17021-18

Worldwide Facilities Group
Remediation Team

September 26, 2001

Ms. Mirtha Capiro
Project Coordinator for MID 041 793 340
RCRA Enforcement Branch (DE-9J)
U.S. EPA, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

RE: Re: Transmittal of Response to U.S. EPA Comments on the Phase 1B RFI Work Plan Amendment, Saginaw Metal Casting Operations, U.S. EPA ID No MID 041-793-340

Dear Ms. Capiro:

Enclosed are responses to the United States Environmental Protection Agency's (U.S. EPA's) comments on the Phase 1B RFI Work Plan Amendment for the Saginaw Metal Casting Operations (SMCO) Plant in Saginaw, Michigan. These responses to comments were prepared as part the preparation for the upcoming meeting with U.S. EPA and the Michigan Department of Environmental Quality (MDEQ) at the SMCO Facility on October 25, 2001. Please call me should you wish to discuss any or all of the responses prior to the meeting. My telephone number is 248-680-5219.

Sincerely,

Cheryl R. Hiatt

Cheryl R. Hiatt
Project Coordinator
General Motors Corp.

Enclosures

cc: Mr. Jim Sygo, MDEQ WMD
Mr. Ed Haapala, MDEQ WMD
Ms. Paula Williams, U.S. EPA
Ms. Rhonda Klann, MDEQ ERD
Mr. Ron Stone, MDEQ WMD
Ms, Joyce Broka, MDEQ USTD
Ms. Trisha Peters, MDEQ WMD
Ms. Jean Caufield, GM WFG Remediation
Mr. Tony Thrubis, GM Legal
Mr. James McGuigan/Mr. Bill Steinmann, CRA
Mr. Joe Toth/ Mr. Ray Ilkka, GM SMCO

Troy Tech Park South Bldg A, 1996 Technology Drive • Mail Code 483-619-356 • Troy, MI 48083 • FAX (248)-680-5129

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: Cheryl R Hiatt

Name: Cheryl R. Hiatt

Title: Project Coordinator

Response to U.S. EPA Electronic Comments on GM's Phase 1B RFI Work Plan Amendment

The following document is a response to comments received by General Motors (GM) from the United States Environmental Protection Agency (U.S. EPA) in June and September 2001. GM would like to generally note that the Phase 1B RFI Work Plan Amendment (Amendment) was not intended to be construed as a Phase 1B Report; but, rather a Work Plan to further characterize areas where we see gaps in data that we will need to complete the Phase 1B Report. Many of the comments received from the U.S. EPA requested additional information on other areas of the Facility where GM believes it has obtained sufficient information to complete the Phase 1B RFI Report. All collected data will be evaluated and presented in the Phase 1B RFI Report. Data for these areas were collected during the Phase 1A and Phase 1B investigation. While the data for the Phase 1A have been summarized in the Phase 1A RFI Report and Phase 1B RFI Work Plan, the Phase 1B data obtained to date have not been formally presented in a report (although these data have been submitted to the U.S. EPA and the screening results were presented in the drawing attached to the Amendment). Therefore, GM has proposed no additional Phase 1B investigation work at this time in areas where we believe sufficient information has been collected. The Phase 1B RFI Report, when completed, will present our evaluation and reasoning for believing data collection in those areas is complete.

The following presents the U.S. EPA's specific comments followed by GM's response:

Response to 6-15-01 U.S. EPA Electronic Comments

GENERAL ITEMS

Comment:

a) Define "elevated PID reading". This is specially critical for soil screening at Unit B near MW-00509.

Response:

As described in the Phase 1A RFI Report and Phase 1B RFI Work Plan (Work Plan), this is a standard, industry accepted, method which generally consists of visual and olfactory evidence of suspected contamination and/or significant needle deflections on the PID.

Because of the variability of sample locations, sample matrices, soil-type, detection limits, and potential constituents of concern, a direct correlation between detected

concentrations and PID readings from the field cannot be established. This method was used during the Phase 1A and the initial Phase 1B Investigation. Therefore, GM is proposing to continue to utilize a combination of visual/olfactory evidence and photoionization readings determine the presence of contamination from a potential source area(s).

If an unsaturated source area is defined through PID and subsequent laboratory analyses, the need for additional soil samples to characterize the conditions and/or extent of the potential source area will be considered.

Comment:

b) Clarify if there is a SOP for collection of soil samples from soil borings, including information on boring depth and sampling intervals.

Response:

As established during completion of previous activities under this RFI, general unsaturated soil samples will be collected for laboratory analysis at the surface (generally, zero to two feet below ground surface - bgs) and at the interval immediately above the capillary fringe, if possible. An additional unsaturated sample will be collected at the four to six, or five to seven, foot bgs interval, if groundwater is encountered at depths greater than eight feet bgs. For borings extending below the upper, water-bearing zone, additional unsaturated soil samples will be collected for laboratory analysis at a rate of one per fifteen feet of drilling.

For specific-purpose borings, the depths for each sample to be submitted to the laboratory is specified in the Work Plan, or the Phase 1B Amendment (June 5, 2001). The soil sampling SOP is included in the Phase 1A RFI Work Plan (June 1998).

Comment:

c) Provide status of UST investigations since that information is critical for achieving environmental indicators. Also, see comments concerning the areas being investigated under the MDEQ ERD lead.

Response:

There are six leaking underground storage tank (LUST) investigations that are still open with the MDEQ, as described below:

Five USTs were removed from the area south of the former Nodular Iron Oil House in IU G (tanks N.I. #3-6 and N.I. #8). The investigation of this area has been incorporated into the site-wide RFI due to the fact that there were constituents

detected that were not associated with substances known to have been stored in these USTs. At one UST (G.I. #1), located at the current Oil House in IU D, groundwater is being monitored annually for closure under the MDEQ – Storage Tank Division. These USTs are tabled below:

List of Open UST Investigations		
AOI Number	***Tank Number***	***AOI Description***
D.17	*G.I. #1*	*Former Grey Iron Oil House UST*
G.12	*N.I. #3, #4, #5, #6*	*Former Nodular Iron Plant Oil House USTs*
G.14	*N.I. #8*	*Former Oil House UST West*

The following table presents the closed LUSTs at the Facility:

