - P O N T I A C O F G E N E R A L M O T O R S C O R P.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 G O S S I A U X, D A L E S R. E N G I N E E R	3 1 3 | 8 5 7 | 2 2 8 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 O N E P O N T I A C P L A Z A

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 P O N T I A C	M I	4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 O N E P O N T I A C P L A Z A

B. COUNTY NAME

O A K L A N D

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 P O N T I A C	M I	4 8 0 5 3	0 6 3

CONTINUE ON REVERSE

(fill-in areas are spaced for elite type, i.e., 12 characters/inch)

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6 (F/A) 1 (S)

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[ ] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

[8] FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

YR. | MO. | DAY

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR. | MO. | DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[X] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. **PROCESS CODE** – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. **PROCESS DESIGN CAPACITY** – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G	
X-2	T 0 3	20	E	
1	S 0 1	45,000	G	
	S 0 2	7,000	G	
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

V. DESCRIPTION OF HAZARDOUS WASTES

. EPA HAZARDOUS WASTE NUMBER – Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

ESTIMATED ANNUAL QUANTITY – For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

UNIT OF MEASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

PROCESSES

. PROCESS CODES:

For listed hazardous wastes: For each listed hazardous waste entered in column A, select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

E: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by than one EPA Hazardous Waste Number shall be described on the form as follows:

Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.

In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.

Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

MPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) – A facility will treat and dispose of an estimated 900 pounds ear of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes rrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated ounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
K 0 5 4	900	P	T 0 3 D 8 0	
D 0 0 2	400	P	T 0 3 D 8 0	
D 0 0 1	100	P	T 0 3 D 8 0	
D 0 0 2				included with above

EPA I.D. NUMBER (enter from page 1)

W	M	I	D	0	0	5	3	5	6	8	8	6		1
													F/A	C

FOR OFFICIAL USE ONLY

W	DUP		2	DUP
		F/A	C	

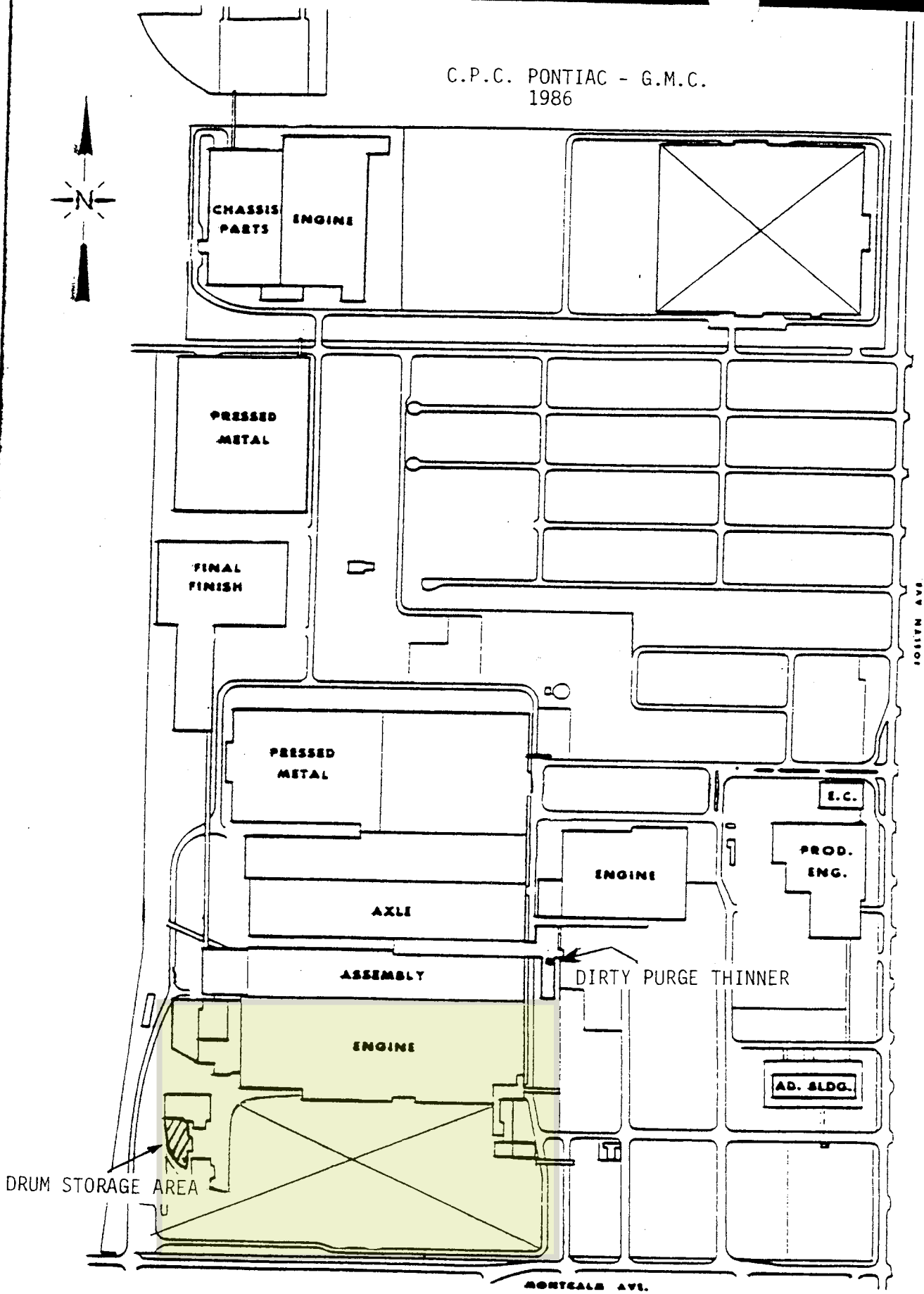
IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F 0 0 5	350	T	S 0 1	
2	F 0 0 5	1,350	T	S 0 2	
3	F 0 0 1	Included with line 1, above	-	S 0 1	
4	D 0 0 8	120	-	S 0 1	
5					
6					
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26					

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

Form Approved OMB No. 158-S80004



RECEIVED
PLANT ENGINEERING
DESIGN
SEP 2 1 38 PM '86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5HS-JCK-13, S.W.

AUG 2 6 1986

CERTIFIED MAIL P#250 760 452
RETURN RECEIPT REQUESTED

Mr. Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering-Design
Chevrolet-Pontiac-Canada Group
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

RE: Chevrolet-Pontiac-Canada Group
MID 005 356 886

Dear Mr. Gossiaux:

This is to acknowledge that the United States Environmental Protection Agency (U.S. EPA) has reviewed your letter and attached partial closure plan dated July 29, 1986. According to the information submitted by your facility on May 29, 1984, the 950 gallon storage tank was incorrectly placed on your Part A Hazardous Waste Permit Application. Your letter stated that the previously referenced tank was used to accumulate hazardous waste generated on site for less than 90 days in accordance with 40 CFR 262.34.

Based on this information and a review of your facility's compliance record, it is the opinion of this office, that a closure plan for this particular unit is not required. However, closure must be conducted in accordance with 40 CFR 265.197 and all applicable State and local requirements.

A closure plan must be submitted at least 180 days prior to closure of your hazardous waste container storage area (S01) and tanks storing waste more than 90 days (S02).

If you have any questions regarding this matter, please contact Diane M. Spencer of my staff, at (312) 886-3740.

Sincerely,

Karl E. Bremer

Karl E. Bremer, Chief
Technical Programs Section

cc: Al Howard/MDNR

PONTIAC

May 29, 1984

United States E.P.A.
Regulation Analysis & Information Unit
Region V
230 South Dearborn Street
Chicago, Illinois 60604

RECEIVED
WASTE MANAGEMENT
BRANCH

The Pontiac Motor Plant, Pontiac, Michigan, EPA I.D.No.MID00535 6886 rescinds the request to modify the Part "A" Permit of March 28, 2984. Pontiac Motor requests to return to the September 13, 1982 Permit, Part "A" application. G, TRS, TSD, ?

The SO2 storage in a tank will follow 40 CFR 262.34 and as such does not need to be present on the permit application.

RECEIVED
JUN 14 1984
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

V. A. STRAUSSER
Sr. Environmental Engineer

cc: R. L. Kieft, PMD
L. F. Charla, GM Legal
W. J. Collinson, EAS

RECEIVED
JUN 14 1984
WMD-RAIU
EPA, REGION V
WASTE MANAGEMENT DIVISION
OFFICE OF THE DIRECTOR

E-16

Chevrolet-Pontiac-Canada Group
Pontiac Engine & Axle Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48053

RECEIVED
OCT 27 1986
RECEIVED
SOLID WASTE BRANCH
U.S. EPA, REGION V
NOV 06 1986
U.S. EPA, REGION V
RECEIVED
OCT 24 1986
U.S. EPA, REGION V
WASTE MANAGEMENT DIVISION
HAZARDOUS WASTE ENFORCEMENT BRANCH

October 21, 1986

United States Environmental Protection Agency
Office of Solid Waste and Emergency Response
Washington, D.C. 20460

Attn: Eilieen Claussen, Director
Characterization and Assessment Division

Dear Ms. Claussen:

C.P.C. - Pontiac, MID005356886, has received the Federal Register notice on the proposal to deny our delisting petition and revoke the temporary exclusion of our wastewater treatment sludge. (51 FR Pgs. 33628-33632)

This proposal and the letter we received from you on April 1, 1986 (copy attached), makes mention of the permitting standards of 40 CFR Part 270 (Part B Permit Application). Your letter also mentions certification of compliance with the groundwater monitoring and financial responsibility requirements.

C.P.C. - Pontiac no longer accumulates the waste of concern in a waste pile, rather, as it is generated, the waste is placed directly into a roll-off box, and, when full, is sent directly to a landfill. Currently filling a roll-off box takes no longer than two (2) production days.

Because we are handling the waste in this manner, we feel that a Part B submittal will not be necessary when the temporary exclusion expires or is officially denied, since, at that time, C.P.C. - Pontiac will not have a hazardous waste - waste pile.

Additionally, a revised Part A will not be required because the waste will not remain on site >90 days and, therefore, the facility will not be storing the waste.

COPY

In a related subject, a recent administrative law (U.S. Nameplate) decision regarding the definition of F006 waste streams (the decision excludes phosphating wastes from the F006 definition) may have an impact on C.P.C. - Pontiac's wastewater treatment sludge. C.P.C. - Pontiac has only one "true" electroplating process. Currently, valve stems are chrome plated in one operation. We intend to either remove the operation so that no electroplating is done on-site or to segregate the waste that this process generates from the rest of the wastewater treatment process. This action, coupled with the U.S. Nameplate decision will exclude our wastewater treatment sludge from being a listed hazardous waste. We will, however, sample and analyze the sludge to see if it meets any of the current hazardous waste characteristics to determine if the waste is hazardous or non-hazardous. Currently we are studying the feasibility of each option.

We would appreciate your written concurrence in these matters as soon as possible. If you have any questions, please contact me at 313-857-2287.

Sincerely,

Dale Gossiaux

Dale Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

Attach

cc: E.P.A. Region 5
R.C.R.A. Activities

Michigan D.N.R.
Hazardous Waste Division

E-17

Chevrolet · Pontiac · Canada Group
Pontiac Engine Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48058-3486

GMP FEB 20 1987

February 19, 1987

United States Environmental Protection Agency
Office of Solid Waste and Emergency Response
Washington, D.C. 20460
ATTN: Eileen Claussen, Director
Characterization and Assessment Division

Dear Ms. Claussen:

In a letter sent to you on October 21, 1986, C.P.C.-Pontiac (MID005356886) indicated that we were studing options on either removing the only one "true" electroplating process or segragating the waste water that this process produces from the waste water treatment plant.

The decision had been made to remove the process entirely, and, therefore, no more electroplating waste will be received by the waste water treatment plant. The process was removed on January 30, 1987. We will monitor the sludge generated by the treatment operation for E.P. Toxicity parameters to ensure that the sludge generated is non-hazardous.

If you have any questions on this matter, please contact me at (313) 857-2287.

Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux
Senior Environmental Engineer
Plant Engineering - Design

cc: E.P.A. Region 5
Michigan D.N.R., Hazardous
Waste Division

E-18

Chevrolet - Pontiac - Canada Group
Pontiac Engine Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48058-3486

August 20, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Michigan Department of Natural Resources
Hazardous Waste Division
Ottawa Street Building, South Tower
P.O. Box 30028
Lansing, MI 48909

RECEIVED
AUG 24 1987
SOLID WASTE BRANCH
U.S. EPA, REGION V

Attn: Ms. A. R. Schoenrock

Dear Ms. Schoenrock:

Enclosed, please find a revised R.C.R.A. Part A permit application for C.P.C. - Pontiac of General Motors Corporation. (MID005356886). This revision is being submitted in light of your determination that our Waste Purge Thinner Tank system has not been used to store (>90 days) hazardous waste, and, therefore, is not a regulated hazardous waste storage unit. (See attached letter).

This revision deletes line 2 on page 1 of form 3, also, the items on page 3 of form 3 have been revised to reflect that there is no tank storage at our facility.

If there are any questions regarding this matter, please contact me at (313) 857-2287.

Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux,
Sr. Environmental Engineer
Plant Engineering - Design

Attach.

cc: Ms. M. Murphy, U.S. EPA

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 charact).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL — U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

EPA I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6 5

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		N.A.
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED
B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: C P C - P O N T I A C O F G E N E R A L M O T O R S C O R P.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*: 2 G O S S I A U X, D A L E, S R. E N G I N E E R

B. PHONE *(area code & no.)*: 3 1 3 | 8 5 7 | 2 2 8 7

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 O N E P O N T I A C P L A Z A

B. CITY OR TOWN: 4 P O N T I A C

C. STATE: M I

D. ZIP CODE: 4 8 0 5 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 O N E P O N T I A C P L A Z A

B. COUNTY NAME: O A K L A N D

C. CITY OR TOWN: 6 P O N T I A C

D. STATE: M I

E. ZIP CODE: 4 8 0 5 3

F. COUNTY CODE (if known): 0 6 3

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 3 RCRA — EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

Form Approved OMB No. 158-S80004

I.D. NUMBER: F M I D 0 0 5 3 5 6 8 8 6

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☐ 1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

C 8 | YR. | MO. | DAY

☐ 2. NEW FACILITY (Complete item below.)

FOR NEW FACILITIES PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR. | MO. | DAY

B. REVISED APPLICATION (place an "X" below and complete Item I above)

☐ 1. FACILITY HAS INTERIM STATUS

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP Y/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G	
X-2	T03	20	E	
1	S01	45,000	G	
2				
3				
4				

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
5				
6				
7				
8				
9				
10				

CONTINUE ON REVERSE

Continued from page 2.

NOTE: Photocopy this page before completing if you h[illegible]re than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)														FOR OFFICIAL USE ONLY													
W	M	I	D	0	0	5	3	5	6	8	8	6		1	W										2	DUP	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F005	350	T	S01	
2	F001	Included with line 1, above	T	S01	
3	D008	120	T	S01	
4					
5					
6					
7					
8					
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23					
24					
25					
26					

E-19

Chevrolet · Pontiac · Canada Group
Pontiac Engine Operations
General Motors Corporation
One Pontiac Plaza
Pontiac, Michigan 48058 · 3486

November 25, 1987

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED
NOV 27 1987

State of Michigan
Department of Natural Resources
Hazardous Waste Division
P.O. Box 30028
Lansing, MI 48909

Dear Sirs:

Part A GEN, TR, TSD, PA

After careful examination of the amounts and types of hazardous waste generated at C.P.C. - Pontiac (MID005356886), we find that there is no need for our facility to retain "interim status" as a hazardous waste storage facility and we wish to convert our hazardous waste operations to "generator only" status. The only regulated unit at this facility is a container storage unit. Attached is the closure plan for this unit.

The container storage unit is a diked, concrete pad located on the south side of our salvage building. Recently we enclosed a portion of the pad in anticipation of conversion to generator only status. It is our intention to utilize this area after the conversion for the accumulation of our hazardous wastes.

C.P.C. - Pontiac thanks you for your review and consideration for approval of this closure plan and we look forward to hearing from you in the near future. If you have any questions on this matter, please contact me at (313) 857-2287.

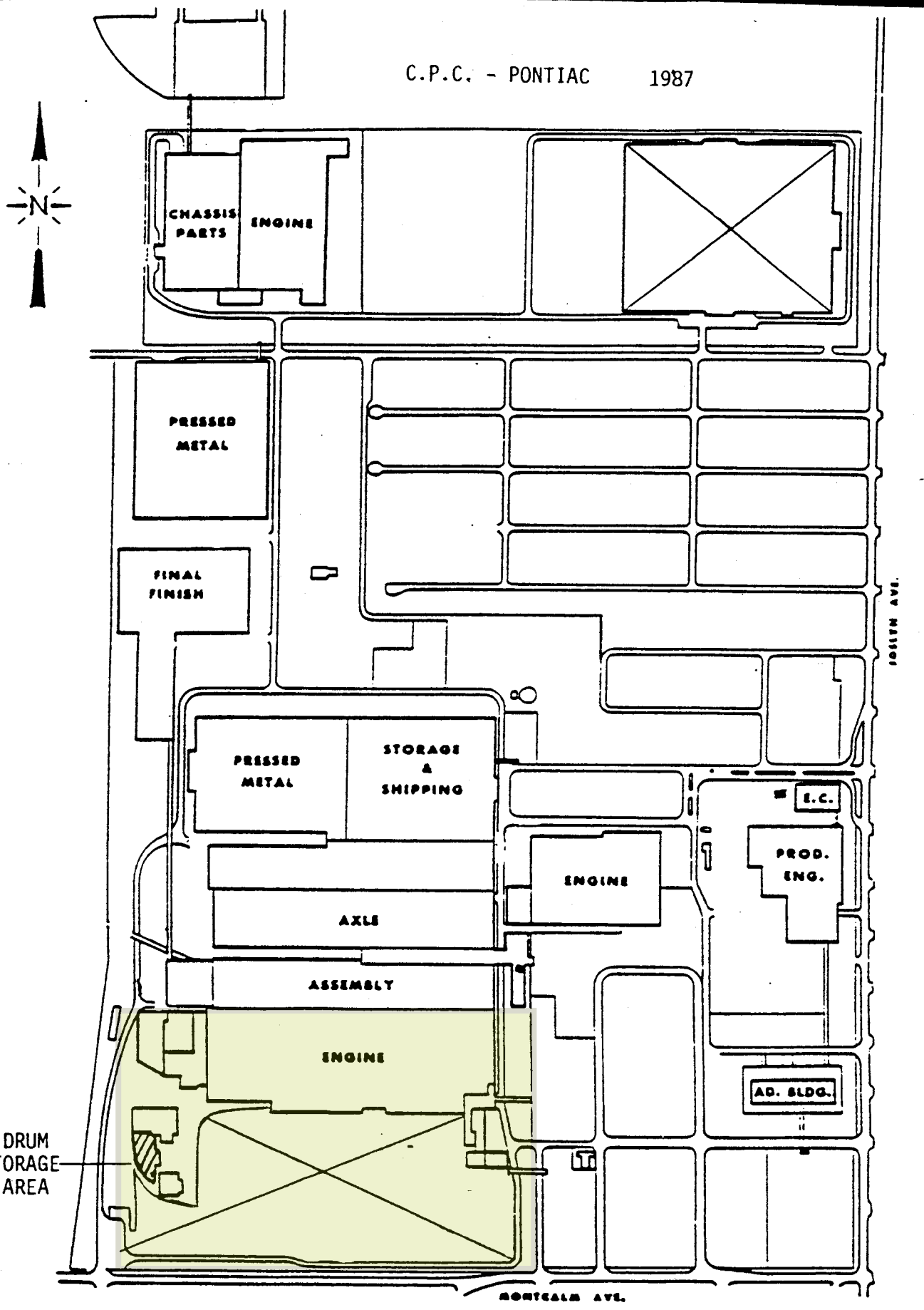
Sincerely,

Dale G. Gossiaux

Dale G. Gossiaux
Sr. Environmental Engineer
Plant Engineering - Design

cc: U.S. E.P.A. Region 5

V. FACILITY DRAWING *(see page 4)*



Draft - For Reference Purposes Only

ATTACHMENT 3

SOIL AND GROUNDWATER DATA PACKAGE

Draft - For Reference Purposes Only

Attachment 3

United States Postal Service Parcel 14-21-101-007

711 North Glenwood Avenue, Pontiac, MI 48340

Summary Tables of Soil and Groundwater

Michigan Part 201 Criteria Exceedances

Soil Table

Media	Substance	Criteria Exceeded (refer to Notes on Page 3)
Soil	1,2-Dibromo-3-chloropropane	RDWP, NRDWP
	1,2-Dichlorobenzene	GSIP
	2,4-Dimethylphenol	RDWP, NRDWP, GSIP
	2-Methylnaphthalene	RDWP, GSIP
	Acenaphthene	GSIP
	Aluminum	SDBL, RDWP, NRDWP
	Antimony	RDWP, NRDWP, GSIP, NRDC
	Arsenic	SDBL, SSBC, RDWP, NRDWP, GSIP, NRDC
	Atrazine	RDWP, NRDWP
	Barium	SDBL, SSBC, RDWP, NRDWP, GSIP
	Benzene	RDWP, NRDWP
	Benzo(a)pyrene	NRDC
	Butylbenzylphthalate	CSAT
	Cadmium	SDBL, RDWP, NRDWP, GSIP
	Carbazole	RDWP, GSIP
	Chromium	SSBC, RDWP, NRDWP, GSIP, NRPSIC
	Cobalt	SDBL, SSBC, RDWP, NRDWP, GSIP
	Copper	SDBL, RDWP, NRDWP, GSIP
	Cyanide (total)	SDBL, RDWP, NRDWP, GSIP
	Dibenzofuran	GSIP
	Dichloromethane	RDWP, NRDWP
	Di-n-Butylphthalate	GSIP
	Ethylbenzene	RDWP, NRDWP, GSIP
	Fluoranthene	GSIP
	Fluorene	GSIP
	Iron	SDBL, RDWP, NRDWP
	Lead	SDBL, SSBC, RDWP, NRDWP, GSIP, NRDC
	Magnesium	RDWP, NRDWP
	Manganese	SDBL, SSBC, RDWP, NRDWP, GSIP, NRPSIC

