ENCORE PROJECT SUMMARY FORM

Revision No. 2
Revision Date: 1/18/08

Aug 05, 2009 15:36

Site Name:	Pontiac West - Validation Center
Site No.:	111-West
Site Address:	200 South Boulevard West, Pontiac, MI 48341
Site Type:	☐ Superfund ☐ Inactive/Sold ☐ Operating Plant ☐ Closed Plant
	☐ Operating Plant ☐ Closed Plant ☐ Other
Site Program:	Federal State
8	▼ Voluntary
	Other
Regulatory Oversight:	☐ Yes
-	Contraction and a second a second and a second a second and a second a
GM Program Manager:	
	Name: Fred Ringhage
	Phone No.: (248) 753-5790
	E-mail: <u>rred.w.rindhage@gm.com</u>
-	
CM Due in at Management	
GM Project Manager:	Name: Fred Rindhage

(248) 753-5790

fred.w.rindhage@gm.com

Other GM Personnel Working on Project:

GENERAL INFORMATION

Name: _____ Phone No.:

Name: Phone No.: E-mail:

E-mail:

Phone No.:

E-mail:

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ENCORE PROJECT SUMMARY FORM

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GENERAL INFORMATION (CONTINUED)

Consultant (If Any):		
. , , , ,	Firm Name:	Conestoga-Rovers and Associates, Inc.
	Address:	651 Colby Drive
		Waterloo, Ontario N2V 1C2
	Contact Name:	Glenn Turchan/Terry Gayman
	Phone No.:	(519) 884-0510
	Firm Name:	
	Address:	
	Contact Name:	
	Phone No.:	
Contractor (If Any):	E. N.	The Marie 36
	Firm Name:	<u> </u>
	Address:	
	Contact Name:	16. 16. 16. 16. 16. 16. 16. 16. 16. 16.
	Phone No.:	
		<u> </u>
	Firm Name:	<u>6449</u>
	Address:	<u>k</u>
	Contact Name:	
	Phone No.:	-
	Flione No.:	
Agency Contact:		
	Agency Name:	
	Address:	
	Contact Name:	
	Phone No.:	
	Agency Name:	
	Address:	
	Contact Name:	
	Phone No.:	

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GENERAL INFORMATION (CONTINUED)

Consultant ENCORE Contact:

Name: Glenn Turchan/Terry Gayman

Phone No.: (519) 884-0510

E-mail: gturchan@craworld.com/tgayman@craworld.com

END OF GENERAL INFORMATION

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SITE INFORMATION

Manufacturing/Operating History:

The Site is comprised of approximately 133 acres of land. The Site included three manufacturing plants, Plants 3, 4, and 5; Building 30; several ancillary structures (a substation, a hazardous waste 90-day storage building, and an aboveground storage tank (AST) farm); paved parking areas; Central Vehicle Operations (CVO) areas; and landscaped areas. Plant 4 included Buildings 20, 25, 31, and 37. The total area under roof for the Site was approximately 1.68 million square feet (structures are currently being demolished, demolition to be completed in the 1st quarter 2008).

The northern portion of the Site consists of the existing CVO Parking and Product Vehicle Parking areas, which are located in the location of former Plant 1. Plant 1 was purchased from the Rapid Motor Company in 1906 and was demolished by GM in 1984. Major production operations at the Site while under GM's operation have included assembly of trucks, motor homes, and buses, welding, phosphating, dip prime (Electrodeposition paint operations (ELPO)), and painting. Support operations included warehousing, development and testing laboratories, a powerhouse, and a railroad shipping facility. Production activities at the Site ceased in August 2005.

Based on the review of available information and discussions with individuals associated with the Site, additional uses of the northern portion of the Site consisted of: residential dwellings and commercial stores; former Fire Station No. 2; and a former gas station, which was located at the far northeast corner of the Site. West Wilson Avenue, previously known as West Foot Avenue, historically bisected the Site, running in an east-west direction. The southern portion of the Site consisted of: various commercial properties including a bank and a hospital; as well as industrial properties including Flander's Electrical Company Inc. (manufacturers of electric automobiles); Pontiac Drop Forge Company; the Wilson Foundry and Machine Company; and Detroit Weather Proof Body Company (manufacturers of winter tops for automobiles).