List of Closed LUSTs			
AOI Number	*Tank Number*	*AOI Description*	*Status*
D.18	*G.I. #2, #3*	*Former Grey Iron Oil House USTs*	*Closed under MDEQ's Requirements*
D.19	*G.I. #4*	*Former Gasoline UST*	*Closed under MDEQ's Requirements*
D.20	*G.I. #5*	*Former Garage Annex UST Service Maintenance Site*	*Closed under MDEQ's Requirements*
D.21	*G.I. #7*	*Former Garage Oil/Water Separator UST*	*Closed under MDEQ's Requirements*
D.22	*G.I. #8*	*Former Garage Annex Oil/Water Separator UST*	*Closed under MDEQ's Requirements*
D.23	*G.I. #10*	*Former Cooling Tower UST*	*Closed under MDEQ's Requirements*
E.11	*G.I. #6*	*Former Riverdock Crane Repair Building UST*	*Closed under MDEQ's Requirements*
E.13	*N.I. #9*	*Former Mill Water Pump House UST*	*Closed under MDEQ's Requirements*
G.13	*N.I. #7*	*Former Cooling Tower Pump House UST*	*Closed under MDEQ's Requirements*
I.4	*N.I. #10*	*Former Downes School Building UST*	*Closed under MDEQ's Requirements*
I.4	*N.I.#11 (AST)*	*Former Downes School Building UST*	*Closed under MDEQ's Requirements*
I.4	*N.I. #12 (AST)*	*Former Downes School Building UST*	*Closed under MDEQ's Requirements*

Additional soil samples were collected during the Phase 1B RFI for the following incidences currently being investigated in coordination with MDEQ-ERD:

AOI D.28: #8 Mold Line Basement PCB Contamination,
AOI D.31: 7/16/92 Diesel Fuel Contamination,

AOI D.32: *Contamination in Railroad Tracks West of the Cupola Cooling Towers, and*
AOI D.35: *4/12/95 Diesel Fuel Contamination.*

These newly collected data for AOIs D.31, D.32 and D.35, along with historical data, are also being incorporated into separate reports to be submitted to MDEQ-ERD (see response under Unit D).

Comment:

d) Consult MDEQ for any additional requirements concerning RCRA closure.

Response:

GM has been in consultation with MDEQ-WMD concerning the closure status of each of the former RCRA units which have not received final closure, and has submitted responses to answer MDEQ questions regarding all outstanding closures.

Comment:

e) Groundwater sampling method: Regarding grab samples and samples from temporary wells, provide rationale for selection of either sample collection method. Consider contaminant behavior in groundwater.

Response:

Temporary monitoring wells have been proposed where low-flow sampling will be completed (e.g., groundwater samples to be analyzed for SVOCs or PCBs), and where groundwater elevations will be measured (i.e., near monitoring well MW-07959). In order to conserve time and at locations where suspended solids will have a lesser impact on analytical results (based on past data and sampling activities), groundwater grab samples have been proposed.

SPECIFIC ITEMS

Comment:

Unit A

U.S. EPA will be discussing the investigation results with Rhonda Klann of MDEQ ERD to determine if the characterization of areas managing sluice sands from Unit A can be considered completed.

Response:

Based on the findings of the RFI to date, GM believes that sufficient data exist to complete the Phase 1B RFI Report, which is why we are not proposing additional investigation. Our evaluation of the data collected to characterize IU A will be detailed in the Phase 1B RFI Report.

Comment:

Unit B

VOCs near MW-00509:

a) Criterion for selecting locations for groundwater grab samples is unclear. The proposed sampling locations appear to be upgradient of MW-00509, with no locations being selected downgradient. Also, there are no locations downgradient from MW-00309 which is associated with SLE for PAHs.

Response:

The groundwater flow direction near the location of monitoring well MW-00509 is to the west-northwest. Groundwater analytical results from Phase 1B temporary monitoring wells SB-00309a and SB-00309b previously defined the downgradient extent of vinyl chloride. The two additional groundwater grab sample locations were selected because data gaps exist and because the source for the VOC contamination in unsaturated soil has not been determined. As indicated in the text, four additional soil borings will be advanced near this location for the purpose of identifying potential source areas for VOCs and SVOCs.

Groundwater analytical results from monitoring well MW-00309 detected two polynuclear aromatic hydrocarbons (PNAs, or PAHs) which exceeded the Phase 1B Screening Levels. We believe these results could be caused by the turbidity of the sample collected. Therefore, GM will resample this monitoring well for SVOCs

utilizing the low-flow purging/sampling techniques to remove suspended solids from the sample.

b) Soil characterization for lead appears warranted due to SLE for lead at SB-00508.

Response:

Numerous soil samples have been collected within the northern portion of Investigative Unit B (March 9, 2000, Monthly Progress Report and February 8, 2001, Monthly Progress Report). Sample results for total lead are tabled below (refer to the attached Figure for IU B for sample locations). These samples which have been submitted to the U.S. EPA show that the Phase 1B Screening Level exceedances of lead in soil in this area have been sufficiently defined. However, lead will be added to the analyte list for soil samples collected from the proposed borings located to the east of SB-00508.

Location ID	Sample ID	Top Depth	Bottom Depth	Date	Total Lead (mg/Kg)
B-1	B-1	0	1	01/18/00	45
B-2	B-2	0	1	01/18/00	160
B-3	B-3	0	1	01/18/00	430
B-4	B-4	0	1	01/18/00	26
B-5	B-5	0	1	01/18/00	99
B-6	B-6	0	1	01/18/00	130
B-7	B-7	0	1	01/18/00	2200
B-8	B-8	0	1	01/18/00	93
B-9	B-9	0	1	01/18/00	190
B-10	B-10	0	1	01/18/00	45
B-11	B-11	0	1	01/18/00	230
B-12	B-12	0	1	01/18/00	240
B-13	B-13	0	1	01/18/00	260
B-14	B-14	0	1	01/18/00	92
B-15	B-15	0	1	01/18/00	1300
B-16	B-16	0	1	01/18/00	890
B-17	B-17	0	1	01/18/00	54
B-18	B-18	0	1	01/18/00	170
B-19	B-19	0	1	01/18/00	32
B-20	B-20	0	1	01/18/00	65
B-21	B-21	0	1	01/18/00	270
B-22	B-22	0	1	01/18/00	68
B-23	B-23	0	1	01/21/00	82
B-24	B-24	0	1	01/21/00	85
B-25	B-25	0	1	01/21/00	160
B-26	B-26	0	1	01/21/00	6.7
B-27	B-27	0	1	01/21/00	110