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Media	Substance	Criteria Exceeded (refer to Notes on Page 3)
	Mercury	SDBL, RDWP, NRDWP, GSIP
	Naphthalene	RDWP, GSIP
	Nickel	SDBL, SSBC, RDWP, NRDWP, GSIP
	Phenanthrene	RDWP, GSIP
	Phenol	RDWP
	Selenium	SDBL, RDWP, NRDWP, GSIP
	Silver	SDBL, RDWP, NRDWP, GSIP
	Tetrachloroethene	RDWP, NRDWP, GSIP
	Thallium	RDWP, NRDWP, GSIP
	Toluene	RDWP, NRDWP, GSIP
	Total PCBs	NRDC
	Total Xylenes	RDWP, NRDWP, GSIP
	Trichloroethene	RDWP, NRDWP, NRSVII
	Vanadium	SSBC, RDWP
	Zinc	SDBL, SSBC, RDWP, NRDWP, GSIP

Groundwater Table

Media	Substance	Criteria Exceeded (refer to Notes on Page 3)
Groundwater	1,4-Dioxane	RDW
	2,4-Dimethylphenol	RDW, NRDW, GSI
	Acetone	RDW, NRDW, GSI
	Antimony	RDW, NRDW
	Arsenic	RDW, NRDW, GSI
	Barium	RDW, NRDW, GSI
	Benzene	RDW, NRDW
	Beryllium	RDW, NRDW
	bis(2-Ethylhexyl)phthalate	RDW, NRDW, GSI
	Cadmium	GSI
	Chromium	RDW, NRDW, GSI
	Cobalt	RDW
	Copper	GSI
	Dichloromethane	RDW, NRDW
	Ethylbenzene	GSI
	Fluorene	GSI
	Iron	RDW, NRDW

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Media	Substance	Criteria Exceeded (refer to Notes on Page 3)
	Lead	RDW, NRDW, GSI
	Manganese	RDW, NRDW, GSI
	Mercury	GSI
	Naphthalene	GSI
	Nickel	RDW, NRDW, GSI
	Phenanthrene	GSI
	Phenol	GSI
	Silver	GSI
	Thallium	RDW, NRDW, GSI
	Total Dissolved Solids	RDW, NRDW, GSI
	Total PCBs	RDW, NRDW, GSI
	Total Xylenes	GSI
	Vanadium	RDW, NRDW, GSI
	Vinyl Chloride	RDW, NRDW, GSI
	Zinc	GSI

SOIL

SDBL – State Default Background Levels

SSBC – Cite Specific Background Criteria

RDWP – Residential Drinking Water Protection

NRDWP- Non-Residential Drinking Water Protection

GSIP – Groundwater Surface Water Interface Protection

NRSVII – Non-Residential Soil Volatilization to Indoor Inhalation Criteria

NRPSIC – Non-Residential Particulate Soil Inhalation Criteria

NRDC – Non-Residential Direct Contact Criteria

CSAT – Soil Saturation Concentration

GROUNDWATER

NRDW – Non-Residential Drinking Water Criteria

RDW – Residential Drinking Water Criteria

GSI – Groundwater Surface Water Interface Criteria

1 – MDEQ Part 201 Generic Cleanup Criteria – Non-Residential Soil and Groundwater Criteria, Table 1, Table 2 and Table 3, dated January 10, 2018; GSI criteria updated June 25, 2018.

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Reqd) LYR:(On)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD\18101-DWG\FIG1A-DATABOX.DWG LAYOUT: 1A SAVED: 12/7/2018 11:59 AM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/7/2018 12:37 PM BY: STOWELL, GARY
XREFS:
X-PNC-DL
IMAGES:

AOIW9–C04	
Date	03/02/05
Depth (ft bgs)	11 – 11.5
Total PCBs	17*

AOIW9–C21	
Date	03/11/05
Depth (ft bgs)	2 – 2.5
Total PCBs	53*

AOIW9–C39	
Date	05/09/05
Depth (ft bgs)	2 – 2.3
Total PCBs	170*

SB–121–18	
Date	06/22/18
Depth (ft bgs)	16 – 18
Total PCBs	48* [55*]

SB–46–14	
Date	06/25/14
Depth (ft bgs)	20 – 22
Total PCBs	43*

SB–56–14	
Date	07/31/14
Depth (ft bgs)	16 – 18
Total PCBs	18*

SB–75–15	
Date	04/28/15
Depth (ft bgs)	4 – 5
Total PCBs	24*

SW9–09–W2S2					
Date	01/03/02	01/29/02	01/29/02	01/29/02	01/29/02
Depth (ft bgs)	2 – 4	6 – 8	8 – 10	10 – 12	12 – 14
Total PCBs	32*	60*	45*	16*	33*

SW9–09–W1N2				
Date	01/03/02	01/03/02	01/29/02	01/29/02
Depth (ft bgs)	4 – 6	6 – 8	8 – 10	10 – 12
Total PCBs	48*	23*	45*	24*

SW9–09–E2N2		
Date	01/22/02	01/22/02
Depth (ft bgs)	2 – 4	4 – 6
Total PCBs	41*	17*

AOIW9–C06	
Date	03/02/05
Depth (ft bgs)	2 – 2.5
Total PCBs	16*

AOIW9–C22	
Date	03/11/05
Depth (ft bgs)	2 – 2.5
Total PCBs	33*

AOIW9–CSW2	
Date	05/11/05
Depth (ft bgs)	0 – 4
Total PCBs	27*

SW9–09–W2S1		
Date	01/17/02	01/31/02
Depth (ft bgs)	8 – 10	10 – 12
Total PCBs	35*	18*

SW9–09–E3S1		
Date	01/31/02	
Depth (ft bgs)	10 – 12	
Total PCBs	16*	

SW9–09–E3N2		
Date	02/13/02	02/13/02
Depth (ft bgs)	0 – 2	8 – 10
Total PCBs	23*	29*

SW9–09–E1S2		
Date	01/03/02	01/03/02
Depth (ft bgs)	2 – 4	4 – 6
Total PCBs	45*	30*

SW9–09–E4S2		
Date	01/31/02	
Depth (ft bgs)	0 – 2	
Total PCBs	20*	

AOIW9–C13	
Date	03/02/05
Depth (ft bgs)	2 – 2.5
Total PCBs	20*

AOIW9–C23	
Date	05/09/05
Depth (ft bgs)	2 – 2.3
Total PCBs	25*

AOIW9–UCNW	
Date	06/03/05
Depth (ft bgs)	1 – 2
Total PCBs	490*

SW9–09–W1	
Date	01/03/02
Depth (ft bgs)	6 – 8
Total PCBs	17*

SW9–09–S1	
Date	01/29/02
Depth (ft bgs)	8 – 10
Total PCBs	22*

SW9–09–E1	
Date	01/04/02
Depth (ft bgs)	6 – 8
Total PCBs	27*

SW9–09–N1		
Date	01/03/02	02/19/02
Depth (ft bgs)	8 – 10	12 – 14
Total PCBs	20*	24*

AOIW9–C14	
Date	03/02/05
Depth (ft bgs)	2 – 2.5
Total PCBs	61*

AOIW9–C32	
Date	05/09/05
Depth (ft bgs)	2 – 2.3
Total PCBs	170*

AOIW9–V002	
Date	03/02/05
Depth (ft bgs)	2 – 2.5
Total PCBs	37*

SW9–09–W2N2	
Date	01/17/02
Depth (ft bgs)	6 – 8
Total PCBs	30*

SW9–09–E2	
Date	01/04/02
Depth (ft bgs)	8 – 10
Total PCBs	16*

SW9–09–W2N1	
Date	02/12/02
Depth (ft bgs)	10 – 12
Total PCBs	24*

AOIW9–C19	
Date	03/11/05
Depth (ft bgs)	2 – 2.5
Total PCBs	21*

AOIW9–C35	
Date	05/09/05
Depth (ft bgs)	2 – 2.3
Total PCBs	240*

AOIW9–V003	
Date	03/02/05
Depth (ft bgs)	2 – 2.5
Total PCBs	26*

SW9–09	
Date	06/27/01
Depth (ft bgs)	0 – 2
Total PCBs	26*

BW9–27			
Date	04/29/05	04/29/05	04/29/05
Depth (ft bgs)	4 – 6	6 – 8	8 – 10
Total PCBs	30*	72*	16*

SAMPLES ARE FROM AREA OF INTEREST (AOI) W-9 BUT EXACT LOCATIONS COULD NOT BE IDENTIFIED

red exceeds state default

underlined exceeds site specific background

switch these 2 descriptions on all figures

BW9–27–E(9–14')	
Date	05/18/05
Depth (ft bgs)	9 – 14
Total PCBs	35*

SB–92–17	
Date	10/31/17
Depth (ft bgs)	16 – 18
Total PCBs	140*

SB–90–17				
Date	10/31/17	10/31/17	10/31/17	10/31/17
Depth (ft bgs)	16 – 18	18 – 20	20 – 22	24 – 26
Total PCBs	106*	196*	27*	34* [4]

SB–54–14			
Date	07/30/14	07/30/14	
Depth (ft bgs)	14 – 16	18 – 20	
Total PCBs	27*	140* [110*]	

SB–60–14					
Date	08/18/14	08/18/14	08/18/14	08/18/14	08/18/14
Depth (ft bgs)	8 – 9	14 – 15	18 – 19	22 – 23	26 – 27
Total PCBs	67.1 J*	46.2 J*	32.8 J*	26.1 J*	25.2 J*

SB–53–14	
Date	07/30/14
Depth (ft bgs)	22 – 24
Total PCBs	53*

BW1–10		
Date	01/11/02	01/11/02
Depth (ft bgs)	8 – 10	12 – 14
Total PCBs	59.8*	23.5 J*

BW1–01	
Date	07/16/01
Depth (ft bgs)	8 – 10
Total PCBs	35*

SB–41–14		
Date	06/24/14	06/24/14
Depth (ft bgs)	14 – 16	16 – 18
Total PCBs	78* [95*]	75*

SB–49–14	
Date	07/29/14
Depth (ft bgs)	18 – 20
Total PCBs	47*

SB–99–17		
Date	11/01/17	11/01/17
Depth (ft bgs)	8 – 10	14 – 16
Total PCBs	36*	30*

SB–51–14	
Date	07/29/14
Depth (ft bgs)	8 – 10
Total PCBs	120*

SB–116–18				
Date	06/21/18	06/21/18	06/21/18	06/21/18
Depth (ft bgs)	4 – 6	6 – 8	12 – 14	14 – 15
Total PCBs	37*	19*	79*	34*

SB–111–18		
Date	03/21/18	03/21/18
Depth (ft bgs)	6 – 8	8 – 10
Total PCBs	24* [25*]	63*

SB–52–14		
Date	07/29/14	07/29/14
Depth (ft bgs)	8 – 10	10 – 12
Total PCBs	110*	29*

BW1–15	
Date	03/17/05
Depth (ft bgs)	8 – 10
Total PCBs	290*

SB–32–14				
Date	06/16/14	06/16/14	06/16/14	06/16/14
Depth (ft bgs)	6 – 8	8 – 10	12 – 14	22 – 24
Total PCBs	100*	110*	37*	0.041 [22*]

SB–31–14				
Date	06/16/14	06/16/14	06/16/14	06/16/14
Depth (ft bgs)	6 – 8	12 – 14	16 – 18	22 – 24
Total PCBs	140*	240*	450*	140*

SBMW20	
Date	12/20/95
Depth (ft bgs)	23 – 25
Total PCBs	38* [43*]

SB–14–14					
Date	06/09/14	06/09/14	06/09/14	06/09/14	06/09/14
Depth (ft bgs)	9 – 10	11 – 12	13 – 14	15 – 16	23 – 24
Total PCBs	300*	47*	100*	150*	41*

SB–95–17				
Date	11/01/17	11/01/17	11/01/17	11/01/17
Depth (ft bgs)	8 – 10	10 – 12	12 – 14	14 – 16
Total PCBs	56*	137*	27*	67* [9]

SB–110–18	
Date	03/21/18
Depth (ft bgs)	14 – 16
Total PCBs	16* [16*]

SB–43–14	
Date	06/24/14
Depth (ft bgs)	28 – 30
Total PCBs	29.4 J*

BCC–60–8	
Date	08/09/04
Depth (ft bgs)	1.1 – 2.1
Total PCBs	180*

BCC–60	
Date	06/01/04
Depth (ft bgs)	1.8 – 2.8
Total PCBs	17*

BCC–60–1	
Date	07/26/04
Depth (ft bgs)	2 – 4
Total PCBs	27*

BW9–02–S1	
Date	12/17/01
Depth (ft bgs)	0.8 – 2
Total PCBs	19*

BW9–02	
Date	07/17/01
Depth (ft bgs)	0.9 – 2
Total PCBs	44*

BW9–02–W2	
Date	01/30/02
Depth (ft bgs)	0.8 – 2
Total PCBs	28*

BW9–02–E1S2	
Date	01/02/02
Depth (ft bgs)	0.5 – 2
Total PCBs	180*

BW9–02–E11S1	
Date	02/19/02
Depth (ft bgs)	0 – 2
Total PCBs	360*

BW9–02–E11S3	
Date	02/19/02
Depth (ft bgs)	0 – 2
Total PCBs	340*

BW9–02–E10S4	
Date	02/20/02
Depth (ft bgs)	0.5 – 2
Total PCBs	16*

BW9–02–W1S3	
Date	01/02/02
Depth (ft bgs)	0.5 – 2
Total PCBs	180*

BW9–02–W2N1	
Date	01/04/02
Depth (ft bgs)	0 – 2
Total PCBs	21*

BW9–02–W2S1	
Date	01/04/02
Depth (ft bgs)	0.5 – 2
Total PCBs	150*

BW9–02–W2S2	
Date	01/04/02
Depth (ft bgs)	0.5 – 2
Total PCBs	41*

BCC–53	
Date	06/03/04
Depth (ft bgs)	6 – 8
Total PCBs	16*

BW9–01–W1	
Date	07/22/04
Depth (ft bgs)	7 – 9
Total PCBs	21*

BW9–01–S1E3	
Date	08/03/04
Depth (ft bgs)	8 – 10
Total PCBs	19*

BW9–01–S2E3	
Date	08/30/04
Depth (ft bgs)	0.6 – 1.2
Total PCBs	24*

BW9–01–S1E2	
Date	08/09/04
Depth (ft bgs)	10 – 11
Total PCBs	330*

BW9–01–E3S7.5	
Date	12/21/04
Depth (ft bgs)	0.75 – 2
Total PCBs	37*

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING/SOIL SAMPLE LOCATION
- SURVEYED CONCRETE AND/OR SOIL SAMPLE LOCATION
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA
- 4,700 EXCEEDS SITE SPECIFIC BACKGROUND CONCENTRATIONS
- 199 EXCEEDS MDEQ 2013 STATE DEFAULT BACKGROUND LEVELS
- * EXCEEDS MDEQ 2013 NONRESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA
- EXCEEDS MDEQ 2013 SOIL SATURATION CONCENTRATION SCREENING LEVEL
- 1,520 EXCEED PARTICU
- 2.3 EXCEED INDOOR

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. E – EXCEEDS CALIBRATION STANDARD.
8. R – REJECTED DATA.
9. PCB – POLYCHLORINATED BIPHENYL.
10. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
    - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
    - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
    - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
    - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
    - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
    - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

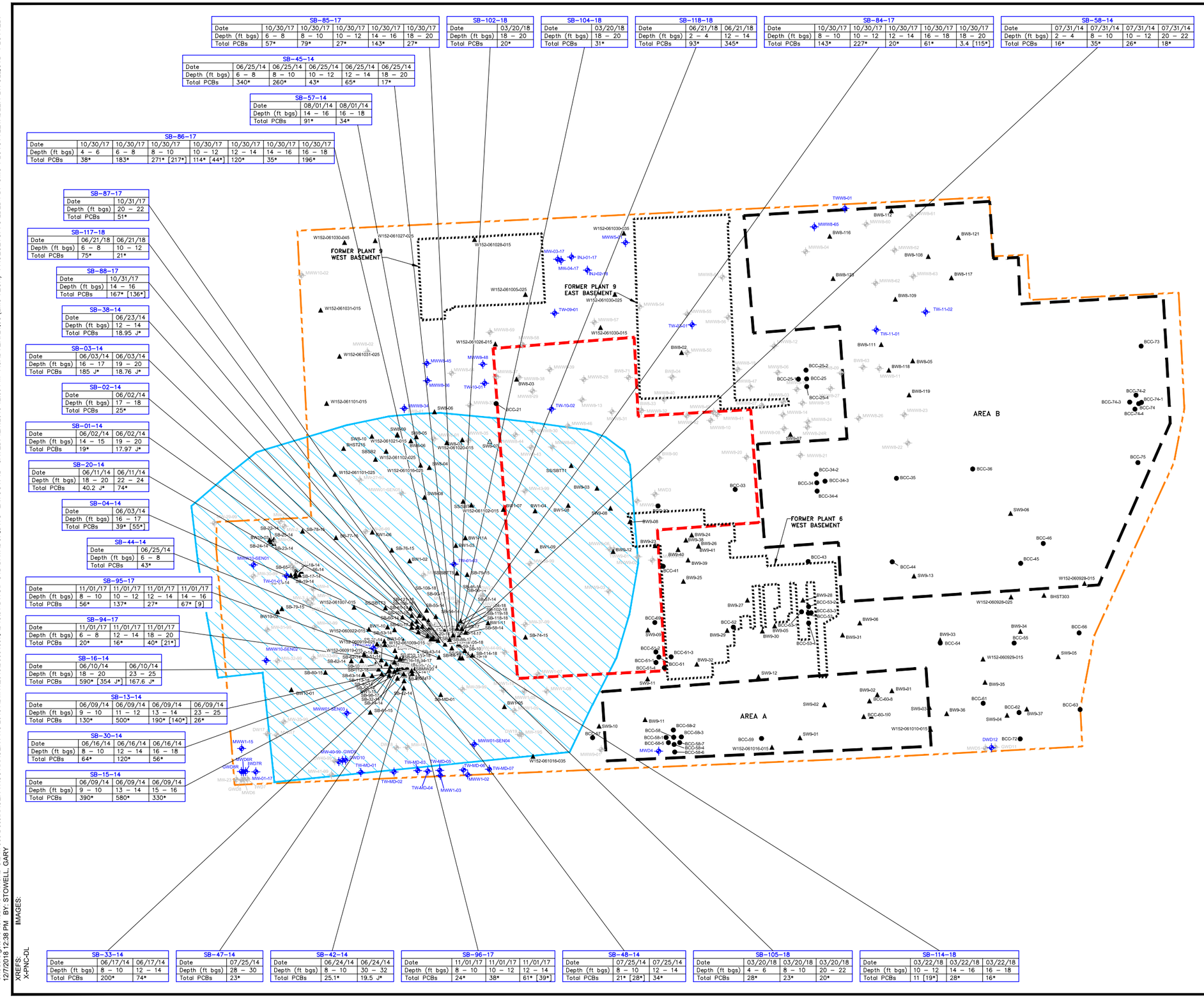
DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY PCB EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1A



NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. E – EXCEEDS CALIBRATION STANDARD.
8. R – REJECTED DATA.
9. PCB – POLYCHLORINATED BIPHENYL.
10. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
    - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
    - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
    - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
    - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
    - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
    - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

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RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
PCB EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1B

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Regq) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\IBM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD.18\01-DWG\FIG1B-DATABOX.DWG LAYOUT: 1B SAVED: 12/7/2018 12:00 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C:\LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED:
12/7/2018 12:38 PM BY: STOWELL, GARY
XREFS:
IMAGES:
X-PNC-DL

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Req) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\IBM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD\18\01-DWG\FIG1C-DATABOX.DWG LAYOUT: 1C SAVED: 12/7/2018 12:04 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB
PLOTTED: 12/7/2018 12:38 PM BY: STOWELL, GARY
XREFS:
X-PNC-DL
IMAGES:

MWW8–02	
Date	08/29/01
Depth (ft bgs)	0.5 – 2
Phenanthrene	7.7 J

SBTT2	
Date	01/22/96
Depth (ft bgs)	15
2–Methylnaphthalene	7.2 J
Phenanthrene	4.9 J
Naphthalene	3.7 J

BW8–06	
Date	07/28/03
Depth (ft bgs)	2 – 4
Fluoranthene	6.9 J
Phenanthrene	3.6 J

SSTT2	
Date	01/22/96
Depth (ft bgs)	0 – 0.5
2–Methylnaphthalene	23
Acenaphthene	36
Benzo(a)pyrene	8.6 J*
Carbazole	11
Dibenzofuran	27
Fluoranthene	82
Fluorene	36
Phenanthrene	110
Naphthalene	97

BW1–11A		
Date	07/30/03	07/30/03
Depth (ft bgs)	0 – 2	6 – 8
Benzene	0.25	0.062 J
1,2–Dichlorobenzene	ND	0.45
Ethylbenzene	0.11 J	0.64
Total Xylenes	0.49 J	3
2–Methylnaphthalene	2.7	29 J
Phenanthrene	0.8 J	10 J
Naphthalene	1.5 J	4.6 J

BW1–03		
Date	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	4 – 6
Dichloromethane	ND	0.13 J
Trichloroethene	ND	0.17 J
Total Xylenes	ND	1.5
2–Methylnaphthalene	1.7	7 J
Phenanthrene	0.64 J	8.8
Naphthalene	3.1	2.9 J

SBTT5	
Date	01/23/96
Depth (ft bgs)	3 – 5
Naphthalene	1.4

BW1–02		
Date	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	8 – 10
Total Xylenes	0.036	1
Di–n–Butylphthalate	16	ND
Phenanthrene	2.5 J	0.94 J

SSTT5	
Date	01/23/96
Depth (ft bgs)	0 – 0.5
Phenanthrene	3.7 J [0.5]
Naphthalene	ND [1.5]

BW10–02	
Date	07/30/01
Depth (ft bgs)	12 – 14
Dichloromethane	0.28 J [ND]
Phenanthrene	2.6 J [3.6 J]