The Site location is presented on Figure 1.

Current Owner/Operator:

Company Name: General Motors Corporation

Address: 300 Renaissance Center, Detroit, Michigan 48265

Contact Name: Fred Rindhage Phone No.: (248) 753-5790

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GENERAL INFORMATION (CONTINUED)

ENCOR	ENCORE Contractual Responsibilities: (if not owned by GM/ENCORE)					
Propert	Description: (Attach Site Map)					
Size:	133 acres Zoning: M-2: Heavy Manufacturing					
Surrour	ding Land Use/Zoning: (Attach Map, if available)					
North:	Commercial (zoned C-3: Fringe CBL) and Thoroughfare Frontage Business)					
South:	Residential (zoned R-1: Single-Family Residential/R-2: Two Family Terrace Family Dwelling)					
East:	Commercial/Industrial coried S.3. Fringe CBD and Thoroughfare Frontage					
	Business/M-1: Light Manufacturing)					
West:	Residential (zoned K-1, Single-Family Residential/R-2: Two Family Terrace Family					
	Dwelling)					
The City	of Pontiac Zoning Map is presented in Attachment A.					
	- Pris					

END OF SITE INFORMATION

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REGIONAL INFORMATION

Topographic Description: (include Topo and/or USGS Map) See attached Site location figure (Figure 1) developed from the area USGS Map.					
•					

Geologic Description: (include General Geological Column Schematic)

Overburden:

Regional geologic profile consists of three distinct units:

- A surficial fill and/or a native granular horizon;
- A glacial till deposit, and
- A Mississipian aged bedrock (Coldwater Shale).

In areas near the Site, the geology is as follows:

- Surficial fill materials are typically comprised of a variable mix of sand, gravel, clay, asphalt, concrete, and other engineered fill;
- Fill unit ranges in depth from approximately 5 to 15 feet below grade;
- Below the fill material, up to 350 feet of glacial material is encountered;
- This glacial material generally consists of a medium-textured, poorly stratified clay till with thin, laterally discontinuous lenses of silts, sands, and/or gravels; and
- In the vicinity of the Site, the glacial till does contain several interbedded laterally continuous sand layers of variable thickness between 120 and 350 feet below grade, including a glacial outwash deposit of well-sorted sand and gravel at approximately 220 feet below grade.

Bedrock: (If Appropriate)

Depth to bedrock in the vicinity of the Site ranges from approximately 250 to 350 feet below grade. The surface elevation of the bedrock unit is approximately 625 to 650 feet above mean sea level (AMSL). The Coldwater Shale may be as much as 1,300 feet thick in the vicinity of the Site and is generally described as dark brown to black, bituminous, fissile, and finely laminated.

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REGIONAL INFORMATION (CONTINUED)

Hydrogeologic Description: (include General Hydrogeological Cross-Section)

Overburden:

- Groundwater is encountered within the surficial fill/granular material, the glacial till deposits, and the underlying bedrock unit.
- Depth to groundwater, groundwater quality, and groundwater quantity varies between and within the geological units.
- Within the shallow surficial fill/granular horizon, groundwater is encountered in unconfined "perched" conditions (accumulating on top of the clay till). Its presence and saturated thickness are influenced by seasonal precipitation, local drainage patterns, and surficial geology.
- In the vicinity of the Site perched groundwater is occasionally encountered at depths of approximately 10 to 20 feet velow grade and is laterally discontinuous.
- Within the glacial till, groundwater has been encountered in confined conditions within the interpedded sand units and the outwash deposits encountered approximately 120 to 250 feet below grade.
- During a 1981 hydraulic assessment near the Site (CDM, 1981), three sand and sand/gravel aquifers were identified at depths of approximately 120, 150, and 210 feet below ground surface, respectively. The units are approximately 7, 25, and 50 feet blick, respectively.
- These interpedded and aquifers are separated from the perched groundwater by approximately 100 feet of glacial clay till.
- The glacial clay has an estimated hydraulic conductivity on the order of 10-6 cm/s to 10-9 cm/s based upon published values (Fetter, 1994 and Kasenow, 1997).