MW-00008	B00088	0	2	09/25/98	10.5
MW-00008	B00089	4	6	09/25/98	37
MW-00008	B00090	22	24	09/25/98	4
MW-00009	B00091	22	24	09/25/98	4
MW-00305	B20266	1	3	06/21/00	4.1
MW-00305	B20267Q	1	3	06/21/00	119
MW-00305	B20268	8	10	06/21/00	5.4
MW-00509	B00092	0	2	09/25/98	148
MW-00509	B00093	2	4	09/25/98	323
MW-00509	B00094	12	14	09/25/98	5
MW-00700	B00018	0	2	09/14/98	9 J
MW-00700	B00019	4	6	09/14/98	2 J
MW-00700	B00020	14	16	09/14/98	6 J
MW-10000	B00095	0	2	09/25/98	21
MW-10000	B00096	6	8	09/25/98	5
MW-10000	B00097	18	20	09/25/98	5
MW-10000	B00098	32	34	09/25/98	6
MW-10000	B00099	48	50	09/25/98	6
SB-00005	B00227	0	1	03/01/00	24
SB-00005	B20277	2	4	07/05/00	6.7
SB-00005	B20278Q	2	4	07/05/00	9.7
SB-00006	B10381	2	4	06/30/00	96.8
SB-00104A	B20279	0	2	07/05/00	113
SB-00104A	B20280	2	4	07/05/00	10.4
SB-00104B	B20275	0	2	07/05/00	570
SB-00104B	B20276	2	4	07/05/00	1820
SB-00105	B00229	0	1	03/01/00	2780
SB-00105A	B20283	2	4	07/05/00	19.4
SB-00105B	B10383	2	4	06/30/00	210
SB-00106	B10382	2	4	06/30/00	5490
SB-00205	B00228	0	1	03/01/00	1340
SB-00205A	B20286	0	2	07/05/00	5.1
SB-00205A	B20287	2	4	07/05/00	14.7
SB-00205B	B20292	0	2	07/05/00	24
SB-00205B	B20293	2	4	07/05/00	327
SB-00206	B10380	2	4	06/30/00	73.4
SB-00307A	B10302	1.5	3.5	06/13/00	147
SB-00407	B20235	4	6	06/01/00	13.4
SB-00407	B20236	6	8	06/01/00	6.4
SB-00508	B20238	1	3	06/01/00	3660
SB-00510	B20239	2	4	06/01/00	54.6
SB-00607	B20237	2	4	06/01/00	48.3
SB-00710	B10357	0	2	06/20/00	261
SB-00711	B10358	0	2	06/20/00	182
SB-00711	B10359Q	0	2	06/20/00	92.9
SB-00810	B10319	0	2	06/20/00	32.9
SB-00811	B10356	0	2	06/20/00	20.2
SB-298	B00141	1	3	10/21/98	74

Notes:

Samples B-1 through B-27 were collected by RC Associates (January 2000),
while the others were collected by EMCON/IT as part of the site RFI on various
dates.
J = Estimated Value

c) Groundwater sampling parameters (grab samples) are not specified. VOCs and SVOCs will be appropriate.

Response:

The Amendment will be revised to indicate that the analytical parameters for the groundwater grab samples in this area will be VOCs and SVOCs.

d) This task does not appear in the schedule.

Response:

The Gantt chart provided was not intended to be specific to each proposed location, rather, it was intended to represented the entire scope of the proposed additional sampling under the Phase 1B Amendment. Per U.S. EPA's request, the timeline has been adjusted to indicate the general categories included in the Amendment. Please note the schedule, previously submitted to the U.S. EPA with the Addendum will be readjusted once GM has been given approval to complete the amended work.

Comment:

LNAPL near MW-00305:
a) If IMs are subsequently proposed to address soil removal, an IM Workplan is to be submitted to U.S. EPA for review.

Response:

Agreed; a work plan for any additional Interim Measures, as necessary, will be submitted for U.S. EPA approval

b) Include some discussion as to any potential relationship between the contamination near MW-00509 and contamination near MW-00305.

Response:

GM does not believe that the contamination encountered in groundwater at MW-00509 is related to the LNAPL encountered at MW-00309. The LNAPL was characterized as an oil product; while the VOC contamination in groundwater appears to be related to solvents. This is also supported by the fact that vinyl chloride was not detected in the groundwater sample collected from monitoring well MW-00306.

Comment:

Unit D
a) Manganese and Formaldehyde: Cite the Current Boring Staging Area (D.8) as a potential source of formaldehyde.

Response:

The Boring Staging Area (AOI D.8) is not likely the source of the observed manganese and formaldehyde concentrations along the eastern portion of the current foundry operations. Formaldehyde is present in the resins which hold the sand molds together while the molten iron cools. When the molten iron is added to the mold, the resin breaks down, thus allowing the mold to be released from around the iron casting. The source for the formaldehyde concentrations more likely may be from the recyclable sand in the form of unused sand molds (cores) which are temporarily stored in this general area (the cores are unused due to imperfections in the molds).

Recyclable sand storage in this area may be the source for the manganese concentrations observed in the soil. This will be investigated during completion of the field activities related to the Amendment.

b) PCBs (MW-02517): Proposed groundwater sampling needs to address the PCB Accumulation Area (D.3) as a potential source.

Response:

Seven soil borings and fifteen soil samples (including three duplicates) have been completed under this RFI in the northeast corner of IU D. All soil PCB results from these fifteen samples were less than the Phase 1B Screening Level (4 mg/Kg), which is the current direct contact criterion under the Residential land use category of Part 201 (Act 451 of 1994, as amended). One soil boring (SB-02619) was specifically placed near the former PCB Accumulation Area – AOI D.3 (total PCBs = 0.32 mg/Kg from the duplicate; not detected in the parent). Therefore, additional soil samples in this area are not proposed. Please note that this concentration falls below the Michigan accepted reporting limit for PCBs.

We believe the apparent PCB concentration in the groundwater sample from monitoring well MW-02517 is likely the result of solids entrained in the groundwater sample (i.e., turbid sample). GM is proposing to resample this monitoring well using low-flow purging/sampling techniques to reduce the particulate matter within the sample.

c) Discuss sampling results at the #8 Mold Line, D.31, D.32 and D.35.

Response:

The attached tables present the validated analytical data from each of these AOIs. Please note that the intent of the Phase 1B Work Plan Amendment was not to present the findings of the Phase 1B RFI, but, to scope out additional information to complete the intent of the Phase 1B. Based on the findings of the RFI to date, GM believes that sufficient data exist to complete the Phase 1B RFI Report, which is why we are not proposing additional investigation. Our evaluation of the data collected to characterize D.28, D.31, D. 32, and D.35 in IU D will be detailed in the Phase 1B RFI Report.

d) Tasks for Unit D do not appear in the schedule.

Response:

The Gantt chart provided was not intended to be specific to each proposed location, rather, it was intended to represented the entire scope of the proposed additional sampling under the Phase 1B Amendment. Per U.S. EPA's request, the timeline has been adjusted to indicate the general categories included in the Amendment. Please note the schedule, previously submitted to the U.S. EPA with the Addendum, will be readjusted once GM has been given approval to complete the amended work.

Comment:

Unit E

a)The proposed sampling associated with TP-18 could provide a more favorable downgradient location based on flow direction. Please relocate.

Response:

The groundwater flow direction in this area is toward the Saginaw River to the northwest. Therefore, the downgradient sampling location will be moved approximately 50 feet to the northeast (toward MW-02432), if possible.

b) Fluoride: revise proposed sampling to include locations for characterization of E.5, E.7 and E.8. Revise sampling rationale accordingly.

Response:

GM's initial analysis indicates that the possible source of fluoride was fluorspar, which was only in use at the former Nodular Iron Plant (IU G). However, the Phase 1B RFI Work Plan Amendment will be modified to include groundwater samples for analysis of fluoride from monitoring wells MW-01827, MW-02228, MW-02432, MW-03240, and MW-03734, in addition to the currently proposed sample from monitoring well MW-03746.

c) Tasks for Unit E do not appear in the schedule.