W152–061007–015	
Date	10/07/06
Depth (ft bgs)	Unknown
Dichloromethane	110

SBTT3	
Date	01/23/96
Depth (ft bgs)	5 – 9
Dichloromethane	25
Ethylbenzene	15
Toluene	42
Total Xylenes	75
2,4–Dimethylphenol	72 J
2–Methylnaphthalene	34 J
Acenaphthene	14 J
Butylbenzylphthalate	1,100
Dibenzofuran	13 J
Fluoranthene	22 J
Fluorene	26 J
Phenanthrene	52 J
Phenol	140
Naphthalene	70 J

BW1–10		
Date	01/11/02	01/11/02
Depth (ft bgs)	8 – 10	12 – 14
Dichloromethane	ND	1.1 J
Ethylbenzene	3.5	8.9
Trichloroethene	0.049 J	0.25 J
Total Xylenes	7.4 J	39 J
2–Methylnaphthalene	85	150
Butylbenzylphthalate	170	57
Fluoranthene	ND	6.1 J
Fluorene	ND	8.9 J
Phenanthrene	13 J	23
Naphthalene	12 J	18

W152–061102–015		
Date	11/02/06	
Depth (ft bgs)	Unknown	
Dichloromethane	200	

BW8–03		
Date	07/28/03	07/28/03
Depth (ft bgs)	0.5 – 2	3 – 5
Phenanthrene	14	5 J

MWW8–29	
Date	11/11/04
Depth (ft bgs)	11 – 13
2–Methylnaphthalene	9.9
Fluorene	14
Phenanthrene	27
Naphthalene	1.9 J

SSTT1	
Date	01/22/96
Depth (ft bgs)	0 – 0.5
2–Methylnaphthalene	5.5
Naphthalene	2.9

MWW8–12		
Date	02/06/02	02/06/02
Depth (ft bgs)	1 – 3	8 – 10
Phenanthrene	3.5	3.4 [3.2]

MWW8–03		
Date	09/04/01	09/04/01
Depth (ft bgs)	2 – 4	8 – 10
2–Methylnaphthalene	ND	6.7 J
Fluorene	19	21
Phenanthrene	18	42

BCC–25		
Date	06/02/04	
Depth (ft bgs)	0.9 – 2	
Fluoranthene	11 J	
Fluorene	12 J	
Phenanthrene	20 J	

BW8–108	
Date	08/02/05
Depth (ft bgs)	0 – 2
2–Methylnaphthalene	8.4
Naphthalene	2.5 J

MWW8–11		
Date	02/04/02	02/04/02
Depth (ft bgs)	0.8 – 2	8 – 10
Fluorene	NA	7.3
Phenanthrene	4.7	9.9

TP–W1–01	
Date	09/06/01
Depth (ft bgs)	7
Tetrachloroethene	4
Trichloroethene	**2.3**

TP–W1–02	
Date	09/06/01
Depth (ft bgs)	9
Tetrachloroethene	3.8

TP–W1–03	
Date	09/06/01
Depth (ft bgs)	10
Tetrachloroethene	5.6

W152–061103–025	
Date	11/03/06
Depth (ft bgs)	Unknown
Dichloromethane	140

W152–061104–015	
Date	11/03/06
Depth (ft bgs)	Unknown
Dichloromethane	110

SBSB5		
Date	12/12/95	
Depth (ft bgs)	4 – 6	
Benzene	0.72 J	
Ethylbenzene	25	
Toluene	34	
Total Xylenes	150	
2–Methylnaphthalene	55	
Di–n–Butylphthalate	480	
Phenanthrene	11 J	
Naphthalene	19 J	

SBDW21		
Date	12/19/95	
Depth (ft bgs)	18 – 20	
Phenanthrene	3.1	

W152–061106–015	
Date	11/05/06
Depth (ft bgs)	Unknown
Dichloromethane	160

W152–061108–025	
Date	11/05/06
Depth (ft bgs)	Unknown
Dichloromethane	100

EXACT LOCATIONS WITHIN THE USPS PROPERTY COULD NOT BE VERIFIED

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING/SOIL SAMPLE LOCATION
- SURVEYED CONCRETE AND/OR SOIL SAMPLE LOCATION
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA
- 4,700 — EXCEEDS SITE SPECIFIC BACKGROUND CONCENTRATIONS
- 199 — EXCEEDS MDEQ 2013 STATE DEFAULT BACKGROUND LEVELS
- * — EXCEEDS MDEQ 2013 NONRESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA
- EXCEEDS MDEQ 2013 SOIL SATURATION CONCENTRATION SCREENING LEVEL
- *1,520* — EXCEEDS MDEQ 2013 NONRESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- **2.3** — EXCEEDS MDEQ 2013 SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. E – EXCEEDS CALIBRATION STANDARD.
8. R – REJECTED DATA.
9. VOCS – VOLATILE ORGANIC COMPOUNDS
10. SVOCS – SEMI–VOLATILE ORGANIC COMPOUNDS
11. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
    - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
    - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
    - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
    - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
    - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
    - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

DRAFT

W152–061009–015	
Date	10/9/006
Depth (ft bgs)	Unknown
Dichloromethane	100

BW1–01	
Date	07/16/01
Depth (ft bgs)	8 – 10
Benzene	0.39
Ethylbenzene	2.5
Total Xylenes	13
2–Methylnaphthalene	33
Dibenzofuran	2.9 J
Fluoranthene	24
Fluorene	5.5 J
Phenanthrene	33
Naphthalene	8.4 J

SBMW20	
Date	12/20/95
Depth (ft bgs)	23 – 25
Ethylbenzene	6.1 [5.4]
Total Xylenes	20 [17]
2–Methylnaphthalene	85 [120]
Dibenzofuran	ND [4.2]
Fluoranthene	15 J [21]
Fluorene	7.5 J [9.2]
Phenanthrene	21 J [26]
Naphthalene	12 J [19]

SSTT4	
Date	01/22/96
Depth (ft bgs)	0 – 0.5
Fluorene	9.9
Phenanthrene	11

SBTT4	
Date	01/23/96
Depth (ft bgs)	3 – 10
Phenanthrene	3.1 J

MW–36–99	
Date	09/02/99
Depth (ft bgs)	17 – 18
Ethylbenzene	1.7
Tetrachloroethene	0.12
Total Xylenes	7.6

SBMW22	
Date	12/12/95
Depth (ft bgs)	16 – 18
Total Xylenes	2.4
2–Methylnaphthalene	19 J
Fluoranthene	19 J
Fluorene	5.4 J
Phenanthrene	25 J
Naphthalene	7.1 J

BW1–04	
Date	07/16/01
Depth (ft bgs)	0 – 2
Benzene	0.39
Dichloromethane	0.13 J
2–Methylnaphthalene	9
Phenanthrene	2.7
Naphthalene	4.9

SW9–01		
Date	06/27/01	
Depth (ft bgs)	0 – 2	
Dichloromethane	0.13 J	

SW9–02		
Date	06/27/01	
Depth (ft bgs)	0 – 2	
Phenanthrene	2.3	

BW9–24	
Date	04/19/05
Depth (ft bgs)	8 – 10
Benzene	0.2 J
1,2–Dibromo–3–chloropropane	0.11 J
Dichloromethane	0.16 J
Total Xylenes	1.4 J
Naphthalene	1.3 J

SW9–07	
Date	06/27/01
Depth (ft bgs)	0 – 2
Carbazole	1.2 J
Fluoranthene	13
Phenanthrene	9

MWW8–10	
Date	01/29/02
Depth (ft bgs)	2 – 4
Phenanthrene	8.3

W152–060929–015	
Date	09/29/06
Depth (ft bgs)	Unknown
Dichloromethane	100

BW9–33	
Date	04/18/05
Depth (ft bgs)	0 – 2
Trichloroethene	0.19

BW9–01	
Date	07/16/01
Depth (ft bgs)	8 – 10
Benzo(a)pyrene	8.5*
Carbazole	1.4 J
Fluoranthene	28
Phenanthrene	16
Naphthalene	0.79 J

W152–061010–015	
Date	10/10/06
Depth (ft bgs)	Unknown
Dichloromethane	110

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
VOC AND SVOC EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1C

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Req'd) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD18\01-DWG\FIG1D-DATABOX.DWG LAYOUT: 1D
PLOTTED: 12/7/2018 12:39 PM BY: STOWELL, GARY SAVED: 12/7/2018 12:02 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB
IMAGES:
XREFS:
X-PNC-DL

W152-061030-045	
Date	10/30/06
Depth (ft bgs)	Unknown
Chromium	10
Manganese	240

W152-061027-025	
Date	10/27/06
Depth (ft bgs)	Unknown
Chromium	8.5
Manganese	220

W152-061026-015	
Date	10/26/06
Depth (ft bgs)	Unknown
Chromium	8.3
Manganese	200
Selenium	0.48

W152-061030-035	
Date	10/30/06
Depth (ft bgs)	Unknown
Chromium	9.6
Manganese	210

W152-061030-025	
Date	10/30/06
Depth (ft bgs)	Unknown
Chromium	9.6
Manganese	240
Silver	0.17

W152-061030-015	
Date	10/30/06
Depth (ft bgs)	Unknown
Chromium	9.3
Manganese	230
Silver	0.25

W152-061031-015	
Date	10/31/06
Depth (ft bgs)	Unknown
Chromium	9.1
Manganese	210
Zinc	48

W152-061031-025	
Date	10/31/06
Depth (ft bgs)	Unknown
Chromium	9.9
Manganese	240

W152-061101-015	
Date	11/01/06
Depth (ft bgs)	Unknown
Chromium	8.1
Manganese	190

W152-061021-015	
Date	10/21/06
Depth (ft bgs)	Unknown
Chromium	9.7
Manganese	230
Silver	0.12

W152-061102-025	
Date	11/02/06
Depth (ft bgs)	Unknown
Chromium	9.6
Manganese	290

W152-061101-025	
Date	11/01/06
Depth (ft bgs)	Unknown
Arsenic	5.3
Chromium	12
Manganese	350
Mercury	0.066
Zinc	52

W152-061020-015	
Date	10/20/06
Depth (ft bgs)	Unknown
Chromium	12
Manganese	250
Selenium	0.4

W152-061016-025	
Date	10/16/06
Depth (ft bgs)	Unknown
Chromium	8.7
Manganese	300

W152-061102-015	
Date	11/02/06
Depth (ft bgs)	Unknown
Chromium	11
Manganese	270

W152-061007-015	
Date	10/07/06
Depth (ft bgs)	Unknown
Chromium	6.8
Manganese	310
Silver	0.17

W152-060922-015	
Date	09/22/06
Depth (ft bgs)	Unknown
Chromium	8.9
Manganese	250
Mercury	0.13

W152-060919-025	
Date	09/19/06
Depth (ft bgs)	Unknown
Chromium	10
Manganese	220
Silver	0.21

W152-060919-015	
Date	09/19/06
Depth (ft bgs)	Unknown
Arsenic	4.7
Chromium	11
Manganese	250
Silver	0.12

W152-061009-015	
Date	10/09/06
Depth (ft bgs)	Unknown
Chromium	7.6
Manganese	230
Silver	0.110

W152-061016-035	
Date	10/16/06
Depth (ft bgs)	Unknown
Chromium	9.2
Manganese	200

W152-061016-015	
Date	10/16/06
Depth (ft bgs)	Unknown
Chromium	8.1
Manganese	290

W152-060928-025	
Date	09/28/06
Depth (ft bgs)	Unknown
Chromium	10
Manganese	320
Selenium	0.45
Silver	0.35

W152-061010-015	
Date	10/10/06
Depth (ft bgs)	Unknown
Chromium	4.7
Manganese	87

W152-060929-015	
Date	09/29/06
Depth (ft bgs)	Unknown
Chromium	8
Manganese	270
Silver	0.29
Zinc	54

W152-060928-015	
Date	09/28/06
Depth (ft bgs)	Unknown
Chromium	10
Manganese	260
Silver	0.36

W152-061103-025	
Date	11/03/06
Depth (ft bgs)	Unknown
Arsenic	7.3
Chromium	17
Manganese	450
Silver	0.11
Zinc	54

W152-061106-025	
Date	11/06/06
Depth (ft bgs)	Unknown
Arsenic	6.5
Chromium	16
Manganese	400
Zinc	54

W152-061027-015	
Date	10/27/06
Depth (ft bgs)	Unknown
Arsenic	5.3
Chromium	11
Manganese	310

W152-060921-015	
Date	09/21/06
Depth (ft bgs)	Unknown
Chromium	7.8
Manganese	300

W152-061104-015	
Date	11/04/06
Depth (ft bgs)	Unknown
Chromium	12
Manganese	280

W152-061104-025	
Date	11/04/06
Depth (ft bgs)	Unknown
Arsenic	5.3
Chromium	11
Manganese	280

W152-061014-015	
Date	10/14/06
Depth (ft bgs)	Unknown
Chromium	7.6
Manganese	290

W152-061026-025	
Date	10/26/06
Depth (ft bgs)	Unknown
Chromium	7.6
Manganese	200
Selenium	0.49

W152-061106-015	
Date	11/06/06
Depth (ft bgs)	Unknown
Arsenic	5.2
Chromium	12
Manganese	300

W152-061014-025	
Date	10/14/06
Depth (ft bgs)	Unknown
Chromium	8.1
Manganese	190

W152-061103-015	
Date	11/03/06
Depth (ft bgs)	Unknown
Chromium	11
Manganese	340

W152-061104-035	
Date	11/04/06
Depth (ft bgs)	Unknown
Chromium	8.6
Manganese	250

EXACT LOCATIONS WITHIN THE USPS PROPERTY COULD NOT BE VERIFIED

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING/SOIL SAMPLE LOCATION
- SURVEYED CONCRETE AND/OR SOIL SAMPLE LOCATION
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA
- 4,700 — EXCEEDS SITE SPECIFIC BACKGROUND CONCENTRATIONS
- 199 — EXCEEDS MDEQ 2013 STATE DEFAULT BACKGROUND LEVELS
- * — EXCEEDS MDEQ 2013 NONRESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA
- EXCEEDS MDEQ 2013 SOIL SATURATION CONCENTRATION SCREENING LEVEL
- 1,520 — EXCEEDS MDEQ 2013 NONRESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- 2.3 — EXCEEDS MDEQ 2013 SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA

NOTES:

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2. ALL CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
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   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
INORGANICS EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1D

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Req'd) LYR:(On)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018IB0064607.AD18101-DWG\FIG1E-DATABOX.DWG LAYOUT: 1E SAVED: 12/7/2018 11:51 AM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED:
12/7/2018 12:40 PM BY: STOWELL, GARY
XREFS:
IMAGES:
X-PNC-DL

SSTT3

Date	01/22/96
Depth (ft bgs)	0 – 0.5
Aluminum	1,790 J [3,270 J]
Chromium	4.48 J [11.7 J]
Cobalt	5.11 [4.07]
Cyanide (total)	ND [0.39]
Iron	10,500 [7,800]
Magnesium	8,160 J [12,000 J]
Manganese	543 J [270 J]

SBTT3

Date	01/23/96
Depth (ft bgs)	5 – 9
Aluminum	6,200
Arsenic	7.12
Barium	306
Cadmium	10.7
Chromium	161
Cobalt	11.3
Copper	2,370
Cyanide (total)	3.6
Iron	69,400
Lead	180
Manganese	*1,920*
Mercury	0.156
Nickel	195
Selenium	0.836
Silver	0.886
Zinc	602

BW1–02

Date	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	8 – 10
Arsenic	8.98	5.99
Barium	296	161
Cadmium	3.37 J	0.961
Chromium	180	37.8
Cobalt	9.14	5.6
Copper	189	45.6
Cyanide (total)	2.81	0.955
Lead	109	55.1
Manganese	*6,330*	471
Mercury	0.3	0.382
Nickel	93.9	35.8
Thallium	7.72 J	ND
Zinc	191	58.1

BW1–01

Date	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	8 – 10
Antimony	ND	35
Arsenic	4	19.1
Barium	25.1	3,830
Cadmium	0.378 J	15.6
Chromium	9.71 J	*1,520*
Cobalt	4.41 J	57.8
Copper	13.6	4,700
Cyanide (total)	ND	1.53
Lead	7.22	3,950*
Manganese	273	1,070
Mercury	ND	0.549
Nickel	10.6 J	349
Selenium	ND	1.34 J
Silver	ND	69.6
Vanadium	13.1	32.3
Zinc	46 J	1,660

SSTT5

Date	01/23/96
Depth (ft bgs)	0 – 0.5
Aluminum	799 J [3,960 J]
Antimony	16.6 J [2.94 J]
Arsenic	67.1 J* [3.35 J]
Barium	41.6 J [83.2 J]
Chromium	940 J [163 J]
Cobalt	69.5 J [4.82 J]
Copper	987 J [82.7 J]
Cyanide (total)	0.37 [0.52]
Iron	70,000 J [52,300 J]
Lead	18.8 J [51.5 J]
Manganese	*4,600 J [1,530 J]*
Nickel	557 J [44.7 J]
Silver	0.447 [ND]
Vanadium	52.7 J [7.4 J]
Zinc	66 J [1,370 J]

SBTT5

Date	01/23/96
Depth (ft bgs)	3 – 5
Aluminum	3,950
Barium	78.4
Chromium	143
Cobalt	6.17
Copper	93.8
Cyanide (total)	0.93
Iron	68,800
Lead	202
Manganese	*1,290*
Nickel	33.5
Zinc	1,120

SBMW22

Date	12/12/95
Depth (ft bgs)	16 – 18
Aluminum	8,220
Antimony	150
Arsenic	20
Barium	5,720
Cadmium	3.51
Chromium	207
Cobalt	29.2
Copper	1,110
Cyanide (total)	3.1
Iron	120,000
Lead	1,350*
Manganese	*3,900*
Mercury	1.56
Nickel	351
Selenium	1.94
Silver	2.37
Vanadium	37.1
Zinc	4,040

SBDW22

Date	12/19/95
Depth (ft bgs)	32 – 34
Aluminum	2,000
Chromium	7.99
Cobalt	4.62
Iron	7,500
Magnesium	15,100
Manganese	216

BW1–10

Date	01/11/02	01/11/02	01/11/02	01/11/02	01/11/02
Depth (ft bgs)	1.3 – 2	2 – 4	4 – 6	8 – 10	12 – 14
Arsenic	3.24	4.64	3.87	5.71	8.65
Barium	6.49 J	6.33 J	8.39 J	61.4 J	175 J
Cadmium	0.129 J	0.164 J	0.217 J	0.933 J	2.03 J
Chromium	5.23	5.72	5.79	52.8	107
Cobalt	1.95	2.89	3.38	10.8	9.13
Copper	20	6.85	12.3	98.7	315
Cyanide (total)	ND	0.256 J	ND	0.913	1.97
Lead	3.67	3.52	5.06	46.3	104
Manganese	145	177	235	498	721
Mercury	ND	ND	0.0154 J	0.146	0.29
Nickel	5.12	7.03	8.59	35.6	90.8
Selenium	ND	ND	ND	1.26 J	1.07 J
Silver	ND	ND	ND	0.275 J	0.748
Zinc	21.3	28.9	36.9	186	647

BW10–03

Date	07/30/01	07/30/01	07/30/01
Depth (ft bgs)	0 – 2	8 – 10	12 – 14
Barium	84.9	28.7	41
Chromium	37.1	9.37	14.1
Cobalt	4.65	4.6	6.93
Copper	45.1	11.4	16.5
Lead	50.2	8.59	26.3
Manganese	659	300	308
Mercury	0.091	0.0134 J	0.0185 J
Nickel	23.5	12.6	19
Selenium	0.433 J	ND	ND
Zinc	64.1	31.1	42.4

BW10–02

Date	07/30/01	07/30/01	07/30/01
Depth (ft bgs)	0 – 2	8 – 10	12 – 14
Chromium	124	22	18 [16.4]
Cobalt	2.62	2.09	1.35 [1.39]
Copper	45.2	16.3	12.9 [12.7]
Lead	27.8	8.72	26.5 [41.8]
Manganese	1,330	534	776 [652]
Nickel	21.1	18.2	8.53 [10.9]
Selenium	0.732	0.401 J	ND [ND]

BW10–01

Date	07/30/01	07/30/01	07/30/01
Depth (ft bgs)	0 – 2	8 – 10	12 – 14
Arsenic	2.82	3.75	8.05
Barium	86.2	15.8	19.2
Chromium	32.9	44.1	94.4
Cobalt	2.19	3.41	5.66
Copper	21.6	48.8	112
Lead	18.3	22.2	28.9
Manganese	*1,720*	402	864
Nickel	14.6	33.9	77.5
Selenium	0.382 J	0.729	0.499 J

SBMW17

Date	12/20/95	12/14/95
Depth (ft bgs)	6 – 8	10 – 12
Aluminum	1,600	625
Barium	16.4	156
Chromium	30.5	1.69
Copper	55.8	2.79
Cyanide (total)	0.62	ND
Iron	16,300	2,060
Magnesium	814	9,630
Manganese	248	425
Nickel	33.8	3.06

GWD8

Date	06/13/01	06/13/01
Depth (ft bgs)	0.8 – 2	4 – 6
Barium	10.2	94.6
Chromium	15.8	50.4
Cobalt	3.76	2.47
Copper	15.1	38.5
Manganese	305	1,350
Nickel	14.4	26.7

SBDW20

Date	12/19/95
Depth (ft bgs)	40 – 42
Aluminum	1,210 [1,200]
Iron	2,950 [2,820]
Manganese	93.5 [95.1]

SBMW20

Date	12/20/95
Depth (ft bgs)	23 – 25
Aluminum	1,850 [2,250]
Barium	187 [267]
Chromium	17.2 [14.2]
Copper	143 [126]
Cyanide (total)	1.9 [3.5]
Iron	10,600 [8,430]
Lead	112 [89.8]
Manganese	252 [170]
Mercury	0.647 [1.39]
Nickel	60.5 [47.8]
Zinc	68.4 [73.2]