Bedrock: (If Appropriate)

- Below the overburden aquifers, the Coldwater Shale is commonly considered a nonproductive aquifer, typically yielding only small amounts of water.
- More abundant water supply is found at greater depths and with significant increases in mineral content (i.e., brines).
- The bedrock water resources, like the more usable lower sand and gravel aquifer above them, are considered to be protected from surficial contamination.

Groundwater Usage:

Site Usage: (If Any)

None

Regional Usage: (If Any)

- Shallow perched water table zone is generally not utilized for water supply purposes in the Pontiac area.
- 210 foot aquifer used for residential drinking wells in the vicinity of the

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REGIONAL INFORMATION (CONTINUED)

Hydrologic Description: (include Map if appropriate)

- Site is located within both the Clinton River and Rouge River drainage basins.
- Clinton River, which is located approximately 2,100 feet west of the Site, flows easterly and discharges into Lake St. Clair.
- Rouge River, which is located approximately 4.0 miles southeast of the Site, flows to the southwest prior to turning east and discharging into the Detroit River (south of Lake St. Clair).
- There are no natural rivers, streams, or surface water bodies located within the Site's property boundaries.
- Several surface water bodies and intermittent drains are located within a mile of the Site.
- The closest surface water body is Crystal Lake, which is located approximately 2,100 feet west of the Site.

END OF REGIONAL INFORMATION

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OVERALL PROJECT TEAM ORGANIZATION/RESPONSIBILITIES

AREA/UNIT OF CONCERN:

Area/Unit of Concern Project Description	Team Players			
	Name	Company	Role	
(COPY FROM AREA/UNIT OF CONCERN PROJECT SUMMARY)		, ,		
Entire Site	Glenn Turchan/ Terry Gayman	CRA	Consultant PMs	
	Fred Rindhage	GM	ENCORE PM	
		EOVA		
	is all who			
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(COPY AND COM	PLETE ABOV	/EFØR EACH	AREA/ONT	OF CONCER	N)	
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END OF OVERALL PROJECT TEAM ORGANIZATION/RESPONSIBILITIES

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AREA/UNIT OF CONCERN (COMPLETE FOR EACH SEPARATE AREA OR UNIT AT THE SITE)

NAME OF AREA/UNIT OF CO	NCE	RN:		
Area/Unit Status:		Inactive Due Diligence Investigation Remedial Design Remedial Action O&M Other	Phase I ESA cond partially conducte	ucted, Phase II ESA ed
Area/Unit Program:		Federal Voluntary Other	Stat	e nsaction Agreement
Specific Media of Concern:		Soil Humen or Ec Surface Water (Hu Sediments (Huma Groundwater (Hum Air (Human or Eco	man or Ecologic) or Ecologic) man or Ecologic)	Under investigation Under investigation
Specific Chemicals of Concern:		VOCs SVOCs Pest/PCBs Inorganics Other	To be determined To be determined To be determined To be determined	

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AREA/UNIT OF CONCERN (CONTINUED)

Project Summary: (Attach Figure)

A Phase I Environmental Site Assessment (ESA) site inspection was conducted at the Site on June 2, 2006 and July 21, 2006. A total of 22 Potential Areas of Concern (PAOCs) and four Potential Areas of Release (PAORs) were identified. The locations of the PAOCs and PAORs are presented on Figure 2.

A Phase II ESA Work Plan was submitted to ENCORE in October 2007 and Phase II ESA Site-specific Health and Safety plan was prepared Phase II ESA Field Investigation activities began on October 5, 2007 and are currently on going. Figure 3 shows complete test pit, borehole and monitoring well locations.

Ongoing tasks being conducted include:

Preparation of Phase II ESA Report and assessment of data gaps.