Response:

The Gantt chart provided was not intended to be specific to each proposed location, rather, it was intended to represented the entire scope of the proposed additional sampling under the Phase 1B Amendment. Per U.S. EPA's request, the timeline has

been adjusted to indicate the general categories included in the Amendment. Please note the schedule, previously submitted to the U.S. EPA with the Addendum, will be readjusted once GM has been given approval to complete the amended work.

Comment:

Unit G
Organics in Groundwater Near the Former Nodular Iron Oil House:
a) Indicate SLE for PCB in soil at SB-04433A. Consider in soil characterization.

Response:

As described in a later response, soil samples could not be collected in this area due to saturated soil conditions. These soil samples will be collected, as stated in the April 19, 2000, Work Plan, if conditions allow for the collection of unsaturated soil samples.

Total PCBs in groundwater were detected at a concentration of 0.49 µg/L from the temporary monitoring well SB-04433A (Drawing No. 3 submitted as Attachment X to the Amendment, incorrectly indicated that this value exceeded the Phase 1B Screening Level of 0.5 µg/L). As previously stated, this detection is thought to be caused by entrained particulate matter within the groundwater sample, rather than representative of the dissolved fraction in groundwater. Though this temporary well is no longer present, the Amendment did indicate that four additional temporary monitoring wells and the existing monitoring well MW-04434, which is in this area, will be sampled for SVOCs, PCBs, and fluoride using low-flow purging/sampling methods.

b) Please consider that the screening for the area covered by standing water needs to satisfy future land use.

Response:

The Phase 1B Screening Levels were obtained from the June 7, 2000, Part 201 Generic Cleanup Criteria and Screening Levels and were utilized in a similar fashion as the Phase 1A Screening Levels (refer to Section 4.0 of the Phase 1A RFI Report and Phase 1B RFI Work Plan). These Phase 1B Screening Levels have been applied to identify potential problem areas and may not be appropriate risk-based cleanup criteria for this site (to be determined upon completion of the risk assessment after final data collection). Future land use will be considered in evaluation of this area.

c) Explain why this area is or has been covered by water.

Response:

Prior to final filling (Spring 1999), the basement of the former Nodular Iron Plant acted as a groundwater sink through dewatering activities. Upon completion of the filling and cessation of pumping, the groundwater has filled the basement slightly above the surrounding groundwater levels. As drainage on the Nodular Iron property is no longer being controlled by the sump and storm sewers now that demolition is complete, groundwater levels are higher. This area is generally flat in elevation and has no natural drainage off-site.

d) This task is not included in the schedule.

Response:

The Gantt chart provided was not intended to be specific to each proposed location, rather, it was intended to represented the entire scope of the proposed additional sampling under the Phase 1B Amendment. Per U.S. EPA's request, the timeline has been adjusted to indicate the general categories included in the Amendment. Please note the schedule, previously submitted to the U.S. EPA with the Addendum will be readjusted once GM has been given approval to complete the amended work.

Comment:

Former (Replacement) Desulfurization Slag RCRA Treatment Unit
a) Based on previous results indicating SLE for ethyl benzene and xylene, need to include those parameters for soil and groundwater screening since there is no sufficient information regarding the source of contamination. Revised task name from schedule.

Response:

Ethyl benzene and the xylene isomers will be added to the parameter list for the soil and groundwater analyses at this location.

b) Indicate sampling and analysis for total and dissolved arsenic.

Response:

Total and dissolved arsenic will be analyzed for the groundwater samples collected in this area.

c) The location of the "back door" from the former NI Plant could be depicted in the existing figure(s).

Response:

The general location of the "back door" is near where the Phase 1B monitoring well (MW-04836) was installed. This area did not contain a basement structure (i.e., the first floor was on grade) and is depicted on Figure 5-7d of the Amendment. The exact location of the door could not be determined. However, the actual location of the discarding of ammonia out the "back door" could include anywhere in this general vicinity. The proposed sampling was designed to cover the large area where ammonia has historically been detected in groundwater.

Comment:

Unit H
a) For clarity, mention fluoride as a groundwater parameter.

Response:

The text will be revised to clearly indicate that all groundwater samples collected from IUs G, H, and I will be analyzed for fluoride.

b) PCBs near MW-04757: Cite previous soil SLE for PCBs at B-5 and B-6. This groundwater sampling does not appear in the schedule.

Response:

Phase 1A Screening Levels were based on the January 29, 1999, generic risk-based cleanup criteria developed by the Michigan Department of Environmental Quality to facilitate implementation of Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. These tables were updated by the MDEQ in June 2000. The updated tables were used as the Phase 1B Screening Levels at this Facility.

Total PCBs were detected in soil at 3.2 mg/Kg at boring B-5 (3-4'). This concentration exceeded the Phase 1A Screening Levels, but, does not exceed the current Screening Levels completed under the Phase 1B RFI. Total PCBs in soil were less than both Screening Levels used in this RFI at boring B-6. Total PCBs in groundwater were less than both Screening Levels for both temporary monitoring wells installed and sampled at these locations (0.2 µg/L at B-5/TMW-5 and not detected at B-6/TMW-6).

The Gantt chart provided was not intended to be specific to each proposed location, rather, it was intended to represented the entire scope of the proposed additional sampling under the Phase 1B Amendment. Per U.S. EPA's request, the timeline has been adjusted to indicate the general categories included in the Amendment. Please note the schedule, previously submitted to the U.S. EPA with the Addendum, will be readjusted once GM has been given approval to complete the amended work.

Unit I

a) Fluoride: The sampling objective is unclear. Please clarify the objective with respect to characterization of the source of fluoride in the bedrock and the source of fluoride in the upper water-bearing zone.

Response:

Fluoride was agreed to as a groundwater parameter during the September 2000 meeting between GM, MDEQ, and U.S. EPA for all future groundwater sampling within IUs G, H, and I. GM included analysis of fluoride in bedrock because those data do not exist to date. The source of the fluoride in shallow groundwater is not known, however, will be evaluated based on the results of the additional data to be collected under this Amendment.

b) Hydrogeologic and Groundwater Characterization: incorporate into this evaluation the potentiometric surface information from the SMCO Landfill semiannual groundwater monitoring, including groundwater contour maps.

Response:

Groundwater contour maps and geologic cross-sections will be completed following this field investigation, as necessary. Based on all available information from IUs H, I, and J, it appears that the upper water-bearing zone is not present north and east of IU I (including the SMCO landfill).

Wells completed for monitoring the landfill were installed within the clay, confining unit (as described in the Phase 1A RFI Report and Phase 1B RFI Workplan) at varying depths. This confining unit is present from the ground surface to

approximately 83 feet below ground surface (at monitoring well MW-96080) at the landfill. Therefore, the potentiometric surface from monitoring wells surrounding the landfill cannot be compared to the upper water-bearing zone in IU I. Further, and consistent with the preliminary hydrogeologic conceptual model, groundwater flow within the clay, confining unit is minimal and discontinuous.