SBDW18

Date	12/20/95
Depth (ft bgs)	34 – 36
Aluminum	1,700 [1,340]
Chromium	3.81 [4.83]
Cyanide (total)	1.9 [ND]
Iron	3,620 [3,020]
Magnesium	10,100 [9,220]
Manganese	124 [110]

SBMW18

Date	12/14/95
Depth (ft bgs)	16 – 18
Aluminum	2,670
Chromium	21.4
Iron	9,980
Lead	113
Manganese	227
Nickel	33.2

SBMW19

Date	12/18/95
Depth (ft bgs)	25 – 27
Aluminum	1,660
Chromium	4.38
Iron	4,050
Lead	70.2
Manganese	32.4

SBDW19

Date	12/15/95
Depth (ft bgs)	36 – 38
Aluminum	1,790
Arsenic	8.3
Chromium	3.55
Iron	10,800
Magnesium	10,700
Manganese	340

BW1–05

Date	01/09/02	01/09/02	01/09/02
Depth (ft bgs)	0 – 2	8 – 10	25 – 27
Chromium	*272*	13.7	144
Manganese	*1,900*	334	877

SBTT4

Date	01/23/96
Depth (ft bgs)	3 – 10
Aluminum	2,750
Antimony	5.44
Arsenic	9.46
Chromium	*340*
Cobalt	14
Copper	350
Cyanide (total)	0.38
Iron	14,200
Lead	48.3
Manganese	*1,690*
Nickel	145
Zinc	69.9

SSTT4

Date	01/22/96
Depth (ft bgs)	0 – 0.5
Aluminum	438
Antimony	22.5
Arsenic	44.3*
Chromium	*1,660*
Cobalt	64.4
Copper	1,590
Iron	64,800
Manganese	*4,490*
Nickel	601
Silver	0.382
Vanadium	46.4
Zinc	99.8

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

red exceeds state default

underlined exceeds site specific background

switch these 2 descriptions on all figures

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING/SOIL SAMPLE LOCATION
- SURVEYED CONCRETE AND/OR SOIL SAMPLE LOCATION
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
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- **2.3** — EXCEEDS MDEQ 2013 SOIL INDOOR AIR INHALATION C

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0 125' 250'
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USPS PROPERTY
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ARCADIS Design & Consultancy for natural and built assets

FIGURE
1E

BCC-51		
Date	06/03/04	06/03/04
Depth (bgs)	0.7 – 2	6 – 8
Arsenic	8.15 J	4.92 J
Barium	359 J	9.15 J
Cadmium	2.51 J	0.291 J
Chromium	131 J	4.65 J
Cobalt	12.1 J	2.62 J
Copper	161 J	8.79 J
Lead	88.7 J	5.11 J
Manganese	4,510 J	200 J
Mercury	0.188	ND
Nickel	157 J	7.39 J
Silver	0.313 J	ND
Zinc	155 J	41.6 J

SW9-09	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	6.96
Barium	118
Cadmium	2.14
Chromium	68.9
Cobalt	6.6
Copper	48
Lead	67.7
Manganese	1,140
Mercury	0.103
Nickel	21.2
Zinc	315 J

BCC-51-2			
Date	08/06/04	08/06/04	08/06/04
Depth (bgs)	0 – 2	7 – 8	8 – 10
Manganese	684	210	122

BCC-51-3		
Date	08/06/04	08/06/04
Depth (bgs)	0 – 2	5 – 6
Manganese	244	378

BW9-32		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	7.7	6.1
Barium	47.3	77.5
Cadmium	0.79	2.9
Chromium	18.3	51.2
Cobalt	5.3	5.5
Copper	19.9 J	56.0 J
Lead	20.9 J	88.9 J
Manganese	397	506
Mercury	0.058	0.081
Nickel	14.3	22.4
Zinc	92.2	414

SW9-12	
Date	01/03/02
Depth (bgs)	0 – 2
Chromium	229 [160]
Manganese	1,600 J [1,400 J]

BW9-02		
Date	07/17/01	07/17/01
Depth (bgs)	0.9 – 2	8 – 10
Arsenic	8.14	4.15
Cadmium	2.49	0.301 J
Chromium	82	5.55
Cobalt	3.88	3.91
Copper	126	13
Lead	322	5.23
Manganese	1,840	265
Nickel	28.8	8.62
Silver	0.588	ND
Zinc	676	45.7

BW9-01		
Date	07/16/01	07/16/01
Depth (bgs)	0 – 2	8 – 10
Arsenic	8.89	9.09
Cadmium	5.74	4.21 J
Chromium	138	213
Cobalt	5.93	7.38
Copper	142	247
Cyanide (total)	0.26 J	0.612 J
Lead	2.59	2.30
Manganese	1,290	1,540
Mercury	0.143	0.183
Nickel	36.7	68.3
Selenium	0.497 J	ND
Silver	0.427 J	0.426 J
Zinc	1,290	1,880

SW9-03	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	6.09 [5.45]
Chromium	18.7 [15.4]
Cobalt	5.47 [5.37]
Lead	41.6 [45.1]
Manganese	339 [299]
Zinc	95.9 [88.4]

BCC-61		
Date	06/01/04	06/01/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	4.9 J	4.67 J
Chromium	11.2 J	10.4 J
Cobalt	5.32	4.72
Manganese	271	236

BCC-62		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	6.84 J	6.18 J
Barium	94.1 J	36.9 J
Chromium	24.8 J	10.8 J
Cobalt	5.33 J	5.12 J
Lead	68.7 J	14.1 J
Manganese	364 J	285 J
Mercury	0.0695	0.0442
Zinc	234 J	46.1 J

BCC-51-4			
Date	08/06/04	08/06/04	08/06/04
Depth (bgs)	0 – 2	7.8 – 8	8 – 10
Manganese	683	251	190

BCC-51-1			
Date	08/06/04	08/06/04	08/06/04
Depth (bgs)	0 – 2	7.33 – 8	8 – 10
Manganese	362	155	308

SW9-11	
Date	01/03/02
Depth (bgs)	0 – 2
Arsenic	8.13 J
Chromium	108
Manganese	1,530 J

BCC-58-3			
Date	07/29/04	07/29/04	07/29/04
Depth (bgs)	0.75 – 2.75	6 – 8	10 – 12
Barium	15.2	188	9.61
Chromium	18.5 J	30 J	4.77 J
Cobalt	1.76	3.15	2.99
Lead	10.8 J	188 J	3.96 J
Manganese	265	630	253
Mercury	0.009 J	0.0503	0.0085 J

BCC-58-2			
Date	07/29/04	07/29/04	07/29/04
Depth (bgs)	0.5 – 2.5	6 – 8	10 – 12
Chromium	4.01 J	5.85 J	5.68 J
Cobalt	1.95	2.67	3.4
Manganese	125	158	252

BCC-58-8	
Date	02/08/06
Depth (bgs)	0 – 2
Manganese	440 J

BW9-11			
Date	07/31/03	07/31/03	07/31/03
Depth (bgs)	2 – 4	5 – 7	7 – 9
Arsenic	2.81	6.28	3.46
Barium	31.7 J	96.7 J	57.5 J
Chromium	26	161	16.4
Cobalt	2.73	4.64	4.1
Copper	18.9 J	74.8 J	24.3 J
Lead	69 J	84.6 J	34.1 J
Manganese	630 J	1,690 J	403 J
Mercury	0.18	0.0367	0.0261 J
Nickel	12.5	29.5	14.4
Zinc	30.3	122	34.8

BCC-58			
Date	06/03/04	06/03/04	07/29/04
Depth (bgs)	0.6 – 2	6 – 8	10 – 12
Antimony	0.355 J	4.62 J	0.164 J
Arsenic	5.91 J	9.58 J	2.47 J
Barium	24.8 J	86.1 J	21.5
Chromium	22.4 J	51.8 J	8.3 J
Cobalt	4.2 J	3.63 J	4.61
Copper	35.3 J	17.8 J	6.05 J
Lead	32.9 J	394 J	5.1 J
Manganese	405 J	2,210 J	252
Mercury	0.0083 J	0.0898	0.0143 J
Zinc	47.3 J	26.7 J	22.6

SW9-10	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	9.43
Barium	105
Cadmium	3.47
Chromium	195
Cobalt	7.38
Copper	160
Lead	139
Manganese	1,470
Mercury	0.115
Nickel	50.3
Zinc	758 J

MWW9-01			
Date	07/28/03	07/28/03	07/28/03
Depth (bgs)	1 – 2	8 – 10	24.5 – 26.5
Antimony	1.12 J	0.249 J	6.2 J
Arsenic	6.43	1.45	2.64
Barium	96.5 J	16.4 J	15.1 J
Cadmium	1.22	0.0244 J	ND
Chromium	33.1 J	7.29 J	15 J
Cobalt	5.15	1.34	2.36
Copper	45.3	7.36	14.4
Lead	89.5	65.2	308
Manganese	504 J	141 J	137 J
Mercury	0.0652	ND	0.0422
Nickel	40.9	7.65	12.9
Zinc	136	14.3	14.4

BCC-58-1			
Date	07/29/04	07/29/04	07/29/04
Depth (bgs)	0.75 – 2.75	6 – 8	10 – 12
Arsenic	3.49 J	4.11 J	7.27 J
Chromium	18.9 J	21.4 J	18.1 J
Cobalt	3.35	7.1	6.18
Copper	36.3 J	23.5 J	22.3 J
Lead	13.6 J	36.6 J	9.54 J
Manganese	454	675	152
Mercury	0.056	0.0542	0.0351 J
Nickel	12.4	21.6	15.5
Zinc	31.8	77.2	46.7

BCC-58-5			
Date	08/10/04	08/10/04	08/10/04
Depth (bgs)	0.6 – 2.6	6.5 – 8	8 – 10
Manganese	99.9	2,340	107

BCC-58-4			
Date	07/29/04	07/29/04	07/29/04
Depth (bgs)	0.7 – 2.7	6 – 8	10 – 12
Arsenic	5.48 J	3.51 J	3.71 J
Barium	87.2	56.9	21.9
Chromium	73.6 J	40.3 J	11.1 J
Cobalt	4.47	2.86	6.46
Copper	73.2 J	39.5 J	9.36 J
Lead	97.2 J	191 J	11.1 J
Manganese	2,440	1,360	257
Mercury	0.0594	0.0332 J	0.026 J
Nickel	33.3	17.3	8.95
Silver	ND	0.149 J	ND
Zinc	95.4	57.7	29.1

BCC-58-7		
Date	08/10/04	08/10/04
Depth (bgs)	0.7 – 2.7	2.7 – 4
Manganese	472	10,700

BCC-58-6			
Date	08/10/04	08/10/04	08/10/04
Depth (bgs)	0 – 2	7 – 8	8 – 10
Manganese	1,260	964	81.8

BCC-59		
Date	06/02/04	06/02/04
Depth (bgs)	1.3 – 2.3	6 – 8
Chromium	14.2 J	4.25 J
Cobalt	22.5	2.17
Copper	32.2 J	6.38 J
Lead	206	2.77
Manganese	258	142
Nickel	22.8 J	4.41 J

SW9-01	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	10.1
Cadmium	2.11 J
Chromium	249
Cobalt	7.35
Copper	154
Lead	175
Manganese	1,360
Mercury	0.0973
Nickel	51.2
Silver	0.653
Zinc	942

SW9-02	
Date	06/27/01
Depth (bgs)	0 – 2
Antimony	6.26 J
Arsenic	19.2
Barium	126
Cadmium	5.86
Chromium	523
Cobalt	14.1
Copper	460
Lead	429
Manganese	2,650
Mercury	0.328
Nickel	154
Selenium	1.71 J
Silver	0.566
Zinc	2,340

BCC-60		
Date	06/01/04	06/01/04
Depth (bgs)	1.8 – 2.8	6 – 8
Chromium	45.5 J	3.22 J
Cobalt	4.64	1.86
Manganese	525	99.5
Selenium	0.44 J	ND

BCC-60-1			
Date	07/23/04	07/26/04	07/23/04
Depth (bgs)	0.66 – 2.66	2 – 4	8 – 9
Arsenic	6.81 J	2.93	6.04 J
Chromium	17.3 J	8.06	9.43 J
Cobalt	7.49	3.91	6.48 J
Manganese	354	231	376 J
Nickel	21.3 J	9.47	15.1 J

BCC-60-2			
Date	07/23/04	07/23/04	07/23/04
Depth (bgs)	1.25 – 3.25	6 – 8	8 – 9
Arsenic	2.18 J	9.88 J	10.6 J
Chromium	14 J	10.6 J	7.28 J
Cobalt	7.79	8.78	4.73
Manganese	352	343	487

SW9-04	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	6.29
Chromium	13.2
Cobalt	6.38
Copper	34.2
Lead	29.4
Manganese	292
Zinc	97.7

LEGEND:

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- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
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- * — EXCEEDS MDEQ 2013 NONRESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA
- EXCEEDS MDEQ 2013 SOIL SATURATION CONCENTRATION SCREENING LEVEL
- 1,520 — EXCEEDS MDEQ 2013 NONRESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- 2.3 — EXCEEDS MDEQ 2013 SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA

NOTES:

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3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
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   - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
INORGANICS EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1F

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BD-6					
Date	09/25/01	09/25/01	09/26/01	09/26/01	09/27/01
Depth (ft bgs)	0.3 – 2	8 – 10	76 – 78	98 – 100	134 – 136
Arsenic	2.86	1.79	4.76	1.5	3.44
Chromium	8.78	7.07	9.13	3.04	6.63
Cobalt	2.07	1.44	3.66	1.32	3.09
Manganese	162	111	210	114	230

SBDW21	
Date	12/19/95
Depth (ft bgs)	18 – 20
Aluminum	4,360
Arsenic	5.02
Chromium	8.01
Cobalt	5.86
Iron	8,670
Magnesium	13,600
Manganese	192

SBSB1	
Date	12/12/95
Depth (ft bgs)	16 – 18
Aluminum	1,660
Chromium	3.85
Iron	3,360
Manganese	87.6

SBSB3	
Date	12/14/95
Depth (ft bgs)	16 – 18
Aluminum	2,070
Chromium	3.8
Iron	4,400
Magnesium	13,200
Manganese	117

SBSB4	
Date	12/15/95
Depth (ft bgs)	6 – 8
Aluminum	6,580
Chromium	10.3
Cobalt	3.07
Iron	14,200
Manganese	563

SBSB5	
Date	12/12/95
Depth (ft bgs)	4 – 6
Aluminum	3,910
Antimony	1,740*
Arsenic	35.7
Barium	1,200
Cadmium	5.18
Chromium	1,020
Cobalt	34.6
Copper	729
Cyanide (total)	4.1
Iron	376,000
Lead	573
Manganese	3,510
Mercury	2.23
Nickel	354
Selenium	7.67
Vanadium	61.4
Zinc	932

SBWD1	
Date	12/18/95
Depth (ft bgs)	14 – 16
Aluminum	3,600
Chromium	20.3 J
Iron	6,280
Manganese	936

SBWD2	
Date	12/18/95
Depth (ft bgs)	24 – 26
Aluminum	2,880
Chromium	13.8
Iron	7,430
Lead	1,300*
Manganese	223

SBWD3	
Date	12/18/95
Depth (ft bgs)	24 – 26
Aluminum	2,600
Chromium	10
Cyanide (total)	0.51
Iron	7,830
Lead	94.1
Manganese	120
Nickel	21.6

TP-W1-03	
Date	09/06/01
Depth (ft bgs)	10
Arsenic	5.75
Chromium	19.2
Cobalt	6.03
Cyanide (total)	1.65
Manganese	511

TP-W1-01	
Date	09/06/01
Depth (ft bgs)	7
Arsenic	5.47
Chromium	39.2
Cobalt	3.55 J
Copper	74.1
Cyanide (total)	0.362 J
Lead	135 J
Manganese	818 J
Mercury	0.0848
Nickel	24.5 J
Zinc	585 J

TP-W1-02	
Date	09/06/01
Depth (ft bgs)	9
Chromium	37.4
Cobalt	5.17
Cyanide (total)	1.75
Manganese	2,080
Thallium	2.59

BW9-25		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	5.0	5.6
Chromium	11.0	12.9
Cobalt	5.0	5.8
Manganese	299	290

BW9-24		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	6.3	8.4
Barium	41.5	126
Cadmium	0.32 J	3.6
Chromium	11.4	94.5
Cobalt	5.4	7.3
Copper	16.0 J	99.0 J
Lead	26.8 J	135 J
Manganese	359	542
Mercury	0.035 J	1.9
Nickel	13.1	58.8
Zinc	50.2	518

BW9-26		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	4.4	5.6
Chromium	10.8	11.3
Cobalt	3.4	5.5
Manganese	204	300
Mercury	0.058	0.035 J
Nickel	8.9	24.2
Zinc	33.0	113

BW9-04		
Date	07/22/03	07/22/03
Depth (bgs)	0.3 – 2	4.5 – 6.5
Arsenic	4.54	5.62
Chromium	17.8 J	12.1 J
Cobalt	5.89	5.94
Lead	68.7 J	6.68 J
Manganese	351 J	331 J
Nickel	26.2	15.4

SW9-13		
Date	01/03/02	
Depth (bgs)	0 – 2	
Manganese	307 J	

SW9-06		
Date	06/27/01	
Depth (bgs)	0 – 2	
Arsenic	7.67	
Barium	131	
Cadmium	1.33	
Chromium	63.1	
Cobalt	8.51	
Copper	53.8	
Lead	232	
Manganese	402	
Mercury	0.155	
Nickel	30	
Silver	0.229 J	
Zinc	437	

BCC-74-4		
Date	08/11/04	
Depth (ft bgs)	0 – 2	
Arsenic	6.26	

BCC-74		
Date	06/03/04	06/03/04
Depth (ft bgs)	0 – 2	5 – 7
Arsenic	91.9 J *	6.81 J
Chromium	10.5 J	16.7 J
Cobalt	4.35 J	6.73 J
Lead	38 J	7.9 J
Manganese	177 J	212 J
Mercury	0.182	0.0347 J

BCC-73		
Date	06/03/04	06/03/04
Depth (ft bgs)	0 – 2	5 – 7
Arsenic	4.13 J [5.3 J]	7.39 J
Barium	48.3 J [40.9 J]	81.3 J
Chromium	10.9 J [11.8 J]	16.8 J
Cobalt	5.44 J [6.89 J]	10.6 J
Manganese	186 J [270 J]	519 J
Selenium	ND [0.537 J]	ND

BCC-74-1		
Date	08/11/04	08/11/04
Depth (ft bgs)	0 – 2	6 – 8
Arsenic	14.3	4.77

BCC-75		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	5 – 7
Arsenic	3.43 J	6.69 J
Chromium	12.4 J	14.5 J
Cobalt	2.54 J	10.3 J
Manganese	329 J	639 J

SW9-05	
Date	06/27/01
Depth (bgs)	0 – 2
Arsenic	5.13
Chromium	10.4
Cobalt	5
Manganese	281

BCC-55		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	4.79 J	4.29 J
Chromium	11.4 J	11.5 J
Cobalt	4.56 J	4.64 J
Manganese	253 J	266 J
Zinc	53.9 J	39.5 J

BW9-27		
Date	04/18/05	04/18/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	6.4	4.2
Chromium	16.2	12.6
Cobalt	5.6	4.6
Copper	35.1 J	11.7 J
Manganese	285	440
Mercury	0.038	0.083
Zinc	57.3	45.4

BCC-52		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	4.97 J	4.63 J
Chromium	10.7 J	9.16 J
Cobalt	5.37 J	4.78 J
Manganese	360 J	236 J
Zinc	49.6 J	52.7 J

BW9-29		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	5.3	6.5
Chromium	10.5	12.8
Cobalt	5.2	6.8
Manganese	465	345
Zinc	33.7	56.8

BW9-30		
Date	04/18/05	04/18/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	9.5	3.1
Chromium	12.9	4.7
Cobalt	7.3	2.8
Manganese	407	208
Zinc	67.2	28.5

BW9-05			
Date	07/22/03	07/22/03	07/22/03
Depth (bgs)	1.5 – 2.5	8 – 10	10 – 12
Arsenic	4.87	3.05	3.59
Chromium	10.5 J	4.38 J	4.52 J
Cobalt	4.33	2.55	5.46
Manganese	261 J	179 J	409 J

BW9-28		
Date	04/18/05	04/18/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	5.1	5.6
Chromium	10.5	12.9
Cobalt	4.8	4.6
Lead	17.0 J	29.9 J
Manganese	345	315
Mercury	ND	0.092
Zinc	50.6	74.1

BCC-53		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	4.82 J	13.3 J
Barium	24.5 J	90 J
Cadmium	0.557 J	5.86 J
Chromium	11.1 J	136 J
Cobalt	4.12 J	8.88 J
Copper	15.5 J	180 J
Lead	18.6 J	221 J
Manganese	232 J	1,820 J
Mercury	0.0143 J	1.42
Nickel	11.5 J	60.2 J
Silver	ND	0.898
Zinc	92 J	4,870 J

BW9-31		
Date	04/18/05	04/18/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	4.7	4.1
Chromium	14.4	5.2
Cobalt	7.3	3.2
Manganese	367	263

BW9-06		
Date	07/22/03	07/22/03
Depth (bgs)	0.3 – 2	6 – 8
Chromium	6.13 J	4.81 J
Cobalt	3.48	2.84
Manganese	263 J	227 J

BCC-54		
Date	06/03/04	06/03/04
Depth (bgs)	0 – 2	6 – 8
Arsenic	5.49 J [3.58 J]	4.93 J
Chromium	11.5 J [13.7 J]	10.2 J
Cobalt	5.79 J [5.41 J]	3.83 J
Copper	32.7 J [23.5 J]	22 J
Lead	22.4 J [16.4 J]	29.9 J
Manganese	267 J [232 J]	287 J
Mercury	0.214 [0.0537]	0.0314 J
Zinc	73.4 J [49.6 J]	59.7 J

EXACT LOCATIONS WITHIN THE USPS PROPERTY COULD NOT BE VERIFIED

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

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0 125' 250'
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USPS PROPERTY
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FIGURE
1G