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High Priority Issues/ Action Items:

- Conclude Phase II ESA Field Investigation
- Evaluate data from the Phase II ESA and determine required remedial actions or areas needing additional delineation (if necessary)
- Finalize the Phase II ESA Report

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AREA/UNIT OF CONCERN (CONTINUED)

	mediation in a manner to support the industrial use of 'limited" industrial land use pursuant to Act 451,
etch:	stial under Folki
	rial under r
	Discourse Services
nieve Long-Term Goals	9 /2 00 V.D.
istrial use of the Site. Ensure that	t altwork is completed consistent with the GM
h Figure, if appropriate)	
n 2008/2009 or as required to sup	oport divestiture.
-	ch Figure, if appropriate) in 2008/2009 or as required to sup

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AREA/UNIT OF CONCERN (CONTINUED)

Short-Term Summary: (Next Calendar Year)

Goals - Reasonable:

- Complete the Phase II ESA
- Conduct additional delineation investigation (if necessary)
- Determine required remedial actions (if necessary)
- Implement required remedial actions (if necessary) to the satisfaction of state and federal agencies
- Begin facilitation of the divestiture and/or redevelopment of the Site

- Stretch:

• Complete facilitation of the divestiture and or redevelopment of the Site

Strategy to Achieve Short-Term Goals

- Complete Phase II field investigation (surveying, hydraulic monitoring), identify data gaps (if applicable) and remediation (if necessary) in accordance with accepted standards of practice
- Complete additional delineation (if necessary)
- Complete Phase II ESA Report and provide recommendations for overall project strategy
- Research and develop innovative remedial technologies (if required)

Schedule (attach Figure, if appropriate):

- Complete the Phase II ESA field activities: 1st quarter 2008
- Complete the Phase II ESA Report: 1st and 2nd quarter 2008
- Complete additional delineation (if necessary) 2nd quarter 2008
- Determine required remedial actions (if necessary): 2nd and 3rd quarter 2008
- Implement required remedial actions (if necessary) to the satisfaction of state and federal agencies: 3rd quarter 2008
- Begin facilitation of the divestiture and/or redevelopment of the Site (as appropriate): 4th quarter 2008

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AREA/UNIT OF CONCERN (CONTINUED)

Summary of Work Activities Planned for Next Year:

- Complete the Phase II ESA field investigation
- Finalize the Phase II ESA Report (including preparation of geologic cross sections, updating the Site database, etc.)
- Conduct additional delineation investigation (if necessary)
- Determine required remedial actions (if necessary)
- Implement required remedial actions (if necessary) to the satisfaction of state and federal agencies

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AREA/UNIT OF CONCERN (CONTINUED)

Finan	cial Assurance
1.	Is financial assurance required for this project? Yes \square No \boxtimes If No, proceed to next section.
2.	Confirm that the detailed cost estimate associated with the financial assurance requirements was reviewed during this past year to determine whether revisions (other than adjustments for inflation made by WFG Finance) are appropriate. Yes No No I If revisions are appropriate, please refer to "Preparation of Cost Estimates for REALM and ENCORE Projects" Section in the REALM APM and ENCORE APM.
3.	Provide the date of the most current agency approved cost estimate associated with financial assurance and the title and date of the document that contains it. Cost estimate amount: Date of cost estimate: Title of document: Date of document:
4.	Provide the title and date of the agency approval document for the above referenced cost estimate. Title of document: Date of document:

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AREA/UNIT OF CONCERN (CONTINUED)

Potential Concerns/Factors Influencing Project Completion/Cost

- Extent of contamination currently undefined (known extent will be summarized in Phase II ESA Report), additional delineation may be required
- Remedial actions required (if any) not determined
- Schedule for divestiture/redevelopment of the Site not determined
- Potential involvement of state or federal agencies may alter the scope of work presented above