Response to 9-05-01 U.S. EPA Electronic Comments

The following presents the U.S. EPA's comment followed by GM's response:

Comment:

A) Clarify the basis for applicability of criteria and procedures under Part 201 and/or TSCA for those sampling locations where detectable concentrations of PCBs have been identified, including Phases 1A and 1B. Similarly, please evaluate whether the screening approach proposed in the RFI Work Plan may warrant any modification.

Response:

In November 2000, a Memorandum of Understanding (MOU) was signed by the U.S. EPA and the MDEQ which establishes U.S EPA Region 5's recognition of Michigan's voluntary cleanup and property redevelopment efforts for facilities regulated under the Resource Conservation and Recovery Act corrective action program.

The Phase 1B Screening Levels were obtained from the Generic Cleanup Criteria and Screening Levels (June 7, 2000), Part 201, Act 451 of 1994, as amended, and Residential and Industrial criteria were used as Screening Levels. These Phase 1B Screening Levels are a "first-look" analysis to determine if additional data may be needed in order to accurately assess an area, or areas. These Screening Levels were utilized in a similar fashion as the Phase 1A Screening Levels (refer to Section 4.0 of the Phase 1A RFI Report and Phase 1B RFI Work Plan). Note, the Phase 1B Screening Levels may not represent actual cleanup goals for this site.

GM is unsure of U.S. EPA's meaning regarding the question of applicability of criteria or procedures under TSCA for this Work Plan Amendment.

Comment:

B) Document any additional action that may have been undertaken under State jurisdiction based on data collection results, such as Due Care.

Response:

In March 2000, GM completed its Due Care Plan for the Saginaw Metal Casting Operations site. This Plan is maintained and is utilized by GM in determining Health and Safety requirements for different areas of the SMCO Site based on available information. No additional sampling was conducted under the Due Care Rules.

As indicated from the Response to the U.S. EPA's General Comment (c) of 6-15-01, GM collected additional closure samples at four locations that are currently being investigated in coordination with MDEQ-ERD. These AOIs are as follows:

AOI D.28:	*#8 Mold Line Basement PCB Contamination,*
AOI D.31:	*7/16/92 Diesel Fuel Contamination,*
AOI D.32:	*Contamination in Railroad Tracks West of the Cupola Cooling Towers, and*
AOI D.35:	*4/12/95 Diesel Fuel Contamination.*

These newly collected data for AOIs D.31, D.32, and D.35, along with historical data, are also being incorporated into separate reports to be submitted to MDEQ-ERD.

Comment:

C) Address all pre-existing PCB concentrations of concern, such as what RMT has identified historically.

D) Refer also to items below addressing PCBs.

2. The depth of the Phase 1B samples from the #8 Mold Line area must be compared to the depth of the samples previously taken by RMT. Monitor wells had been proposed for this area, an explanation of why they were not installed is needed.

Response:

The Phase 1A RCRA Facility Investigation (RFI) Report and Phase 1B RFI Work Plan (April 19, 2000) presented the historical PCB concentrations (Table 5-11) collected by RMT at the #8 Mold Line Basement PCB Contamination (AOI D.28). Five additional soil borings were completed as part of the Phase 1B RFI. During each investigation, samples were identified as depths from the drilling surface (e.g., basement floor, first floor, etc.). Table 5-11 is reproduced below with the Phase 1B data appended. Sample elevations (ft. MSL) have been added for all data points in Table 5-11. In addition, a Figure showing all sample locations is provided (attached).

One monitoring well was proposed to be installed during the Phase 1B RFI (at location SB-02011), if groundwater was encountered. Groundwater was not encountered at any of the Phase 1B soil borings in this area, therefore, a groundwater monitoring well was not installed.

Sample ID	Depth Below Basement Floor [1] (feet)	Sample Elevation (ft MSL)	Total PCB Concentration (ppm)
6 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	1.09
7 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
8 [2]	0 - 6	574.0 - 580.0	excavated
	6 - 7	573.0 - 574.0	352.2
	9 - 10	570.0 - 571.0	292
	10 - 11	569.0 - 570.0	515
	11 - 12	568.0 - 569.0	309
	12 - 13	567.0 - 568.0	< 1
	13 - 14	566.0 - 567.0	18.4
	14 - 15	565.0 - 566.0	9.7
	15 - 16	564.0 - 565.0	1.2
	16 - 17	563.0 - 564.0	< 1
	17 - 18	562.0 - 563.0	< 1
8E [2]	0 - 5.5	574.5 - 580.0	excavated
	5.5 - 6.5	573.5 - 574.5	46
	6.5 - 7.5	572.5 - 573.5	33
	7.5 - 8.5	571.5 - 572.5	< 1
	8.5 - 9.5	570.5 - 571.5	< 1
8N [2]	0 - 6	574.0 - 580.0	excavated
	6 - 7	573.0 - 574.0	113
	7 - 8	572.0 - 573.0	156
	8 - 9	571.0 - 572.0	13.4
	9 - 10	570.0 - 571.0	2.1
	10 - 11	569.0 - 570.0	< 1
8S [2]	0 - 6	574.0 - 580.0	excavated
	6 - 7	573.0 - 574.0	110
	7 - 8	572.0 - 573.0	98
	8 - 9	571.0 - 572.0	200
	9 - 10	570.0 - 571.0	120
	10 - 11	569.0 - 570.0	63
	11 - 12	568.0 - 569.0	140
	12 - 13	567.0 - 568.0	110
	13 - 14	566.0 - 567.0	50
	14 - 15	565.0 - 566.0	2.3
	15 - 16	564.0 - 565.0	< 1
	16 - 17	563.0 - 564.0	< 1