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Read) LYR:(Opt)ON=*;OFF=*REF*
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BW8–02		
Date:	09/05/01	09/05/01
Depth (ft bgs):	0 – 2	8 – 10
Chromium	12.1	15.7
Cobalt	5.09	3.21
Lead	15.4	24
Manganese	315	353

INJ–01–17		
Date	10/17/17	10/17/17
Depth (ft bgs)	16 – 17	20 – 21
Chromium	8.44	3.23
Cobalt	7.82	1.79
Manganese	361	563
Selenium	0.91	ND

MWW8–03			
Date:	09/04/01	09/04/01	09/04/01
Depth (ft bgs):	2 – 4	8 – 10	24 – 26
Arsenic	3.89	2.84	6.07
Chromium	7.19	5.2	10.1
Cobalt	3.01	2.56	5.99
Manganese	174	174	258
Selenium	ND	ND	0.556 J

MWW8–12		
Date:	02/06/02	02/06/02
Depth (ft bgs):	1 – 3	8 – 10
Arsenic	5.12	5.08 [4.8]
Chromium	10.5	15.2 J [9.72]
Cobalt	5.12	7.68 J [5.83]
Manganese	229	183 J [261]

MWW8–04			
Date:	09/04/01	09/04/01	09/04/01
Depth (ft bgs):	2 – 4	8 – 10	10 – 12
Chromium	12.1	9.27	12.5
Cobalt	5.97	3.99 J	5.81
Manganese	558	242	307

MWW8–11		
Date:	02/04/02	02/04/02
Depth (ft bgs):	0.8 – 2	8 – 10
Arsenic	4.68	4.79
Barium	169 J	17.5 J
Chromium	8.1	9.95
Cobalt	2.85	5.1
Manganese	353	179

BW8–108		
Date:	08/02/05	08/02/05
Depth (ft bgs):	0 – 2	8 – 10
Chromium	12.5	10.6
Cobalt	5.0 J	5.2 J
Manganese	239 J	239 J
Mercury	0.13	0.019 J

BW8–118			
Date:	08/25/05	08/25/05	08/25/05
Depth (ft bgs):	0 – 2	8 – 10	12 – 14
Arsenic	4.4	5.8	6.3
Chromium	12.2	13.0	8.9
Cobalt	4.3	6.4	4.8
Manganese	344	307	234

BW8–05		
Date:	07/22/03	07/22/03
Depth (ft bgs):	0.7 – 2	7 – 9
Chromium	12	10.9 [9.48]
Cobalt	6.65	4.39 [3.71]
Manganese	276 J	187 J [186 J]

BW8–01			
Date:	09/05/01	09/05/01	09/06/01
Depth (ft bgs):	2 – 4	8 – 10	10 – 12
Arsenic	5.45	7.7	8.43
Cobalt	2.47	1.73	4.79
Manganese	127	114	273

BW8–04		
Date:	07/22/03	07/22/03
Depth (ft bgs):	0 – 2	5 – 7
Arsenic	7.48	5.67 E
Barium	30.9 J	79.2 J
Chromium	10.1	40.7 E
Cobalt	4.36	5.12 E
Lead	9.62	81.6 E
Manganese	397 J	744 E
Vanadium	13.2	35.8
Zinc	35.8	98.6

BCC–20	
Date:	08/10/04
Depth (ft bgs):	2 – 4
Barium	124 J
Chromium	30.6
Cobalt	5.57
Copper	34.5
Lead	22.5
Manganese	640
Mercury	0.0764 J
Nickel	21.3
Zinc	57.5

MWW8–13			
Date:	05/29/03	05/29/03	05/29/03
Depth (ft bgs):	0.7 – 2	8 – 10	15 – 17
Arsenic	3.42	4.82	5.11
Chromium	21.5 J	16.3 J	16.5 J
Cobalt	2.9	7.88	6.71
Lead	21.9	7.91	7.67
Manganese	507 J	652 J	535 J

MWW8–05		
Date:	08/20/01	08/20/01
Depth (ft bgs):	0 – 2	8 – 10
Arsenic	26.9	6.02
Barium	124	19.7
Chromium	112	8.44
Cobalt	6.93	3.96
Copper	91.3	11.3
Lead	94.6	5.76
Manganese	1,290	251
Mercury	0.531	0.0311 J
Nickel	41.8	9.95 J
Selenium	0.627 J	ND
Zinc	146	31.1

SSTT1	
Date	01/22/96
Depth (ft bgs)	0 – 0.5
Aluminum	3,450
Arsenic	7.77 J
Cadmium	2.11
Chromium	81.9
Cobalt	6.66
Copper	57.9 J
Cyanide (total)	0.59
Iron	69,000
Lead	151
Manganese	2,080
Nickel	25 J
Silver	0.357
Zinc	3,640

SBTT1	
Date	01/22/96
Depth (ft bgs)	10 – 15
Aluminum	2,740
Chromium	12.4 J
Cyanide (total)	0.48
Iron	6,660
Manganese	894

BW9–03			
Date	07/28/03		07/28/03	07/28/03
Depth (bgs)	0.7 – 2		3 – 5	8 – 10
Arsenic	5.75 [7.39]		1.01	4.9
Barium	116 J [193 J]		10.8 J	54 J
Chromium	86.6 J [164 J]		5.08 J	17.5 J
Cobalt	4.36 [4.69]		0.776 J	7.26
Copper	63.1 [111]		2.31	16.7
Lead	67.2 [113]		5.58	7.68
Manganese	1,680 J		232 J	256 J
Mercury	0.0505 [0.0397]		ND	ND
Nickel	22.5 [26.4]		2.08 J	20.6
Zinc	131 [194]		5.19	41.4

SW9–08	
Date	06/27/01
Depth (bgs)	0 – 2
Chromium	10.1
Cobalt	5.09
Manganese	264

BW9–12			
Date	07/30/03	07/30/03	07/30/03
Depth (bgs)	0.5 – 2	8 – 10	20 – 22
Chromium	4.12 J	14.9	27.5
Cobalt	2.44	1.39	2.44
Lead	3.16 J	23.5 J	88 J
Manganese	154 J	147 J	781 J
Mercury	ND	0.0376	0.207
Nickel	5.88 J	16.6	31.8

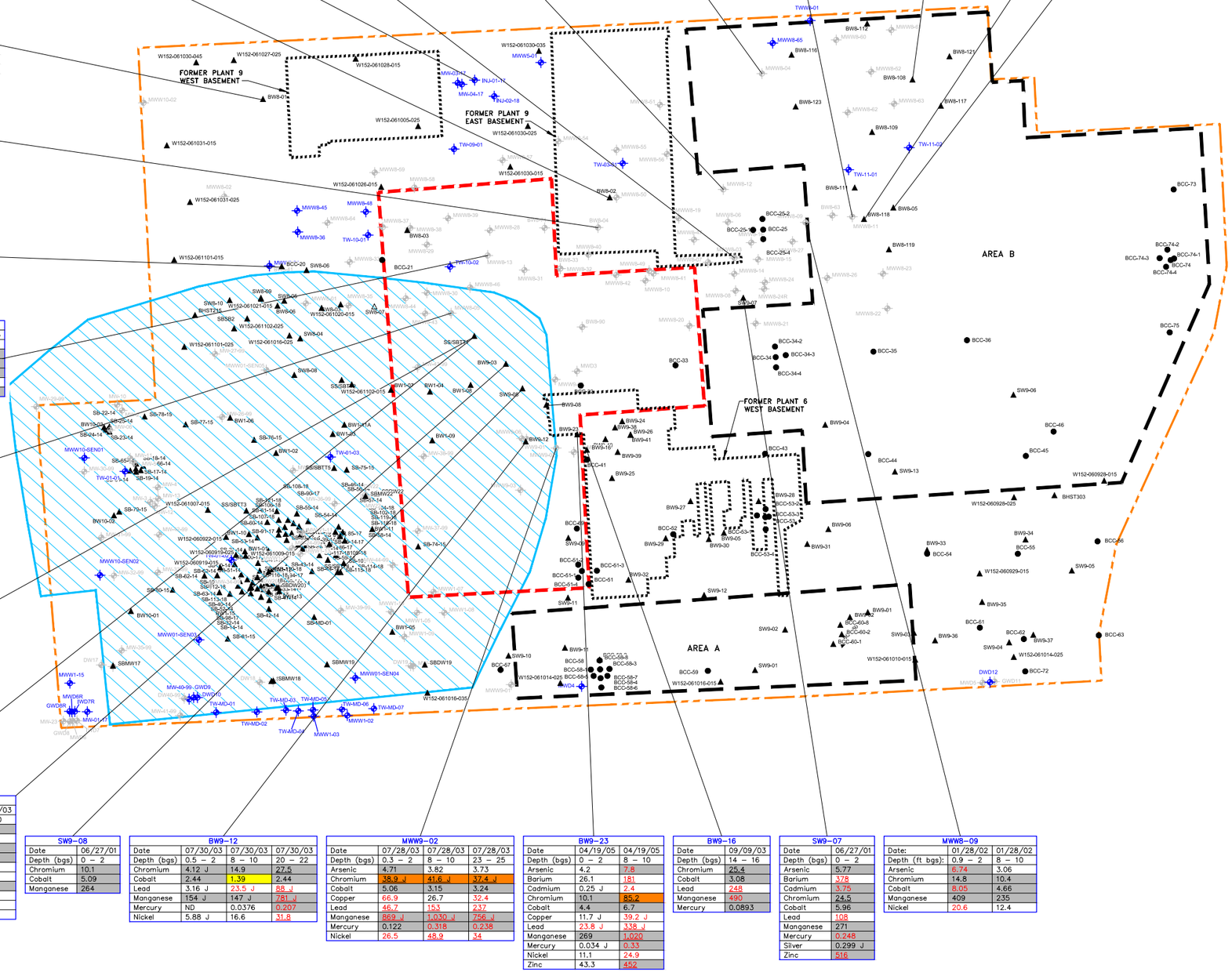
MWW9–02			
Date	07/28/03	07/28/03	07/28/03
Depth (bgs)	0.3 – 2	8 – 10	23 – 25
Arsenic	4.71	3.82	3.73
Chromium	38.9 J	41.6 J	37.4 J
Cobalt	5.06	3.15	3.24
Copper	66.9	26.7	32.4
Lead	46.7	153	237
Manganese	869 J	1,030 J	756 J
Mercury	0.122	0.318	0.238
Nickel	26.5	48.9	34

BW9–23		
Date	04/19/05	04/19/05
Depth (bgs)	0 – 2	8 – 10
Arsenic	4.2	7.8
Barium	26.1	181
Cadmium	0.25 J	2.4
Chromium	10.1	85.2
Cobalt	4.4	6.7
Copper	11.7 J	39.2 J
Lead	23.8 J	338 J
Manganese	269	1,020
Mercury	0.034 J	0.33
Nickel	11.1	24.9
Zinc	43.3	452

BW8–16		
Date	09/09/03	
Depth (bgs)	14 – 16	
Chromium	25.4	
Cobalt	3.08	
Lead	248	
Manganese	490	
Mercury	0.0893	

SW9–07		
Date	06/27/01	
Depth (bgs)	0 – 2	
Arsenic	5.77	
Barium	378	
Cadmium	3.75	
Chromium	24.5	
Cobalt	5.96	
Lead	108	
Manganese	271	
Mercury	0.248	
Silver	0.299 J	
Zinc	516	

MWW8–09		
Date:	01/28/02	01/28/02
Depth (ft bgs):	0.9 – 2	8 – 10
Arsenic	6.74	3.06
Chromium	14.8	10.4
Cobalt	8.05	4.66
Manganese	409	235
Nickel	20.6	12.4


FORMER PLANT 9 WEST BASEMENT
FORMER PLANT 9 EAST BASEMENT
FORMER PLANT 6 WEST BASEMENT
AREA A
AREA B
TWW8-01
MWW8-65
BW8-116
BW8-123
BW8-108
BW8-121
BW8-117
BW8-109
TW-11-01
TW-11-02
BW8-111
BW8-118
BW8-05
BW8-119
BW8-123
BCC-73
BCC-74-2
BCC-74-3
BCC-74-1
BCC-74
BCC-74-4
BCC-75
BCC-25-2
BCC-25
BCC-25-4
BCC-25-3
BCC-34-2
BCC-34
BCC-34-3
BCC-34-4
BCC-33
BCC-35
BCC-36
BCC-43
BCC-44
BCC-45
BCC-46
SW9-13
SW9-06
W152-060928-015
W152-060928-025
BHST303
BW9-04
BW9-24
BW9-38
BW9-26
BW9-41
BW9-39
BW9-16
BW9-25
BW9-12
BW9-23
BW9-28
BCC-53-2
BCC-53-3
BCC-53-4
BCC-42
BCC-41
BW9-27
BW9-29
BW9-30
BW9-05
BW9-31
BW9-06
BW9-33
BW9-34
BW9-55
BCC-54
BCC-56
BW9-05
W152-060929-015
BW9-35
BCC-61
BCC-62
BW9-37
BW9-36
BW9-04
BCC-63
W152-061010-015
W152-061014-025
DWD12
BCC-72
BW9-01
BW9-02
SW9-02
SW9-01
BCC-59
W152-061016-015
BW9-10
BCC-58
BCC-58-3
BCC-58-2
BCC-58-7
BCC-58-4
BCC-58-6
BCC-57
BW9-11
BCC-61-2
BCC-61-3
BCC-61
BCC-61-4
BW9-32
SW9-11
BW9-12
BW9-03
BW9-08
BW9-09
BW9-90
SW9-10
SW9-03
BW1-03
BW1-04
BW1-05
BW1-A
BW1-06
BW1-09
BW1-02
BW1-01
BW10-01
BW10-02
TW-01-03
TW-01-14
TW-01-04
TW-01-13
TW-01-05
TW-01-12
TW-01-06
TW-01-11
TW-01-07
TW-01-10
TW-01-08
TW-01-09
MWW10-SEN01
MWW10-SEN02
MWW01-SEN03
MWW01-SEN04
MW-40-99-GWD9
MWW1-15
MWW1-01
MWW1-02
MWW1-03
TW-MD-01
TW-MD-02
TW-MD-03
TW-MD-04
TW-MD-05
TW-MD-06
TW-MD-07
GWD8R
GWD7R
GWD9R
GWD10
W152-061030-035
MWW5-01
W152-061030-045
W152-061027-025
W152-061028-015
BW9-01
INJ-01-17
MW-04-17
INJ-02-18
W152-061030-025
W152-061005-025
TW-09-01
TW-03-01
W152-061030-015
W152-061031-015
W152-061031-025
W152-061026-015
MWW8-45
MWW8-48
MWW8-36
TW-10-01
BW8-03
BW8-02
BW8-04
W152-061101-015
MWW8-CC-20
SW8-06
BCC-21
TW-10-02
SW8-09
SW8-10
BHST216
W152-061021-015
BW8-05
SW8-05
W152-061020-015
SW8-07
SBSB2
W152-061102-025
SW8-04
W152-061101-025
W152-061016-025
SW8-08
SS/SBT216
SS/SBT215
SS/SBT15
SS/SBT13
W152-061007-015
W152-060922-015
W152-060919-015
W152-061009-015
MWW10-SEN05
MWW10-SEN06
MWW10-SEN07
MWW10-SEN08
MWW10-SEN09
MWW10-SEN10
MWW10-SEN11
MWW10-SEN12
MWW10-SEN13
MWW10-SEN14
MWW10-SEN15
MWW10-SEN16
MWW10-SEN17
MWW10-SEN18
MWW10-SEN19
MWW10-SEN20
MWW10-SEN21
MWW10-SEN22
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MWW10-SEN28
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MWW10-SEN30
MWW10-SEN31
MWW10-SEN32
MWW10-SEN33
MWW10-SEN34
MWW10-SEN35
MWW10-SEN36
MWW10-SEN37
MWW10-SEN38
MWW10-SEN39
MWW10-SEN40
MWW10-SEN41
MWW10-SEN42
MWW10-SEN43
MWW10-SEN44

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM: (Req) LYR: (Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\IBM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD\18\01-DWG\FIG11-DATABOX.DWG LAYOUT: 11 SAVED: 12/7/2018 12:24 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/7/2018 12:42 PM BY: STOWELL, GARY
XREFS: X-PNC-DL
IMAGES:

SW8–06	
Date:	01/14/02
Depth (ft bgs):	0 – 2
Chromium	32
Manganese	321

MWW10–02		
Date	01/28/02	01/28/02
Depth (ft bgs)	0.6 – 2	8 – 10
Chromium	4.59	4.84
Cobalt	1.95	2.2
Manganese	157	172

MWW8–02				
Date:	08/29/01	08/29/01	08/29/01	08/29/01
Depth (ft bgs):	0.5 – 2	6 – 8	8 – 10	12 – 14
Antimony	7.46 J	ND	ND	ND
Arsenic	36.2	7.49	2.5	5.05
Barium	509	85.9	67	121
Cadmium	ND	ND	0.212 J	5.46
Chromium	*857*	156	156	17.6
Cobalt	40.6	8.34	6.14	7.5
Copper	1,920	20	21.9	205
Lead	587	14.7	10.4	31
Manganese	*2,780*	236	230	337
Mercury	0.699	0.0983	0.0815	0.272
Nickel	1,890	16.6	16.2	28.5
Selenium	8.62	0.622	ND	ND
Silver	0.925 J	ND	ND	ND
Vanadium	29.3	29.2	14.6	19.1
Zinc	879	48.5	40.6	192

MWW8–01			
Date:	08/29/01	08/29/01	08/29/01
Depth (ft bgs):	0.7 – 2	8 – 10	10 – 12
Arsenic	4.99	2.54	2.17
Chromium	14.6	4.17	4.88
Cobalt	3.58 J	2.35	2.06
Manganese	351	221	149
Mercury	0.117	ND	ND
Zinc	47.2 J	21.6	17.8

SW8–09	
Date:	02/04/02
Depth (ft bgs):	0.5 – 2
Manganese	*2,040*

SW8–10	
Date:	02/07/02
Depth (ft bgs):	0.5 – 2
Manganese	1.31 J

SW8–05	
Date:	01/14/02
Depth (ft bgs):	0.5 – 2
Chromium	*4.33 [203]*
Manganese	*1,750 [952]*

SBSB2	
Date	12/14/95
Depth (ft bgs)	4 – 6
Aluminum	10,800
Arsenic	5.39
Chromium	78.2
Cobalt	6.73
Iron	14,800
Lead	30.1
Magnesium	16,500
Manganese	335

BW8–06			
Date:	07/28/03	07/28/03	07/28/03
Depth (ft bgs):	0.5 – 2	2 – 4	6 – 8
Antimony	5.33 J	31.5 J	101 J
Arsenic	25.5	16.1	54 *
Barium	432 J	4,040 J	429 J
Cadmium	ND	38.5	ND
Chromium	*726 J*	*363 J*	123 J
Cobalt	20.2	7.79	64.2
Copper	1,570	4,930	25,800
Lead	179	2,820 *	8,440 *
Manganese	*1,390 J*	*777 J*	*1,600 J*
Mercury	0.269	6.55	0.0223 J
Nickel	424	251	151
Selenium	ND	ND	4.89 J
Silver	ND	0.765	2.61
Vanadium	25.3	25.1	52
Zinc	192	5,820	5,080

BW1–06			
Date	01/11/02	01/11/02	01/11/02
Depth (ft bgs)	1 – 2	2 – 4	4 – 6
Chromium	12	6.52	4.44
Cobalt	3.22	2.43	1.62
Copper	37.8	12.3	16.1
Manganese	216	212	148
Zinc	54.6	25.7	18.8

SW8–04	
Date:	01/14/02
Depth (ft bgs):	0 – 2
Chromium	*264*
Manganese	*2,770*

SW8–08	
Date:	02/04/02
Depth (ft bgs):	0 – 2
Manganese	1,170

BW8–03			
Date:	07/28/03	07/28/03	07/28/03
Depth (ft bgs):	0.5 – 2	3 – 5	8 – 10
Arsenic	7.2	7.08	5.3
Barium	99.5 J	131 J	38.6 J
Chromium	153 J	16.4 J	13.4 J
Cobalt	5.63	4.51	6.8
Copper	92.9	44.9	16.2
Lead	29.8	56.3	6.79
Manganese	*1,660 J*	276 J	349 J
Mercury	0.045	0.201	0.0203 J
Nickel	82	27.5	18.2
Selenium	ND	0.88	ND
Zinc	68.8	63.2	40.9

MWW8–29			
Date:	11/11/04	11/11/04	11/11/04
Depth (ft bgs):	0.6 – 2	8 – 10	11 – 13
Arsenic	2.7	8.0	2.8
Chromium	26.3	18.0	7.4
Cobalt	2.2	8.7	3.6
Manganese	633	429	117
Mercury	0.30	0.026 J	0.033 J
Nickel	15.1	22.8	6.6
Zinc	27.5 J	49.2 J	24.1 J

MWW8–10		
Date:	01/29/02	01/29/02
Depth (ft bgs):	2 – 4	12 – 14
Chromium	19.8	7.83
Cobalt	2.62	3.42
Lead	31.6	4.79
Manganese	417	358
Mercury	0.0876	ND

BCC–74–4			
Date:	08/11/04	08/11/04	08/11/04
Depth (ft bgs):	0 – 2	6 – 8	8 – 10
Arsenic	6.26	3.83	4.13

BCC–74				
Date:	06/03/04	08/06/04	06/03/04	08/06/04
Depth (ft bgs):	0 – 2	0 – 2	5 – 7	6.75 – 8
Arsenic	91.9 J *	2.92	6.81 J	4.27
Chromium	10.5 J	NA	16.7 J	NA
Cobalt	4.35 J	NA	6.73 J	NA
Lead	38 J	NA	7.9 J	NA
Manganese	177 J	NA	212 J	NA
Mercury	0.182	NA	0.0347 J	NA

BCC–73		
Date:	06/03/04	06/03/04
Depth (ft bgs):	0 – 2	5 – 7
Arsenic	4.13 J [5.3 J]	7.39 J
Barium	48.3 J [40.9 J]	81.3 J
Chromium	10.9 J [11.8 J]	16.8 J
Cobalt	5.44 J [6.89 J]	10.6 J
Manganese	186 J [270 J]	519 J
Selenium	ND [0.537 J]	ND