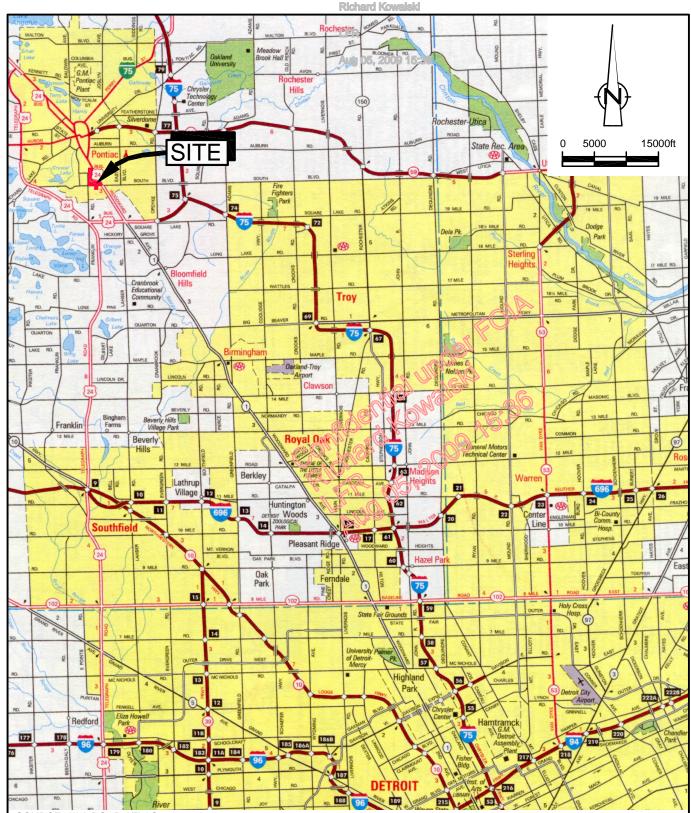
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AREA/UNIT OF CONCERN (CONTINUED)

Work Activities: Planned for Upcoming Year	Activity Phase II ESA Reporting	Time Period 1st and 2nd quarter 2008	Bid Date
	Complete	2 nd quarter 2008	
	additional	1	
	delineation		
	activities (if		
	required)		
	Determine	2^{nd} , 3^{rd} , and 4^{th}	
	Remedial Actions	quarter 2008	
	and implement		
	(if necessary)		
Activities Where:	Activity	Time Ceriod	Other Site(s)
Synergies with Other Sites may Exist for Upcoming Year	Well of the second	W. V.	
	Colination		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
END OF AREA/UNIT OF CON	CERN V		