8SA [2]	0 - 1.5	578.5 - 580.0	excavated
	1.5 - 2.5	577.5 - 578.5	85.1
	2.5 - 3.5	576.5 - 577.5	178
	3.5 - 4.5	575.5 - 576.5	118
	4.5 - 5.5	574.5 - 575.5	96.3
	5.5 - 6.5	573.5 - 574.5	280
	6.5 - 7.5	572.5 - 573.5	47.5
	7.5 - 8.5	571.5 - 572.5	84.7
	8.5 - 9.5	570.5 - 571.5	1.3
	9.5 - 10.5	569.5 - 570.5	1.3
	10.5 - 11.5	568.5 - 569.5	< 1
	11.5 - 12.5	567.5 - 568.5	< 1
8SB [2]	0 - 1	579.0 - 580.0	excavated
	1 - 2	578.0 - 579.0	19.7
	2 - 3	577.0 - 578.0	11.9
	7 - 8	572.0 - 573.0	161
	8 - 9	571.0 - 572.0	< 1
	9 - 10	570.0 - 571.0	< 1
8W [2]	0 - 5.5	574.5 - 580.0	excavated
	5.5 - 6.5	573.5 - 574.5	420
	6.5 - 7.5	572.5 - 573.5	280
	7.5 - 8.5	571.5 - 572.5	240
	8.5 - 9.5	570.5 - 571.5	44
	9.5 - 10.5	569.5 - 570.5	73
	10.5 - 11.5	568.5 - 569.5	160
	11.5 - 12.5	567.5 - 568.5	27.5
	12.5 - 13.5	566.5 - 567.5	130
	13.5 - 14.5	565.5 - 566.5	186
	14.5 - 15.5	564.5 - 565.5	178
	15.5 - 16.5	563.5 - 564.5	< 1
8WA [2]	0 - 5.5	574.5 - 580.0	excavated
	5.5 - 6.5	573.5 - 574.5	275
	6.5 - 7.5	572.5 - 573.5	207
	7.5 - 8.5	571.5 - 572.5	207
	8.5 - 9.5	570.5 - 571.5	391
	9.5 - 10.5	569.5 - 570.5	21.0
	10.5 - 11.5	568.5 - 569.5	74.1
	11.5 - 12.5	567.5 - 568.5	2.0
	12.5 - 13.5	566.5 - 567.5	< 1
8WB [2]	0 - 5.5	574.5 - 580.0	excavated
	11.5 - 12.5	567.5 - 568.5	25
	12.5 - 13.5	566.5 - 567.5	< 1
8WC [2]	0 - 1	579.0 - 580.0	excavated
	1 - 2	578.0 - 579.0	52.5
	5 - 6	574.0 - 575.0	1.0
8WD [2]	0 - 1	579.0 - 580.0	excavated
	1 - 2	578.0 - 579.0	< 1
9 [2]	0 - 6	574.0 - 580.0	excavated
	6 - 7	573.0 - 574.0	332.8

	9 - 10	570.0 - 571.0	< 1
9E [2]	0 - 2.5	577.5 - 580.0	excavated
	2.5 - 3.5	576.5 - 577.5	96
	3.5 - 4.5	575.5 - 576.5	164.0
	4.5 - 5.5	574.5 - 575.5	9.0
	5.5 - 6.5	573.5 - 574.5	< 1
9N [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	3.5
	3 - 4	576.0 - 577.0	218
	4 - 5	575.0 - 576.0	418
	5 - 6	574.0 - 575.0	< 1
	6 - 7	573.0 - 574.0	37.4
	7 - 8	572.0 - 573.0	2.2
	8 - 9	571.0 - 572.0	< 1
9NA [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
	4 - 5	575.0 - 576.0	< 1
	7 - 8	572.0 - 573.0	< 1
9S [2]	0 - 1.5	578.5 - 580.0	excavated
	1.5 - 2.5	577.5 - 578.5	54.6
	2.5 - 3.5	576.5 - 577.5	22.4
	3.5 - 4.5	575.5 - 576.5	73.6
	4.5 - 5.5	574.5 - 575.5	290.9
	5.5 - 6.5	573.5 - 574.5	115.1
	6.5 - 7.5	572.5 - 573.5	71.6
	7.5 - 8.5	571.5 - 572.5	67.0
	8.5 - 9.5	570.5 - 571.5	13.7
	9.5 - 10.5	569.5 - 570.5	49.4
9SA [2]	0 - 1.5	578.5 - 580.0	excavated
	10.5 - 11.5	568.5 - 569.5	285.3
	11.5 - 12.5	567.5 - 568.5	63.4
	12.5 - 13.5	566.5 - 567.5	< 1
9SB [2]	0 - 1	579.0 - 580.0	excavated
	1 - 2	578.0 - 579.0	112.7
	3 - 4	576.0 - 577.0	< 1
	7 - 8	572.0 - 573.0	24.1
	8 - 9	571.0 - 572.0	4.3
	9 - 10	570.0 - 571.0	< 1
9SC [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	23.5
	3 - 4	576.0 - 577.0	43
	4 - 5	575.0 - 576.0	2.6
	5 - 6	574.0 - 575.0	< 1
10 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1

11 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
12 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
17 [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
18 [2]	1 - 2	578.0 - 579.0	< 1
19 [2]	0 - 3.5	576.5 - 580.0	excavated
	3.5 - 4.5	575.5 - 576.5	101.8
	4.5 - 5.5	574.5 - 575.5	85.0
	5.5 - 6.5	573.5 - 574.5	253
	6.5 - 7.5	572.5 - 573.5	97.0
	7.5 - 8.5	571.5 - 572.5	96.7
	8.5 - 9.5	570.5 - 571.5	6.3
	9.5 - 10.5	569.5 - 570.5	1.6
	10.5 - 11.5	568.5 - 569.5	< 1
	11.5 - 12.5	567.5 - 568.5	< 1
19E [2]	0 - 2.5	577.5 - 580.0	excavated
	2.5 - 3.5	576.5 - 577.5	47
	3.5 - 4.5	575.5 - 576.5	70
	4.5 - 5.5	574.5 - 575.5	110
	5.5 - 6.5	573.5 - 574.5	200
	6.5 - 7.5	572.5 - 573.5	53
	7.5 - 8.5	571.5 - 572.5	3.3
	8.5 - 9.5	570.5 - 571.5	< 1
	9.5 - 10.5	569.5 - 570.5	< 1
19EA [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
	3 - 4	576.0 - 577.0	72.5
	4 - 5	575.0 - 576.0	< 1
	5 - 6	574.0 - 575.0	22.0
	6 - 7	573.0 - 574.0	< 1
19EB [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	< 1
	3 - 4	576.0 - 577.0	< 1
19W [2]	0 - 3	577.0 - 580.0	excavated
	3 - 4	576.0 - 577.0	140
	4 - 5	575.0 - 576.0	150
	5 - 6	574.0 - 575.0	190
	6 - 7	573.0 - 574.0	240
	7 - 8	572.0 - 573.0	140
	8 - 9	571.0 - 572.0	45
	9 - 10	570.0 - 571.0	< 1
	10 - 11	569.0 - 570.0	< 1