BCC–74–1			
Date:	08/11/04	08/11/04	08/11/04
Depth (ft bgs):	0 – 2	6 – 8	8 – 10
Arsenic	14.3	4.77	4.01

SW8–07	
Date:	02/04/02
Depth (ft bgs):	0 – 2
Manganese	866

SW8–03	
Date:	01/14/02
Depth (ft bgs):	0.7 – 2
Chromium	*1,260*
Manganese	*1,770*

BW1–08			
Date	01/07/02	01/07/02	01/07/02
Depth (ft bgs)	1 – 2	8 – 10	11 – 13
Chromium	97.7	25.1	123
Manganese	1,100	1,300	*2,040*

BW1–03		
Date	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	4 – 6
Antimony	1.88 J	6.74 J
Arsenic	5.69	35.4
Barium	38	256
Cadmium	1.92	2.02 J
Chromium	104	*6.39*
Cobalt	4.16	24.9
Copper	91.4	1,060
Cyanide (total)	0.232 J	1.59
Lead	126	141
Manganese	1,320	*4,250*
Mercury	0.0474	0.786
Nickel	38	528
Silver	0.36 J	1.43 J
Vanadium	7.3	30
Zinc	936	145

BW1–11A		
Date	07/30/03	07/30/03
Depth (ft bgs)	0 – 2	6 – 8
Arsenic	5.07	15.7
Barium	48.7 J	224 J
Cadmium	3.57 J	R
Chromium	114	*340*
Cobalt	3.85	11.4
Copper	112 J	616 J
Lead	210 J	41.9 J
Manganese	*1,750 J*	*7,260 J*
Mercury	0.074	0.208
Nickel	32.5	103
Silver	0.332 J	ND
Zinc	3,670	54.4

SSTT2	
Date	01/22/96
Depth (ft bgs)	0 – 0.5
Aluminum	4,250
Arsenic	7.27 J
Barium	79.1 J
Cadmium	2.32
Chromium	*251*
Cobalt	11.8
Copper	221
Cyanide (total)	0.36
Iron	10,700
Lead	117
Manganese	*2,040*
Mercury	0.0921
Nickel	84.7 J
Silver	0.487
Zinc	379

SBTT2	
Date	01/22/96
Depth (ft bgs)	15
Aluminum	1,890
Chromium	9.82
Cyanide (total)	0.49
Iron	6,090
Manganese	107
Mercury	0.0821

BW1–09			
Date	01/11/02	01/11/02	01/11/02
Depth (ft bgs)	1 – 2	8 – 10	19 – 21
Chromium	95.2	15.9	50.8
Manganese	*3,670*	340	*1,540*

BW1–07			
Date	01/09/02	01/09/02	01/09/02
Depth (ft bgs)	0 – 2	8 – 10	11 – 13
Chromium	*327*	55.2	17.2
Manganese	*4,620*	1,020	307

BW1–04			
Date	07/16/01	07/16/01	07/16/01
Depth (ft bgs)	0 – 2	8 – 10	12 – 14
Arsenic	6.48	7.54	1.09
Cadmium	5.77	0.153 J	0.125 J
Chromium	117	114	7.12
Cobalt	4.17	4.94	0.97 J
Copper	134	60.1	4.55
Cyanide (total)	0.637	ND	ND
Lead	266	17.1	6.46
Manganese	*2,090*	659	160
Mercury	0.114	ND	ND
Nickel	40.8	62.9	4.6
Selenium	ND	0.557 J	ND
Silver	0.63	ND	ND
Zinc	7,400	55.6	7.98

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING/SOIL SAMPLE LOCATION
- SURVEYED CONCRETE AND/OR SOIL SAMPLE LOCATION
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER PROTECTION CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE PROTECTION CRITERIA
- 4,700 — EXCEEDS SITE SPECIFIC BACKGROUND CONCENTRATIONS
- 199 — EXCEEDS MDEQ 2013 STATE DEFAULT BACKGROUND LEVELS
- * — EXCEEDS MDEQ 2013 NONRESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA
- EXCEEDS MDEQ 2013 SOIL SATURATION CONCENTRATION SCREENING LEVEL
- *1,520* — EXCEEDS MDEQ 2013 NONRESIDENTIAL PARTICULATE SOIL INHALATION CRITERIA
- **2.3** — EXCEEDS MDEQ 2013 SOIL VOLATILIZATION TO INDOOR AIR INHALATION CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. E – EXCEEDS CALIBRATION STANDARD.
8. R – REJECTED DATA.
9. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
   - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
   - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
   - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
   - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
   - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

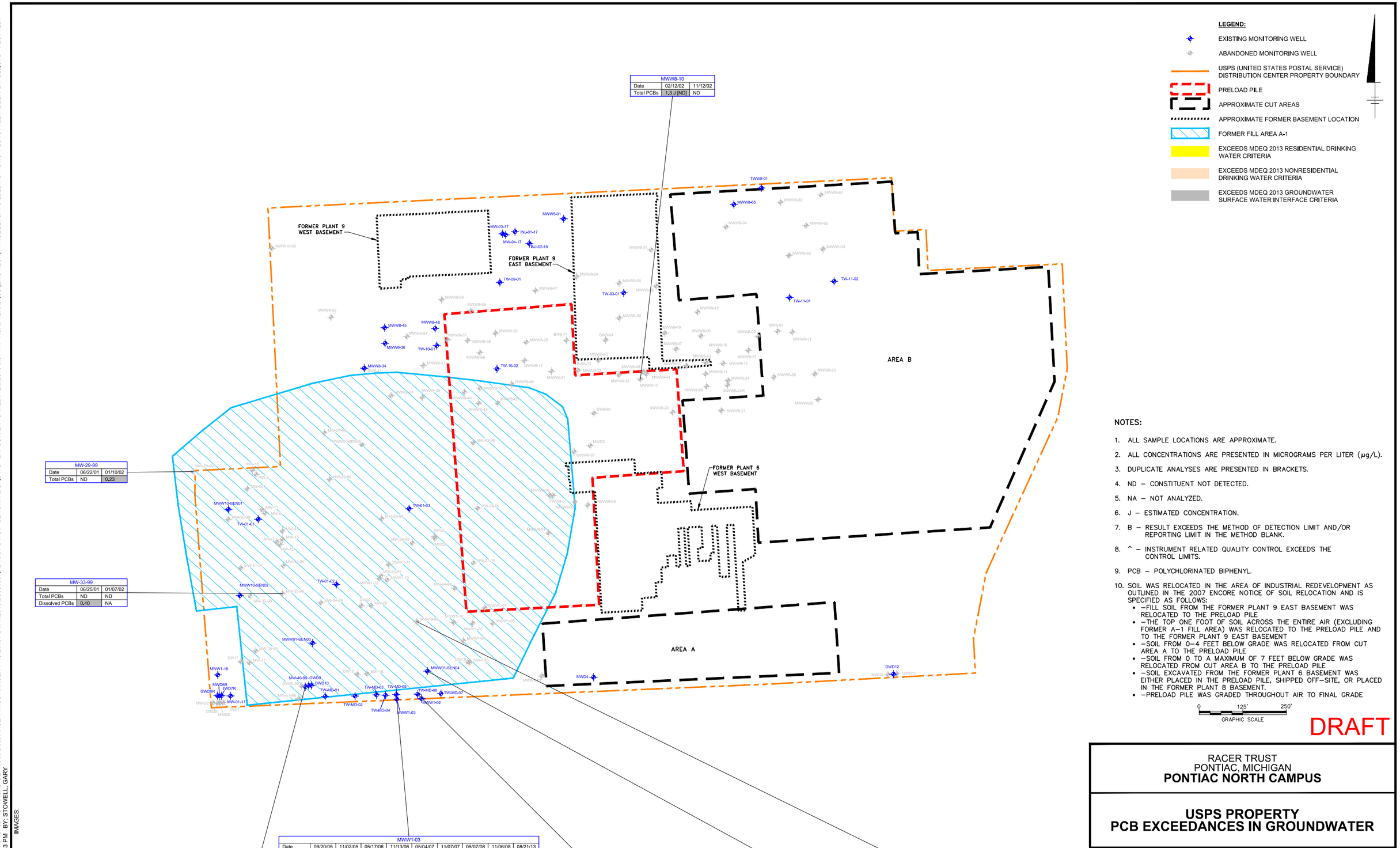
DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
INORGANICS EXCEEDANCES IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE
11



CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM: (Reqd) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD1801\+DWG\FIG2A-DATABOX.DWG LAYOUT: 2A SAVED: 12/5/2018 9:51 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2018 9:53 PM BY: STOWELL, GARY
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XREFS: IMAGES:
X-PNC-DL

MWW10-02		
Date	02/12/02	11/14/02
bis(2-Ethylhexyl)phthalate	150 J	ND

MWW8-02		
Date	09/11/01	01/09/02
Phenanthrene	2,3 J	ND

MWW8-13		
Date	08/25/03	12/17/03
2,4-Dimethylphenol	2,500	5,800
Phenol	1,200	2,700

MWW8-10		
Date	02/12/02	11/12/02
Fluorene	21 J	ND
Phenanthrene	ND	4,4 J

MWW8-08		
Date	02/15/02	11/14/02
Phenanthrene	1,5 J	28 J

MWW8-04		
Date	09/17/01	01/09/02
Phenanthrene	3,9 J	1,1 J

MWW8-11		
Date	02/11/02	11/12/02
Fluorene	13	17
Phenanthrene	3,6 J	ND

MWW01-SEN05				
Date	10/05/12	02/20/13	06/26/13	12/03/13
Benzene	6,1	6,6	4,2	5,7

MW-34-99		
Date	08/28/01	01/07/02
Benzene	7,3	9,3 [10]
Ethylbenzene	15	18 [20]
Vinyl Chloride	5,6	7,8 [8,8]
Naphthalene	NA	14 [12]

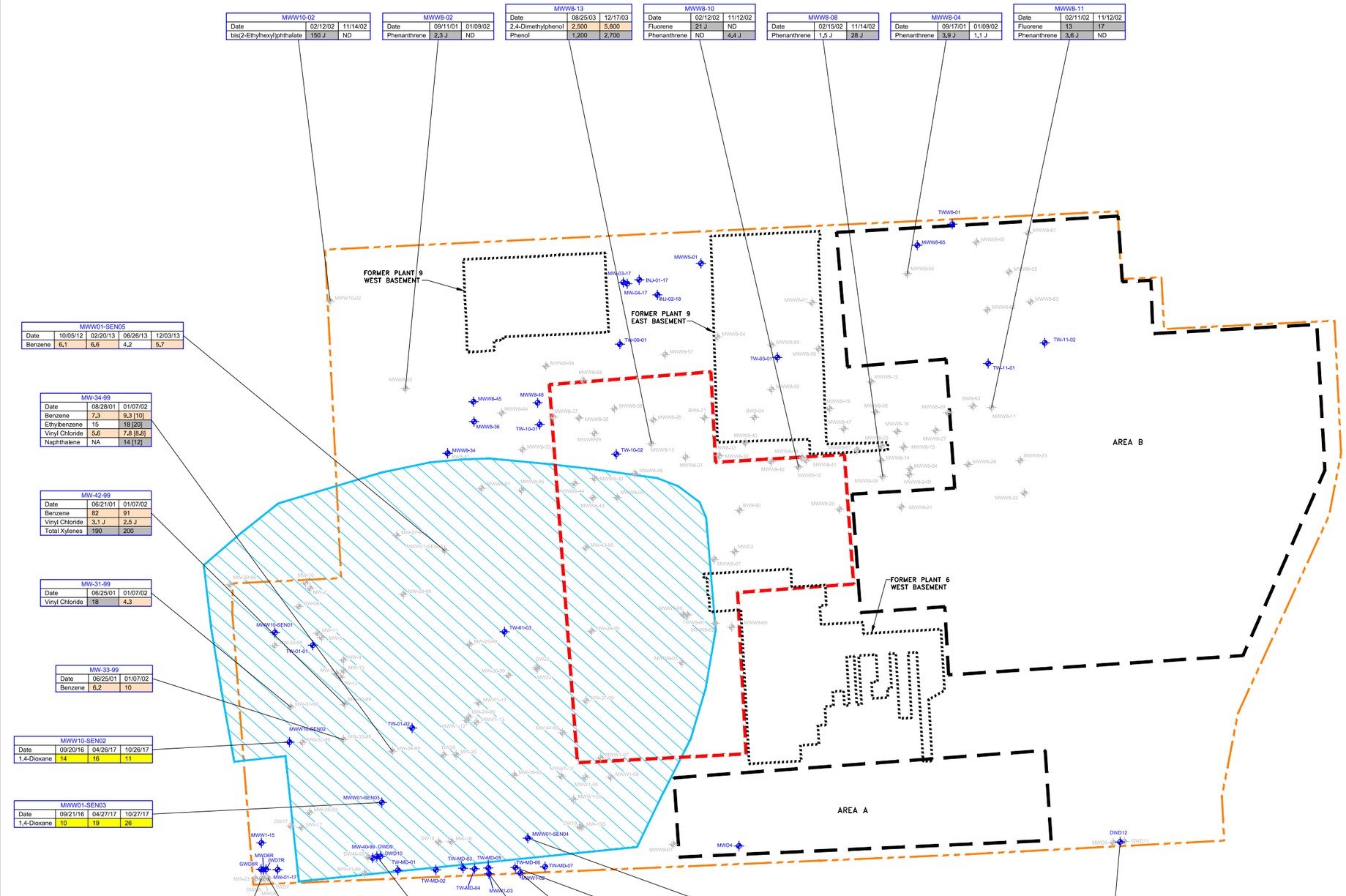
MW-42-99		
Date	06/21/01	01/07/02
Benzene	82	91
Vinyl Chloride	3,1 J	2,5 J
Total Xylenes	190	200

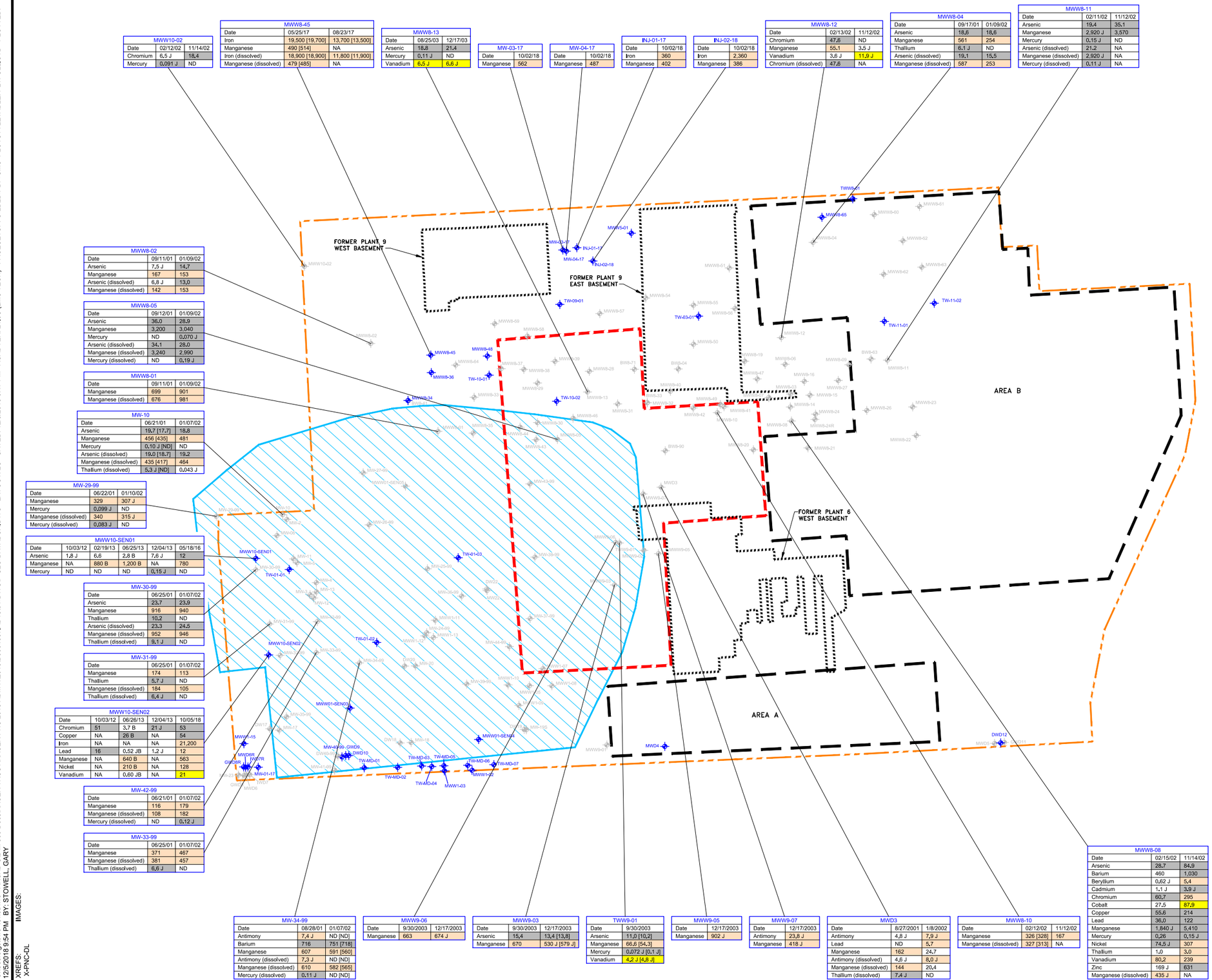
MW-31-99		
Date	06/25/01	01/07/02
Vinyl Chloride	18	4,3

MW-33-99		
Date	06/25/01	01/07/02
Benzene	6,2	10

MWW10-SEN02			
Date	09/20/16	04/26/17	10/26/17
1,4-Dioxane	14	16	11

MWW01-SEN03			
Date	09/21/16	04/27/17	10/27/17
1,4-Dioxane	10	19	26





MWW10-02		
Date	02/12/02	11/14/02
Chromium	6,5 J	18,4
Mercury	0,091 J	ND

MWW8-45		
Date	05/25/17	08/23/17
Iron	19,500 [19,700]	13,700 [13,500]
Manganese	490 [514]	NA
Iron (dissolved)	18,900 [18,900]	11,800 [11,900]
Manganese (dissolved)	479 [485]	NA

MWW8-13		
Date	08/25/03	12/17/03
Arsenic	18,8	21,4
Mercury	0,11 J	ND
Vanadium	6,5 J	6,6 J

MW-03-17		
Date	10/02/18	
Manganese	562	

MW-04-17		
Date	10/02/18	
Manganese	487	

INJ-01-17		
Date	10/02/18	
Iron	360	
Manganese	402	

INJ-02-18		
Date	10/02/18	
Iron	2,360	
Manganese	386	

MWW8-12		
Date	02/13/02	11/12/02
Chromium	47,6	ND
Manganese	55,1	3,5 J
Vanadium	3,6 J	11,9 J
Chromium (dissolved)	47,6	NA

MWW8-04		
Date	09/17/01	01/09/02
Arsenic	18,8	18,8
Manganese	561	254
Thallium	6,1 J	ND
Arsenic (dissolved)	19,1	15,5
Manganese (dissolved)	587	253

MWW8-11		
Date	02/11/02	11/12/02
Arsenic	19,4	35,1
Manganese	2,920 J	3,570
Mercury	0,15 J	ND
Arsenic (dissolved)	21,2	NA
Manganese (dissolved)	2,920 J	NA
Mercury (dissolved)	0,11 J	NA

MWW8-02		
Date	09/11/01	01/09/02
Arsenic	7,5 J	14,7
Manganese	167	153
Arsenic (dissolved)	6,8 J	13,0
Manganese (dissolved)	142	153

MWW8-05		
Date	09/12/01	01/09/02
Arsenic	36,0	28,9
Manganese	3,200	3,040
Mercury	ND	0,070 J
Arsenic (dissolved)	34,1	28,0
Manganese (dissolved)	3,240	2,990
Mercury (dissolved)	ND	0,19 J

MWW8-01		
Date	09/11/01	01/09/02
Manganese	699	901
Manganese (dissolved)	676	981

MW-10		
Date	06/21/01	01/07/02
Arsenic	19,7 [17,7]	18,8
Manganese	456 [435]	481
Mercury	0,10 J [ND]	ND
Arsenic (dissolved)	19,0 [18,7]	19,2
Manganese (dissolved)	435 [417]	464
Thallium (dissolved)	5,3 J [ND]	0,043 J

MW-29-99		
Date	06/22/01	01/10/02
Manganese	329	307 J
Mercury	0,099 J	ND
Manganese (dissolved)	340	315 J
Mercury (dissolved)	0,083 J	ND

MWW10-SEN01					
Date	10/03/12	02/19/13	06/25/13	12/04/13	05/18/16
Arsenic	1,8 J	6,6	2,8 B	7,6 J	12
Manganese	NA	880 B	1,200 B	NA	780
Mercury	ND	ND	ND	0,15 J	ND

MW-30-99		
Date	06/25/01	01/07/02
Arsenic	23,7	23,9
Manganese	916	940
Thallium	10,2	ND
Arsenic (dissolved)	23,3	24,5
Manganese (dissolved)	952	946
Thallium (dissolved)	9,1 J	ND

MW-31-99		
Date	06/25/01	01/07/02
Manganese	174	113
Thallium	5,7 J	ND
Manganese (dissolved)	184	105
Thallium (dissolved)	6,4 J	ND

MWW10-SEN02				
Date	10/03/12	06/26/13	12/04/13	10/05/18
Chromium	51	3,7 B	21 J	53
Copper	NA	26 B	NA	54
Iron	NA	NA	NA	21,200
Lead	16	0,52 JB	1,2 J	12
Manganese	NA	640 B	NA	563
Nickel	NA	210 B	NA	128
Vanadium	NA	0,60 JB	NA	21

MW-42-99		
Date	06/21/01	01/07/02
Manganese	116	179
Manganese (dissolved)	108	182
Mercury (dissolved)	ND	0,12 J

MW-33-99		
Date	06/25/01	01/07/02
Manganese	371	467
Manganese (dissolved)	381	457
Thallium (dissolved)	6,6 J	ND