SOURCE: AAA ROAD ATLAS

PRIVILEGED AND CONFIDENTIAL PREPARED AT THE REQUEST OF COUNSEL

figure 1

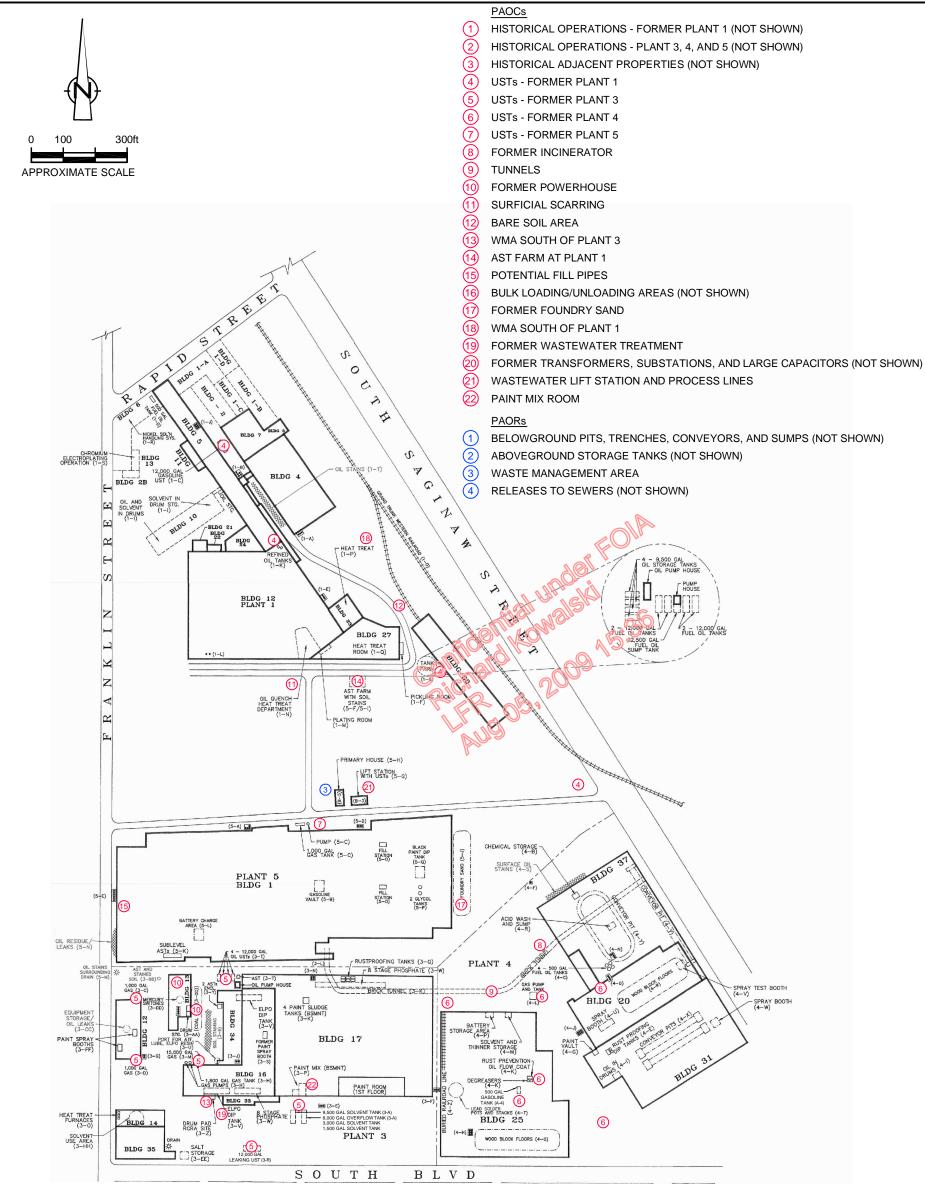
SITE LOCATION
GENERAL MOTORS PONTIAC CENTERPOINT CAMPUS
VALIDATION CENTER

200 South Boulevard West, Pontiac, Michigan



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LEGEND

17322-07(MEMO002)GN-WA002 JAN 17/2008

- 4 POTENTIAL AREA OF CONCERN (PAOC)
- 3 POTENTIAL AREA OF RELEASE (PAOR)

NOTES: - SITE PLAN IS HISTORICAL (PRE 1984)
- LOCATIONS OF PAOC/PAORs ARE APPROXIMATE

SOURCE: POTENTIAL AREAS OF ENVIRONMENTAL CONCERN GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM PONTIAC WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP PRIVILEGED AND CONFIDENTIAL PREPARED AT THE REQUEST OF COUNSEL

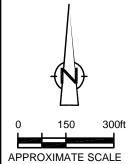
figure 2

LOCATIONS OF PAOC/PAORS
GENERAL MOTORS PONTIAC CENTERPOINT CAMPUS
VALIDATION CENTER

200 South Boulevard West, Pontiac, Michigan



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NOTES: 1. SITE PLAN IS HISTORICAL

2. LOCATIONS OF PAOCs ARE APPROXIMATE

HISTORICAL SITE PLAN SOURCE: GENERAL MOTORS CORPORATION NORTH AMERICA TRUCK PLATFORM WEST FACILITY PONTIAC, MICHIGAN, THE TRAVERSE GROUP, DRAFT PHASE I ENVIRONMENTAL ASSESSMENT, DECEMBER 19, 1994.

AERIAL PHOTOGRAPH SOURCE: SATELLITE IMAGE PROVIDED BY NASA, COPYRIGHT 2006, AND TERRA METRICS, COPYRIGHT 2006. IMAGE DOWNLOADED FROM GOOGLE

EARTH PRO NOVEMBER 8, 2006.

APPROXIMATE PROPERTY BOUNDARY

COMPLETED BOREHOLE SAMPLE LOCATION

COMPLETED TEST PIT LOCATION

MW2-07 COMPLETED MONITORING WELL LOCATION

DRAFT

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COMPLETED SAMPLING LOCATIONS - AERIAL VIEW GENERAL MOTORS PONTIAC CENTERPOINT CAMPUS **VALIDATION CENTER** 200 South Boulevard West, Pontiac, Michigan

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ATTACHMENTA

CITY OF PONTIAC ZONING MAP

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