19WA [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	203
	3 - 4	576.0 - 577.0	161
	4 - 5	575.0 - 576.0	94
	5 - 6	574.0 - 575.0	183
	6 - 7	573.0 - 574.0	265
	7 - 8	572.0 - 573.0	176
	8 - 9	571.0 - 572.0	140
	9 - 10	570.0 - 571.0	< 1
19WB [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	235
	3 - 4	576.0 - 577.0	261
	4 - 5	575.0 - 576.0	192
	5 - 6	574.0 - 575.0	384
	6 - 7	573.0 - 574.0	286
	7 - 8	572.0 - 573.0	398
	8 - 9	571.0 - 572.0	324
	9 - 10	570.0 - 571.0	38
19WC [2]	0 - 2	578.0 - 580.0	excavated
	10 - 11	569.0 - 570.0	52.2
	11 - 12	568.0 - 569.0	< 1
19WD [2]	0 - 2	578.0 - 580.0	excavated
	6 - 7	573.0 - 574.0	225
	9 - 10	570.0 - 571.0	71.2
	11 - 12	568.0 - 569.0	63
19WE [2]	0 - 2	578.0 - 580.0	excavated
	2 - 3	577.0 - 578.0	81.1
	3 - 4	576.0 - 577.0	81
	4 - 5	575.0 - 576.0	300
	6 - 7	573.0 - 574.0	31.0
	7 - 8	572.0 - 573.0	32.0
	8 - 9	571.0 - 572.0	18.0
	9 - 10	570.0 - 571.0	< 1
20 [2]	0 - 1.5	578.5 - 580.0	excavated
	1.5 - 2.5	577.5 - 578.5	< 1
SB-01911	12 - 14	566.0 - 568.0	< 1
	17 - 19	561.0 - 563.0	< 1
	17 - 19 [3]	561.0 - 563.0	< 1
	22 - 24	556.0 - 558.0	< 1
SB-02010	11 - 13	566.0 - 568.0	< 1
	16 - 18	561.0 - 563.0	< 1
	21 - 23	556.0 - 558.0	< 1
	21 - 23 [3]	556.0 - 558.0	< 1
SB-02011	12 - 14	566.0 - 568.0	3.2
	17 - 19	561.0 - 563.0	19.3
	22 - 24	556.0 - 558.0	0.055 J
	22 - 24 [3]	556.0 - 558.0	< 1
SB-02012 [4]	24 - 26	566.0 - 568.0	< 1
	29 - 31	561.0 - 563.0	< 1

	34 - 36	556.0 - 558.0	< 1
	34 - 36 [3]	556.0 - 558.0	0.021 J
SB-02111 [4]	24 - 26	566.0 - 568.0	< 1
	29 - 31	561.0 - 563.0	< 1
	34 - 36	556.0 - 558.0	< 1
	34 - 36 [3]	556.0 - 558.0	< 1

Notes:

[1] = Basement floor elevation is 580.0 ft MSL.

[2] = PCB results taken from RMT drawing titled "Contaminated Soil Excavation", 4/19/89, revised 5/19/89, RMT Project 1073.15 SGI CFD GMC.

[3] = Duplicate sample.

[4] = Sample collected at ground floor. Depths are below ground floor. Ground floor elevation is 592.0 ft MSL.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Comment:

3. The Phase 1B samples in the Rail Road by the Cupola Tower area did not address the possible sheen in MW-2 and MW-3 identified historically.

Response:

Based on our review of the original data collected by CRA, a sheen was noted during well development for monitoring wells MW-2-97 and MW-3-97 (also known as MW-2 and MW-3 and since destroyed through plant maintenance activities). Since the installation of those monitoring wells, several soil borings were advanced as part of the original investigation and soil samples from those borings have been analyzed (a sheen was noted in soil encountered immediately below the water table surface at soil boring SB-02518, 6.5 ft. bgs).

In addition, several additional soil samples were collected and analyzed in the area of this AOI (D.32) during the Phase 1B RFI. Three monitoring wells were installed in this area (two of these wells have been subsequently destroyed through plant maintenance activities). All soil boring and groundwater monitoring well locations are depicted on the attached Figure.

Historical and RFI soil and groundwater analytical data from this area do not indicate any exceedances of the Phase 1B Screening Levels, with one exception. PCBs were detected in the groundwater sample collected from RFI monitoring well MW-02517 at an apparent concentration of 1.3 µg/L (there were no indications of a sheen detected in groundwater at any of the RFI monitoring wells, including monitoring well MW-02418 which was installed adjacent to the former MW-3-97).

This well is proposed to be re-sampled in the Phase 1B RFI Work Plan Amendment using low-flow purging and sampling techniques (previous sampling was conducted using a bailer and likely contained entrained soil particles).

A separate report is also being prepared for submittal to the MDEQ-ERD for this AOI.

Comment:

4. The relationship of the historical sample locations to these sample locations for the #8 Mold Line and the Rail Road by the Cupola Tower area need to be shown. This could be accomplished by providing both sets of samples on a single map.

Response:

See response to Comments 2 and 3, and attached figures for AOI D.28 and D.32, respectively.

Comment:

5. Evaluate any potential data gaps with respect to extent of PCB contamination in soil and groundwater in the area of #8 Mold Line.

Response:

To address previous concerns posed by MDEQ-ERD at this AOI, five additional soil borings were proposed, and subsequently approved, in the Phase 1A RFI Report and Phase 1B RFI Work Plan (April 19, 2000). Soil samples were collected to define the vertical and horizontal extent of the residual PCBs from this release. As presented in the previous table (response to Comment 2), PCBs were defined both horizontally and vertically to below MDEQ-acceptable detection limits. Groundwater was not encountered at any of the soil boring locations completed under the RFI.

Based on the data collected to date, there do not appear to be any data gaps with respect to this area. Additional evaluation of the data will be provided in the Phase 1B RFI Report.

characterized to evaluate the proposed sampling strategies for the surface water and sediment samples within the Saginaw River. This was completed and preliminary data were distributed to the U.S. EPA prior to initiating the river sampling. Additional characterization will not be necessary in order to complete the Phase 1B RFI Report, which will present GM's evaluation of the data.