MW-34-99		
Date	08/28/01	01/07/02
Antimony	7,4 J	ND [ND]
Barium	716	751 [718]
Manganese	607	591 [560]
Antimony (dissolved)	7,3 J	ND [ND]
Manganese (dissolved)	610	582 [565]
Mercury (dissolved)	0,11 J	ND [ND]

MWW9-06		
Date	9/30/2003	12/17/2003
Manganese	663	674 J

MWW9-03		
Date	9/30/2003	12/17/2003
Arsenic	15,4	13,4 [13,8]
Manganese	670	530 J [579 J]

TWW9-01	
Date	9/30/2003
Arsenic	11,0 [10,2]
Manganese	66,6 [54,3]
Mercury	0,072 J [0,1 J]
Vanadium	4,2 J [4,8 J]

MWW9-05		
Date	12/17/2003	
Antimony	23,8 J	
Manganese	418 J	

MWW9-07		
Date	12/17/2003	
Antimony	23,8 J	
Manganese	418 J	

MWD3		
Date	8/27/2001	1/8/2002
Antimony	4,8 J	7,9 J
Lead	ND	5,7
Manganese	162	24,7
Antimony (dissolved)	4,6 J	8,0 J
Manganese (dissolved)	144	20,4
Thallium (dissolved)	7,4 J	ND

MWW8-10		
Date	02/12/02	11/12/02
Manganese	326 [328]	167
Manganese (dissolved)	327 [313]	NA

MWW8-08		
Date	02/15/02	11/14/02
Arsenic	28,7	84,9
Barium	460	1,030
Beryllium	0,62 J	5,4
Cadmium	1,1 J	3,9 J
Chromium	60,7	295
Cobalt	27,5	87,9
Copper	55,6	214
Lead	36,0	122
Manganese	1,840 J	5,410
Mercury	0,26	0,15 J
Nickel	74,5 J	307
Thallium	1,0	3,0
Vanadium	80,2	239
Zinc	169 J	631
Manganese (dissolved)	435 J	NA

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. B – RESULT EXCEEDS THE METHOD OF DETECTION LIMIT AND/OR REPORTING LIMIT IN THE METHOD BLANK.
8. ^ – INSTRUMENT RELATED QUALITY CONTROL EXCEEDS THE CONTROL LIMITS.
9. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
   - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
   - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
   - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
   - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
   - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY INORGANICS EXCEEDANCES IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2C

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Reqd) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD18\01-DWG\FIG2C-DATABOX.DWG LAYOUT: 2C SAVED: 12/5/2018 9:47 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2018 9:54 PM BY: STOWELL, GARY
XREFS:
IMAGES:
X-PNC-DL

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Req) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607\AD18\01-DWG\FIG2D-DATABOX.DWG LAYOUT: 2D SAVED: 12/5/2018 9:49 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2018 9:55 PM BY: STOWELL, GARY
XREFS:
X-PNC-DL
IMAGES:

MWW1-03

Date	01/17/02	11/08/02	05/19/03	12/10/03	05/03/04	05/17/04	10/26/04	05/11/05	11/02/05	05/17/06	11/13/06	05/04/07	11/07/07	05/07/08	11/06/08	08/21/13
Antimony	ND	ND	ND	ND	ND	ND	ND	ND [ND]	ND	ND	ND [ND]	ND [ND]	10,2 J [2,7 J]	ND [ND]	ND [ND]	0,15 J
Arsenic	4,7 J	6,1 J	ND	ND	ND	ND	ND	3,2 J [3,2 J]	ND	2,0	2,0 [1,7 J]	1,0 J [1,4 J]	7,3 [5,4]	1,5 J [1,5 J]	4,0 [4,3]	12 B
Lead	ND	ND	ND	ND	ND	ND	ND	ND [ND]	18,1	4,4	ND [ND]	ND [ND]	2,9 J [ND]	ND [ND]	ND [ND]	0,30 JB
Manganese	427 J	429 J	494 J	1,320	873	740	568	725 [717]	675 J	737 J	741 J [724 J]	1,130 [1,130]	425 J [434 J]	324 J [296 J]	1,050 J [1,030 J]	990 B
Silver	ND	ND	ND	ND	ND	ND	ND	ND [ND]	ND	ND	ND [ND]	ND [ND]	ND [ND]	4,2 J [ND]	ND [ND]	ND
Arsenic (dissolved)	4,3 J	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	11 B
Manganese (dissolved)	433 J	NA	NA	NA	NA	739	NA	NA	NA	NA	NA	NA	NA	NA	NA	930 B

MWW1-02

Date	01/17/02	11/08/02	05/19/03	12/10/03	05/03/04	05/17/04	10/26/04	05/11/05	11/02/05	05/17/06	11/13/06	05/03/07	11/07/07	05/07/08	11/06/08	08/21/13
Arsenic	10,9	5,3 J	2,1 J	ND [ND]	ND [ND]	ND	ND [ND]	ND	ND [ND]	1,0 J [0,97 J]	ND	0,51 J	ND	0,81 J	1,6 J	12 B
Manganese	539 J	448 J	464 J	532 [486]	543 [548]	638	410 [419]	447	409 J [414 J]	376 J [400 J]	421 J	262	374	187 J	1,230 J	1,300 B
Mercury	0,12 J	ND	ND	ND [ND]	ND [ND]	ND	ND [ND]	ND	ND [ND]	ND [ND]	ND	ND	ND	ND	ND	ND
Arsenic (dissolved)	12,0	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	12 B
Manganese (dissolved)	558 J	NA	NA	NA	NA	647	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300 B

TW-MD-05

Date	07/30/14	02/18/15	04/01/15	05/20/15	04/24/17	05/25/17	10/03/18
Iron	NA	NA	NA	NA	13,900 [22,200]	12,600	11,500
Manganese	650	360	380	380	414 [807]	429	356
Mercury	ND	0,24	ND	ND	ND [ND]	NA	ND
Iron (dissolved)	8,600 B	15,000 B	16,000	15,000 B	13,200 [21,800]	12,400	NA
Manganese (dissolved)	720	390	400	390	419 [718]	423	NA

TW-MD-06

Date	08/01/14	02/25/15	04/01/15	05/20/15	04/24/17	05/25/17	08/17/17	10/04/18
Iron	NA	NA	NA	NA	21,200	17,200	22,100	24,900
Manganese	1,600	1,300 B	1,600	1,200	738	634	NA	947
Iron (dissolved)	11,000 B	13,000	12,000	12,000 B	21,600	17,000	21,500	NA
Manganese (dissolved)	1,600	1,300 B	1,500 ^	1,300	736	630	NA	NA
Mercury (dissolved)	NA	ND	ND	0,16 J	ND	NA	NA	NA

MW-19

Date	08/28/01	01/07/02
Arsenic	23,7	26,4
Manganese	246	409
Mercury	0,11 J	ND
Silver	1,5 J	ND
Antimony (dissolved)	7,9 J	ND
Arsenic (dissolved)	22,3	26,9
Manganese (dissolved)	278	463
Mercury (dissolved)	0,13 J	ND

MWW01-SEN05

Date	10/05/12	02/20/13	06/26/13	12/03/13
Barium	1,800 B	2,100 B	2,200 B	2,900 J
Lead	7,0	1,4 B	4,2 B	1,4 J
Manganese	NA	72 B	62 B	NA

MW-39-99

Date	08/28/01	01/10/02
Antimony	6,7 J	ND
Lead	6,6	19,9
Manganese	51,5	75,6 J
Manganese (dissolved)	47,2	79,1 J

TW-MD-07

Date	07/30/14	02/25/15	04/01/15	05/20/15	04/24/17	05/25/17	10/04/18
Iron	NA	NA	NA	NA	13,300	12,900	23,900
Manganese	220	210 B	430 [430]	190	257	134	201
Mercury	ND	ND	ND [ND]	0,22	ND	NA	ND
Iron (dissolved)	20,000 B	23,000	28,000 [28,000]	23,000 B	12,800	12,800	NA
Manganese (dissolved)	220	200 B	460 [460]	180	278	134	NA

TW-MD-04

Date	07/30/14	02/18/15	03/31/15	05/20/15	04/24/17	05/24/17	10/03/18
Iron	NA	NA	NA	NA	10,700	11,300	21,900
Manganese	1,300 [1,200]	600	600	560	353	341	1,160
Iron (dissolved)	6,300 B [6,700 B]	27,000 B	24,000	24,000 B	10,200	11,200	NA
Manganese (dissolved)	1,300 [1,300]	670	670 ^	580	369	345	NA

TW-MD-03

Date	07/29/14	02/18/15	03/31/15	05/20/15	05/25/17	10/03/18
Iron	NA	NA	NA	NA	9,490	18,000
Manganese	1,200	1,200 [1,100]	760	740	520	820
Iron (dissolved)	6,400 B	20,000 B [19,000 B]	17,000	15,000 B	9,160	NA
Manganese (dissolved)	1,200	980 [960]	740 ^	680	529	NA

MWW01-SEN03

Date	02/19/13	06/25/13	12/03/13	10/05/18
Chromium	23	12 B	8,5 J	29
Copper	18	13 B	NA	16
Iron	NA	NA	NA	21,100
Lead	6,4 B	7,5 B	3,4 J	11
Manganese	160 B	130 B	NA	477
Vanadium	3,9 J	2,4 JB	NA	7

IWD7R

Date	11/13/06	05/04/07	10/22/07	11/08/07	05/08/08	11/05/08
Arsenic	5,7	10,2	8,6	11,1	7,1	7,8
Chromium	ND	ND	NA	13,2	ND	ND
Manganese	66,1 J	42,7	NA	63,8 J	37,0 J	45,5 J

MWD6R

Date	11/13/06	05/04/07	11/08/07	05/08/08	11/05/08
Manganese	126 J	78,4	38,5 J	117 J	194 J

GWD8R

Date	11/13/06	05/03/07	11/08/07	05/09/08	11/05/08
Chromium	25,8	ND	6,2 J	4,2 J	ND
Manganese	93,6 J	55,8	52,7 J	39,0 J	37,4 J

GWD8

Date	09/14/01	01/10/02	05/21/03	12/12/03	05/05/04	10/26/04	05/11/05	11/02/05	05/17/06
Chromium	ND	3,8 J	2,3 J	21,4	4,1 J	ND	ND	4,5 J	4,1 J
Manganese	71,2	67,0 J	45,1	63,8 J	43,6	41,6	55,4	51,6 J	47,5 J
Manganese (dissolved)	70,3	64,1 J	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	0,072 J	ND	NA	NA	NA	NA	NA	NA	NA

MWD6

Date	09/11/01	01/09/02	11/13/02	05/21/03	12/12/03	05/05/04	05/17/04	10/26/04	05/11/05	11/02/05	05/17/06
Barium	532	166	220	1,090	66,1	2,030	1,520	56,2	495	58,0	66,3
Manganese	393	131	191 J	617	55,1 J	1,080	918	59,2	492	80,9 J	91,8 J
Mercury	ND	0,11 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium (dissolved)	520	157	NA	NA	NA	NA	1,500	NA	NA	NA	NA
Manganese (dissolved)	383	125	NA	NA	NA	NA	900	NA	NA	NA	NA

IWD7

Date	09/11/01	01/09/02	11/13/02	05/21/03	12/12/03	05/05/04	10/26/04	05/11/05	11/02/05	05/17/06
Lead	ND	13,5	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	177	63,1	142 J	80,9	94,7 J	77,6	86,7	78,2	86,1 J	78,1 J
Vanadium	ND	4,9 J	ND	ND	ND	ND	ND	ND	21,0	8,8 J
Zinc	ND	592	ND	ND	ND	ND	ND	ND	ND	ND
Manganese (dissolved)	159	2,8 J	NA	NA	NA	NA	NA	NA	NA	NA

TW-MD-02

Date	07/29/14	02/11/15	03/31/15	05/20/15	05/24/17	08/17/17	10/03/18
Iron	NA	NA	NA	NA	14,000	14,400	14,300
Manganese	1,400	1,900	1,400	1,300	917	NA	747
Iron (dissolved)	14,000 B	17,000	16,000	15,000 B	13,500	14,200	NA
Manganese (dissolved)	1,300	1,700	1,300 ^	1,300	892	NA	NA

MWD5

Date	08/27/2001	1/8/2002
Chromium	ND	11,2
Manganese	382	16,5
Thallium	12,4	ND
Manganese (dissolved)	242	19,8
Thallium (dissolved)	5,3 J	0,038 J

DWD10

Date	01/22/02	11/12/02	05/19/03	12/11/03	05/03/04	10/26/04	05/11/05	11/02/05	05/17/06	11/13/06	05/02/07	11/07/07	05/07/08	11/06/08
Arsenic	ND	4,4 J	14,5 J	5,5 J	6,9 J	5,3 J	10,4	6,1 J	7,2	7,4	9,3	8,4	6,7	6,0

TW-MD-01

Date	07/30/14	02/11/15	03/31/15	05/20/15	05/24/17	10/03/18
Iron	NA	NA	NA	NA	7,220	10,800
Manganese	1,200	1,000	1,200	1,100 [1,200]	971	1,000
Iron (dissolved)	13,000 B	13,000	14,000	13,000 B [14,000 B]	6,890	NA
Manganese (dissolved)	1,200	990	1,100 ^	1,100 [1,200]	974	NA

DWD12

Date	01/18/02	11/12/02	05/20/03	12/17/03	05/04/04	10/27/04	05/13/05	11/04/05	05/18/06	11/10/06	05/04/07	11/09/07	05/08/08	11/06/08
Arsenic	31,2	39,5	36,4	41,3	41,3	38,4	39,6	40,9	39,1 [1,6 J]	36,2 J	39,4 [39,4]	34,4 [36,1]	36,3 [36,7]	33,4
Chromium	ND	8,4 J	4,7 J	6,8 J	7,4 J	2,7 J	10,8	2,6 J	16,0 [3,3 J]	1,9 J	ND [ND]	6,4 J [4,8 J]	ND [ND]	30,2
Manganese	ND	67,5	59,7 J	56,2 J	54,8	52,2	61,5	51,3	57,7 [13,8]	51,5 J	44,1 [47,6]	55,9 [53,3]	47,9 J [49,8 J]	98,9 J
Silver	ND	1,3 J	ND	ND	ND	ND	ND	ND	ND [ND]	ND	ND [ND]	ND [ND]	ND [ND]	ND
Arsenic (dissolved)	25,9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

MW-40-99

Date	01/10/02	11/12/02	05/19/03	12/11/03	05/03/04	05/17/04	10/26/04	05/11/05	11/02/05	05/17/06	11/13/06	05/02/07	11/07/07	05/07/08	11/06/08
Manganese	301 J	150	1,240 J [1,190 J]	727	651	589	255	351	221 J	311 J	240 J	287	210	112 J	435 J
Vanadium	ND	4,7 J	ND [ND]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,0 J	ND
Manganese (dissolved)	280 J	NA	NA	NA	NA	579	NA	NA	NA	NA	NA	NA	NA	NA	NA

MWW9-01

Date	08/25/2003	12/17/2003	05/24/2004	11/1/2004	11/4/2005	05/19/2006	11/14/2006	05/3/2007	11/8/2007	05/8/2008
Arsenic	3,7 J	ND	4,1 J	ND	22,8	5,3	5,1	3	9,5	6,2
Chromium	56,8	15,5	6,7 J	ND	36,8	6,4 J	ND	6,2 J	7,4 J	ND
Copper	ND	ND	2,6 J	ND	18,8	6,8	ND	1,9 J	ND	ND
Lead	39,1	64,0	4	ND	78,4	8,0	ND	ND	ND	ND
Manganese	187 J	167 J	147 J	ND	336	180 J	71,6 J	20,7	143 J	74,7 J
Mercury	ND	ND	ND	0,039 J	0,11 J	ND	ND	ND	ND	ND
Vanadium	1,9 J	2,3 J	ND	ND	12,8	2,3 J	ND	ND	ND	ND
Manganese (dissolved)	NA	NA	156 J	NA	NA	NA	NA	NA	NA	NA

GWD11R

Date	05/04/07	11/9/2007	05/8/2008	11/6/2008
Arsenic	6,9	7,4	20,9	18,5 [18,7]
Chromium	5,4 J	21,7	6,2 J	ND [2,3 J]

GWD11

Date	01/29/02	11/12/02	05/20/03	12/17/03	05/04/04	10/27/04	05/12/05	11/04/05	05/18/06
Manganese	72,6	255	46,1 J	ND	27,8	78,8	137	39,9	13,8
Manganese (dissolved)	61,8	NA	NA	NA	NA	NA	NA	NA	NA

LEGEND:

- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- PRELOAD PILE
- APPROXIMATE CUT AREAS
- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER CRITERIA
- EXCEEDS MDEQ 2013 GROUNDWATER SURFACE WATER INTERFACE CRITERIA

NOTES:

1. ALL SAMPLE LOCATIONS ARE APPROXIMATE.
2. ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L).
3. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
4. ND – CONSTITUENT NOT DETECTED.
5. NA – NOT ANALYZED.
6. J – ESTIMATED CONCENTRATION.
7. B – RESULT EXCEEDS THE METHOD OF DETECTION LIMIT AND/OR REPORTING LIMIT IN THE METHOD BLANK.
8. ^ – INSTRUMENT RELATED QUALITY CONTROL EXCEEDS THE CONTROL LIMITS.
9. SOIL WAS RELOCATED IN THE AREA OF INDUSTRIAL REDEVELOPMENT AS OUTLINED IN THE 2007 ENCORE NOTICE OF SOIL RELOCATION AND IS SPECIFIED AS FOLLOWS:
   - –FILL SOIL FROM THE FORMER PLANT 9 EAST BASEMENT WAS RELOCATED TO THE PRELOAD PILE
   - –THE TOP ONE FOOT OF SOIL ACROSS THE ENTIRE AIR (EXCLUDING FORMER A–1 FILL AREA) WAS RELOCATED TO THE PRELOAD PILE AND TO THE FORMER PLANT 9 EAST BASEMENT
   - –SOIL FROM 0–4 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA A TO THE PRELOAD PILE
   - –SOIL FROM 0 TO A MAXIMUM OF 7 FEET BELOW GRADE WAS RELOCATED FROM CUT AREA B TO THE PRELOAD PILE
   - –SOIL EXCAVATED FROM THE FORMER PLANT 6 BASEMENT WAS EITHER PLACED IN THE PRELOAD PILE, SHIPPED OFF–SITE, OR PLACED IN THE FORMER PLANT 8 BASEMENT.
   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

FORMER PLANT 9 WEST BASEMENT

FORMER PLANT 9 EAST BASEMENT

FORMER PLANT 6 WEST BASEMENT

AREA A

AREA B

0 125' 250'
GRAPHIC SCALE

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

**USPS PROPERTY
INORGANICS EXCEEDANCES IN GROUNDWATER**

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2D

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Req'd) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018\B0064607.AD18\01-DWG\FIG2E-DATABOX.DWG LAYOUT: 2E SAVED: 12/5/2018 9:51 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED:
12/5/2018 9:55 PM BY: STOWELL, GARY
XREFS:
IMAGES:
X-PNC-DL

MWW8-45	
Date	05/25/17
Total Dissolved Solids	752 [764]

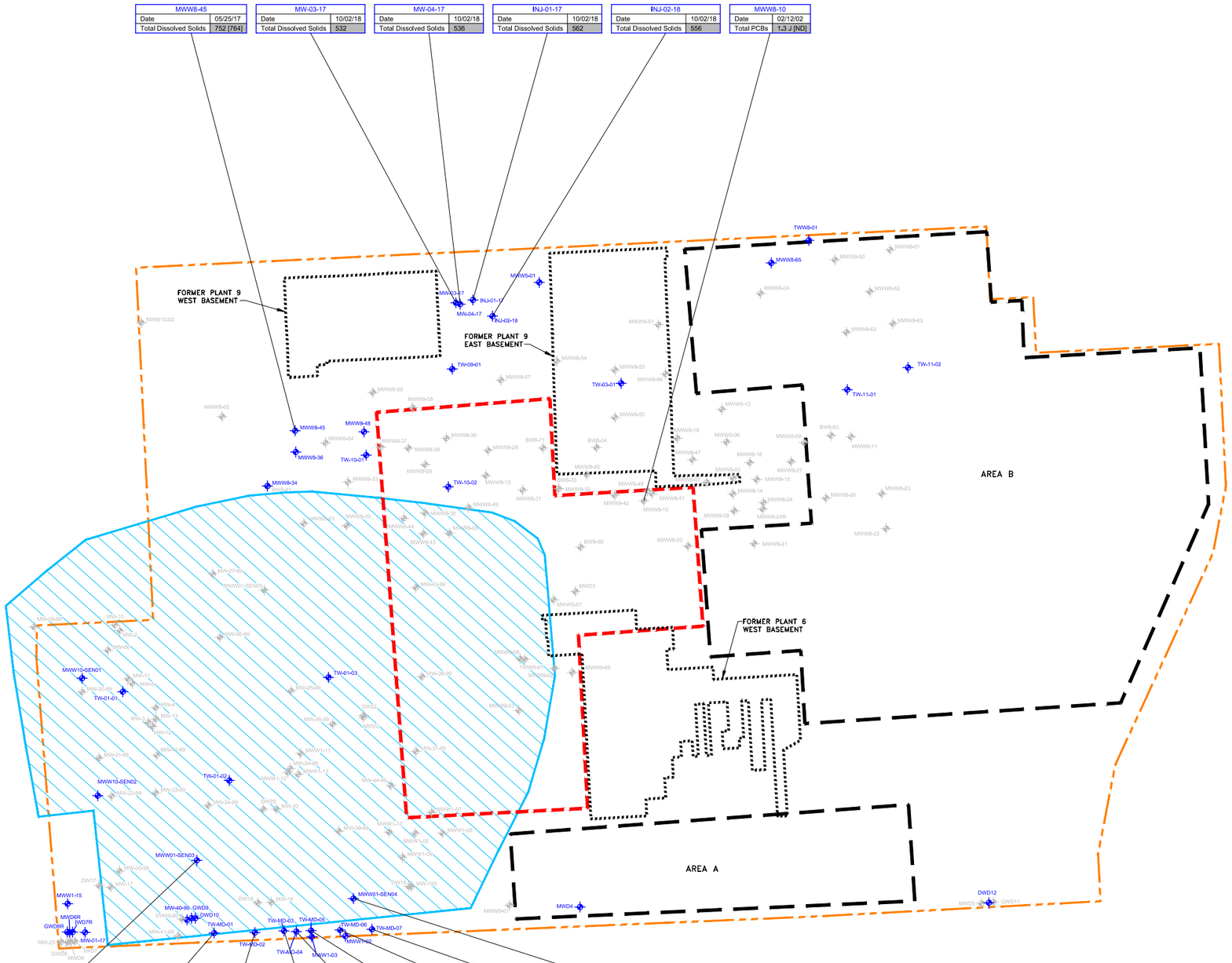
MW-03-17		
Date	10/02/18	
Total Dissolved Solids	532	

MW-04-17	
Date	10/02/18
Total Dissolved Solids	536

INJ-01-17	
Date	10/02/18
Total Dissolved Solids	562

INJ-02-18	
Date	10/02/18
Total Dissolved Solids	556

MWW8-10	
Date	02/12/02
Total PCBs	1.3 J [ND]



MWW01-SEN03	
Date	10/05/18
Total Dissolved Solids	1,110

TW-MD-01		
Date	05/24/17	10/03/18
Total Dissolved Solids	714	630

TW-MD-02			
Date	07/29/14	05/24/17	10/03/18
Total Dissolved Solids	680	678	620

TW-MD-03		
Date	05/25/17	10/03/18
Total Dissolved Solids	726	1,180

TW-MD-04		
Date	05/24/17	10/03/18
Total Dissolved Solids	728	1,700

TW-MD-05			
Date	07/30/14	05/25/17	10/03/18
Total Dissolved Solids	620	696	586

TW-MD-06			
Date	08/01/14	05/25/17	10/04/18
Total Dissolved Solids	910	1,138	1,080

TW-MD-07		
Date	05/25/17	10/04/18
Total Dissolved Solids	1,006	958

MWW01-SEN04	
Date	10/03/18
Total Dissolved Solids	580

LEGEND:

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- ABANDONED MONITORING WELL
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- PRELOAD PILE
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- APPROXIMATE FORMER BASEMENT LOCATION
- FORMER FILL AREA A-1
- EXCEEDS MDEQ 2013 RESIDENTIAL DRINKING WATER CRITERIA
- EXCEEDS MDEQ 2013 NONRESIDENTIAL DRINKING WATER CRITERIA
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NOTES:

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   - –PRELOAD PILE WAS GRADED THROUGHOUT AIR TO FINAL GRADE

0 125' 250'
GRAPHIC SCALE

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY TOTAL DISSOLVED SOLIDS EXCEEDANCES IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2E

Constituents	Units	MDEQ 2013 State Default Background Levels	Site Specific Background Criteria	MDEQ 2013 Residential Drinking Water Protection Criteria	MDEQ 2013 Nonresidential Drinking Water Protection Criteria	MDEQ 2013 Groundwater Surface Water Interface Protection Criteria	MDEQ 2013 Nonresidential Soil Volatilization to Indoor Air Inhalation Criteria	MDEQ 2013 Nonresidential Particulate Soil Inhalation Criteria	MDEQ 2013 Nonresidentail Infinite Source Volatile Soil Inhalation Criteria	MDEQ 2013 Nonresidential Direct Contact Criteria	MDEQ 2013 Soil Saturation Concentration Screening Levels
PCBs											
Total PCBs	ug/kg	- -	- -	- -	- -	- -	16,000,000	6,500,000	810,000	16,000	- -
Volatile Organics											
Benzene	ug/kg	- -	- -	100	100	4,000	8,400	470,000,000	45,000	840,000	400,000
1,2-Dibromo-3-chloropropane	ug/kg	- -	- -	10	10	- -	1,200	700,000	900	20,000	1,200
1,2-Dichlorobenzene	ug/kg	- -	- -	14,000	14,000	280	20,000,000	44,000,000,000	46,000,000	63,000,000	210,000
Dichloromethane	ug/kg	- -	- -	100	100	30,000	240,000	8,300,000,000	700,000	5,800,000	2,300,000
Ethylbenzene	ug/kg	- -	- -	1,500	1,500	360	460,000	13,000,000,000	2,400,000	71,000,000	140,000
Tetrachloroethene	ug/kg	- -	- -	100	100	1,200	21,000	1,200,000,000	210,000	930,000	88,000
Toluene	ug/kg	- -	- -	16,000	16,000	5,400	610,000	12,000,000,000	3,300,000	160,000,000	250,000
Trichloroethene	ug/kg	- -	- -	100	100	4,000	1,900	59,000,000	14,000	660,000	500,000
Total Xylenes	ug/kg	- -	- -	5,600	5,600	980	12,000,000	130,000,000,000	54,000,000	1,000,000,000	150,000
Semivolatile Organics											
2,4-Dimethylphenol	ug/kg	- -	- -	7,400	20,000	7,600	- -	2,100,000,000	- -	36,000,000	- -
2-Methylnaphthalene	ug/kg	- -	- -	57,000	170,000	4,200	4,900,000	290,000,000	1,800,000	26,000,000	- -
Acenaphthene	ug/kg	- -	- -	300,000	880,000	8,700	350,000,000	6,200,000,000	97,000,000	130,000,000	- -
Atrazine	ug/kg	- -	- -	60	60	150	- -	- -	- -	330,000	- -
Benzo(a)pyrene	ug/kg	- -	- -	- -	- -	- -	- -	1,900,000	- -	8,000	- -
Butylbenzylphthalate	ug/kg	- -	- -	2,200,000	5,000,000	120,000	- -	21,000,000,000	- -	120,000,000	310,000
Carbazole	ug/kg	- -	- -	9,400	39,000	1,100	- -	78,000,000	- -	2,400,000	- -
Dibenzofuran	ug/kg	- -	- -	- -	- -	1,700	3,600,000	2,900,000	160,000	- -	- -
Di-n-Butylphthalate	ug/kg	- -	- -	960,000	2,700,000	11,000	- -	1,500,000,000	- -	87,000,000	760,000
Fluoranthene	ug/kg	- -	- -	730,000	730,000	5,500	1,000,000,000	4,100,000,000	890,000,000	130,000,000	- -
Fluorene	ug/kg	- -	- -	390,000	890,000	5,300	1,000,000,000	4,100,000,000	150,000,000	87,000,000	- -
Phenanthrene	ug/kg	- -	- -	56,000	160,000	2,100	5,100,000	2,900,000	190,000	5,200,000	- -
Phenol	ug/kg	- -	- -	88,000	260,000	9,000	- -	18,000,000,000	- -	230,000,000	12,000,000
Naphthalene	ug/kg	- -	- -	35,000	100,000	730	470,000	88,000,000	350,000	52,000,000	- -
Inorganics											
Aluminum	mg/kg	6,900	- -	1.0	1.0	- -	- -	- -	- -	370,000	- -
Antimony	mg/kg	- -	- -	4.3	4.3	94	- -	5,900	- -	670	- -
Arsenic	mg/kg	5.8	8.05	4.6	4.6	4.6	- -	910	- -	37	- -
Barium	mg/kg	75	75	1,300	1,300	440	- -	150,000	- -	130,000	- -
Beryllium	mg/kg	- -	- -	51	51	84	- -	390	- -	1,000	- -
Cadmium	mg/kg	1.2	- -	6	6	3	- -	2,200	- -	2,100	- -
Chromium	mg/kg	- -	23.2	30	30	3.3	- -	240	- -	9,200	- -
Cobalt	mg/kg	6.8	11.8	0.8	2	2	- -	5,900	- -	9,000	- -
Copper	mg/kg	32	- -	5,800	5,800	73	- -	59,000	- -	73,000	- -
Cyanide (total)	mg/kg	0.39	- -	4	4	0.1	- -	250	- -	250	- -
Iron	mg/kg	12,000	- -	6	6	- -	- -	- -	- -	580,000	- -
Lead	mg/kg	21	33.2	700	700	2,500	- -	44,000	- -	900	- -
Manganese	mg/kg	440	631	1	1	26	- -	1,500	- -	90,000	- -
Magnesium	mg/kg	- -	- -	800	22,000	- -	- -	2,900,000	- -	1,000,000	- -
Mercury	mg/kg	0.13	- -	1.7	1.7	0.05	89	8,800	62	580	- -
Nickel	mg/kg	20	29	100	100	76	- -	16,000	- -	150,000	- -
Selenium	mg/kg	0.41	- -	4	4	0.4	- -	59,000	- -	9,600	- -
Silver	mg/kg	1	- -	4.5	13	0.1	- -	2,900	- -	9,000	- -
Thallium	mg/kg	- -	- -	2.3	2.3	4.2	- -	5,900	- -	130	- -
Vanadium	mg/kg	- -	27.7	72	990	430	- -	- -	- -	5,500	- -
Zinc	mg/kg	47	76.3	2,400	5,000	170	- -	- -	- -	630,000	- -

Constituents	Units	MDEQ 2013 Residential Drinking Water Criteria	MDEQ 2013 Non-Residential Drinking Water Criteria	MDEQ 2013 Groundwater Surface Water Interface Criteria	MDEQ 2013 Nonresidential Ground Water Volatilization to Indoor Air Inhalation Criteria	MDEQ 2013 Water Solubility	MDEQ 2013 Flammability and Explosivity Screening Level
PCBs							
Total PCBs	ug/L	0.5	0.5	0.2	45	44.7	- -
Volatile Organics							
Acetone	ug/L	730	2,100	1,700	1,000,000,000	1,000,000,000	15,000,000
Benzene	ug/L	5	5	200	35,000	1,750,000	68,000
Dichloromethane	ug/L	5	5	1,500	1,400,000	17,000,000	- -
1,4-Dioxane	ug/L	7.2	350	280	- -	900,000,000	140,000,000
Ethylbenzene	ug/L	74	74	18	170,000	169,000	43,000
Vinyl Chloride	ug/L	2	2	13	13,000	2,760,000	33,000
Total Xylenes	ug/L	280	280	49	190,000	186,000	70,000
Semivolatile Organics							
2,4-Dimethylphenol	ug/L	370	1,000	380	- -	7,870,000	- -
bis(2-Ethylhexyl)phthalate	ug/L	6	6	14	- -	340	- -
Fluorene	ug/L	880	2,000	12	2,000	1,980	- -
Phenanthrene	ug/L	52	150	2	1,000	1,000	- -
Phenol	ug/L	4,400	13,000	450	- -	82,800,000	- -
Naphthalene	ug/L	520	1,500	11	31,000	31,000	- -
Inorganics							
Antimony	ug/L	6	6	130	- -	- -	- -
Arsenic	ug/L	10	10	10	- -	- -	- -
Barium	ug/L	2,000	2,000	670	- -	- -	- -
Beryllium	ug/L	4	4	6.7	- -	- -	- -
Cadmium	ug/L	5	5	2.5	- -	- -	- -
Chromium	ug/L	100	100	11	- -	- -	- -
Cobalt	ug/L	40	100	100	- -	- -	- -
Copper	ug/L	1,000	1,000	13	- -	- -	- -
Iron	ug/L	300	300	- -	- -	- -	- -
Lead	ug/L	4	4	14	- -	- -	- -
Manganese	ug/L	50	50	1,300	- -	- -	- -
Mercury	ug/L	2	2	0.0013	56	56	- -
Nickel	ug/L	100	100	73	- -	- -	- -
Silver	ug/L	34	98	0.2	- -	- -	- -
Thallium	ug/L	2	2	3.7	- -	- -	- -
Vanadium	ug/L	4.5	62	27	- -	- -	- -
Zinc	ug/L	2,400	5,000	170	- -	- -	- -
Miscellaneous							
Total Dissolved Solids	mg/L	500	500	500	- -	- -	- -

Notes:

1. Groundwater Surface Water Interface Criteria listed for barium, beryllium, cadmium, chromium, copper, lead, manganese, nickel and zinc are calculated based on a hardness of 150 mg/L-CaCO3 for southern Lower Peninsula waters protected as a drinking water source.

DRAFT

RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

USPS PROPERTY
CRITERIA TABLES 2013 CRITERIA

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2F

CITY: SYRACUSE DIV/GROUP: IMDV DB: A.FOX G.STOWELL PM:(Reqd) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\gstowell\OneDrive - ARCADIS\BIM 360 Docs\RACER TRUST\RACER PNC 2018 ADMIN\2018B0064607.AD18101-DWG\FIG2F-DATABOX.DWG LAYOUT: 2F SAVED: 12/7/2018 11:15 AM ACADVER: 21.0S (LMS TECH) PAGESETUP: C-LD2B-PDF-GMS PLOTSTYLETABLE: PLTFULL.CTB PLOTTED:
12/7/2018 11:16 AM BY: STOWELL, GARY
XREFS:
X-PNC-DL
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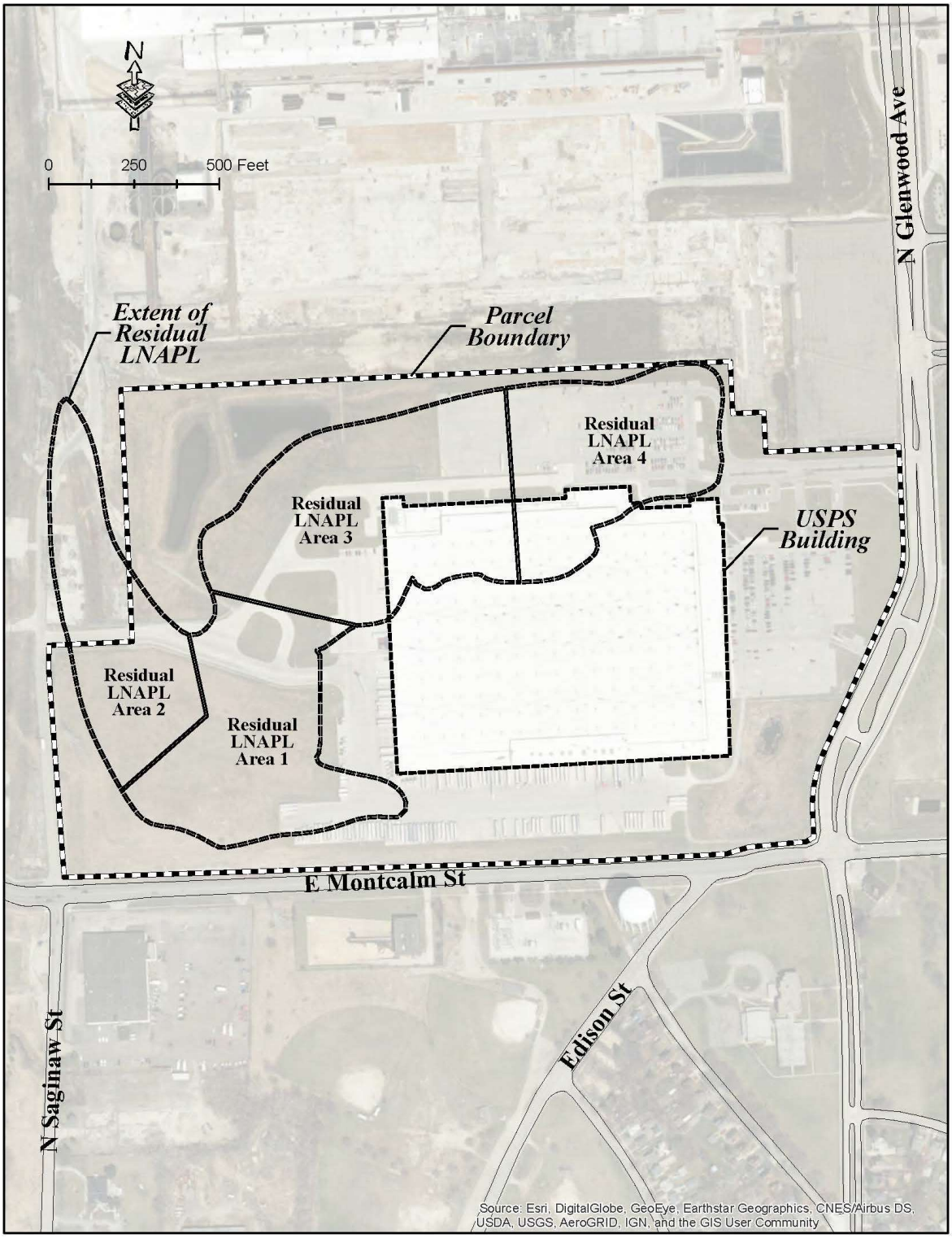
Draft - For Reference Purposes Only

ATTACHMENT 4
LNAPL BOUNDARIES

Draft - For Reference Purposes Only

EXHIBIT 7

RESIDUAL LNAPL AREAS



Draft - For Reference Purposes Only

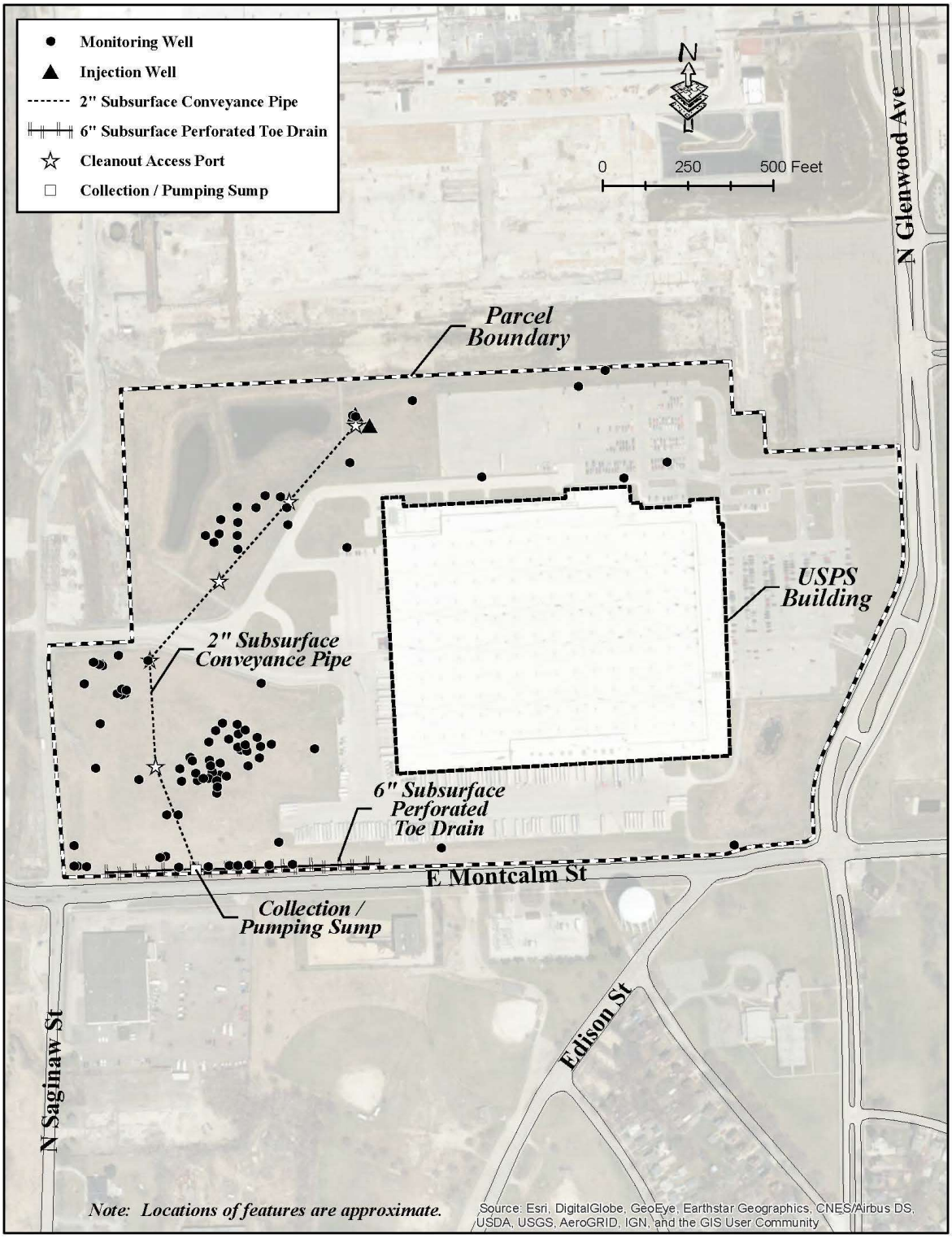
ATTACHMENT 5

SEEP INJECTION SYSTEM

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EXHIBIT 6

MONITORING WELLS AND MONTCALM STREET SEEP CONTROL SYSTEM



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ATTACHMENT 6

PLANNED PCB SOIL REMOVAL INTERIM MEASURE

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M-13
M-26
M-21
M-2
M-1
M-9
P-11
P-9
P-10
F-16
M-27
M-19
M-7
F-10
F-15
F-1
F-11
W-5
W-3
F-3
W-6
F-12
W-8
W-13
W-11
W-10
W-1
W-9
Owens St
Wing St
Portland St
E Montcalm St
E Montcalm St
Edison St
SWDF

N

LEGEND

- ABANDONED SEWER BULKHEAD LOCATION
- ABANDONED SEWER
- PCB IMPACTS GREATER THAN 100 PPM
- ESTIMATED EXCAVATION BOUNDARIES
- BOUNDARY OF CURRENT AND FORMERLY OWNED RACER TRUST PROPERTY (NOWAK & FRAUS, JUNE 2012)
- USPS (UNITED STATES POSTAL SERVICE) DISTRIBUTION CENTER PROPERTY BOUNDARY
- AREAS OF INTEREST

AOI - AREA OF INTEREST

PCBs - POLYCHLORINATED BIPHENYLS

PPM - PARTS PER MILLION

0 250 500

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

AREAS OF INTEREST
AOI W-1 SOIL REMOVAL AREA

ARCADIS Design & Consultancy for natural and built assets

FIGURE
3

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: TM: TR: PROJECT NUMBER: B0064607.2019.00004 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
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