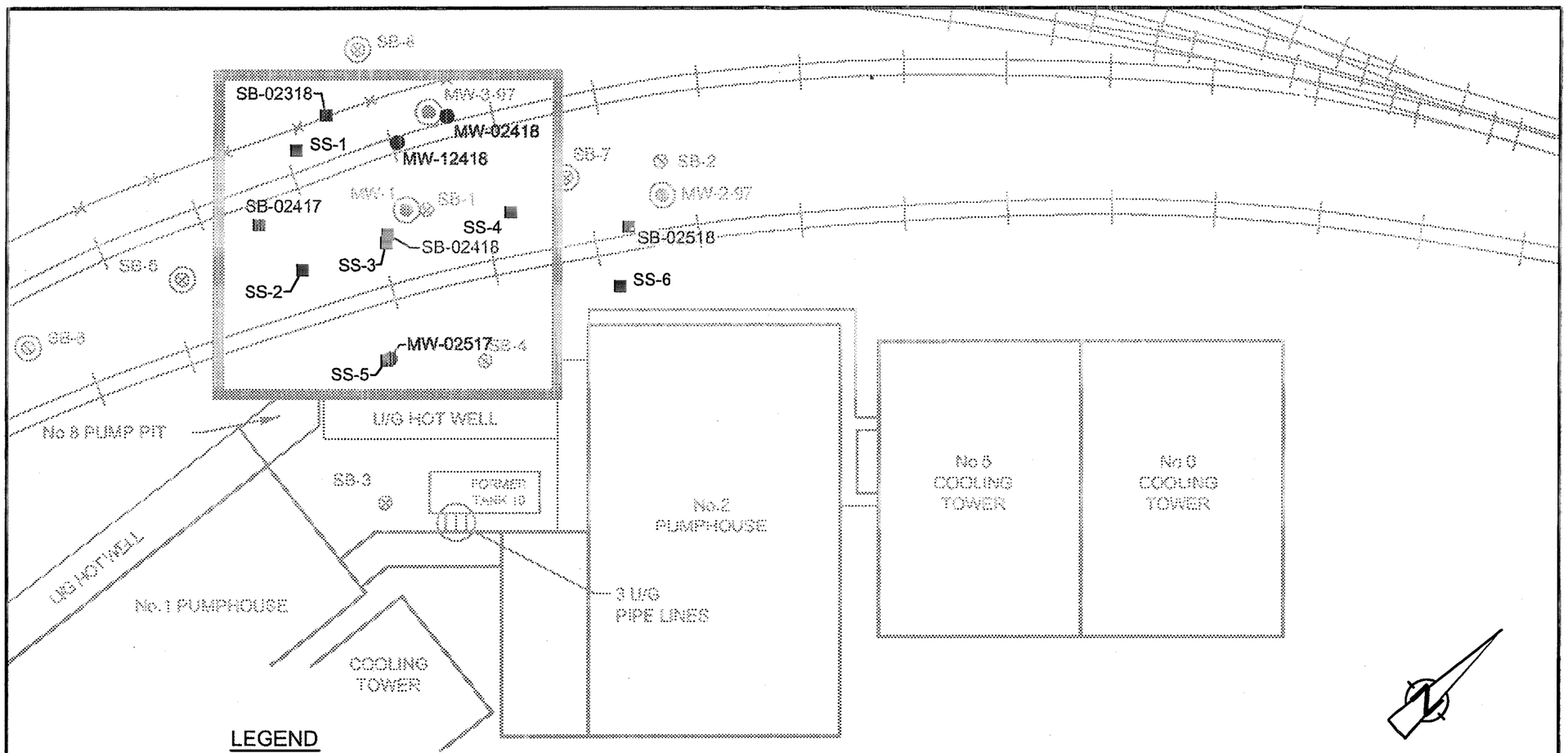


figure 2.1

SURFACE SOIL AND GROUNDWATER INVESTIGATION
RELEASE LOCATION AOI D.32
SAGINAW METAL CASTING OPERATIONS
Saginaw, Michigan

CRA

17075-11(006)GN-CO003 SEP 24/2001

LEGEND:

SB-02010 ■ PHASE 1B SOIL BORING LOCATION AND IDENTIFIER

(E) COLUMN IDENTIFIER

0 100 200ft

SMCO

IU D

(18) (23)

SB-02012

(E) SB-01911 ■ SB-02011 SB-02111

(F)

#8 MOLD LINE (D.28)

SB-02010

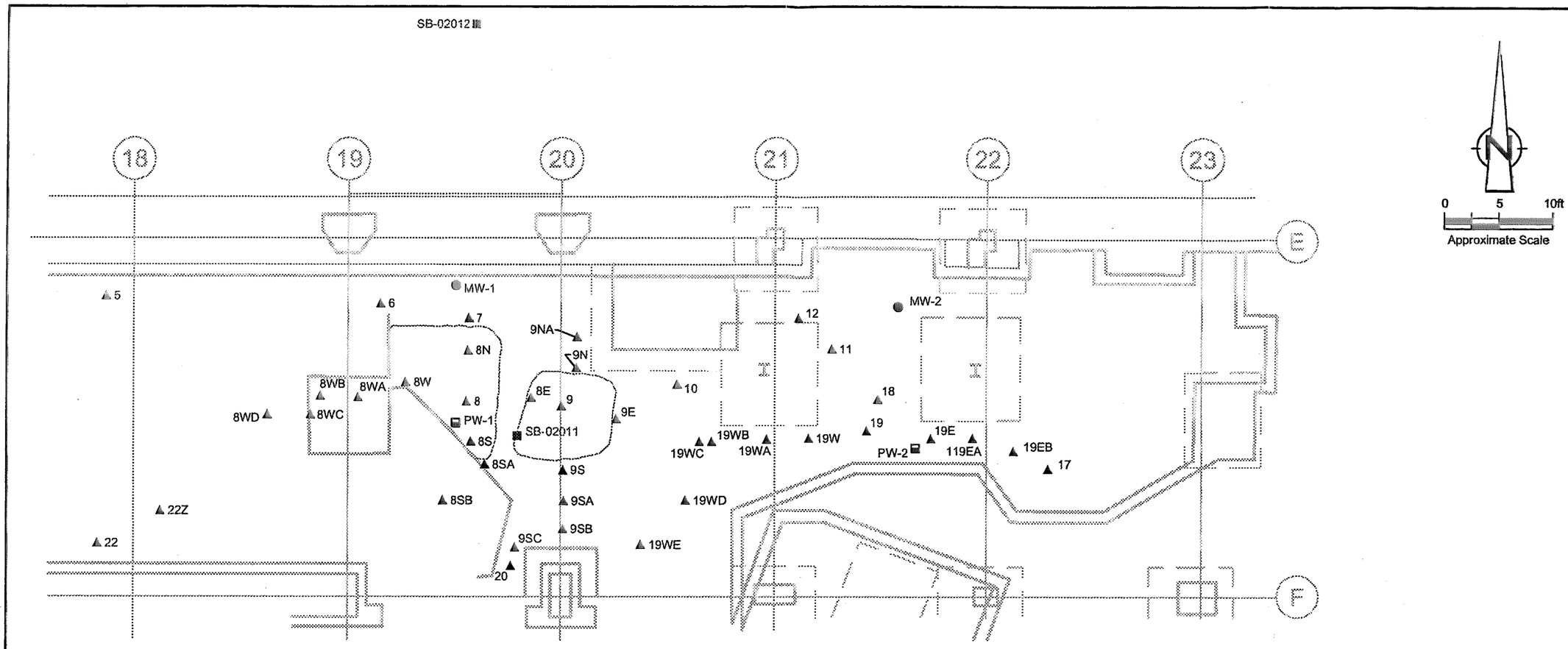
DRAFT

figure --

#8 MOLD LINE (D.28)
GENERAL MOTORS CORPORATION
SAGINAW METAL CASTING OPERATIONS
Saginaw, Michigan

CRA

17075-15(SOURCE)GN-CO048 SEP 25/2001



LEGEND:

5 ▲	RMT SOIL BORING LOCATION AND IDENTIFIER
PW-1 ■	RMT PURGE WELL LOCATION AND IDENTIFIER
MW-1 ●	RMT MONITORING WELL LOCATION AND IDENTIFIER
SB-02010 ▩	PHASE 1B SOIL BORING LOCATION AND IDENTIFIER

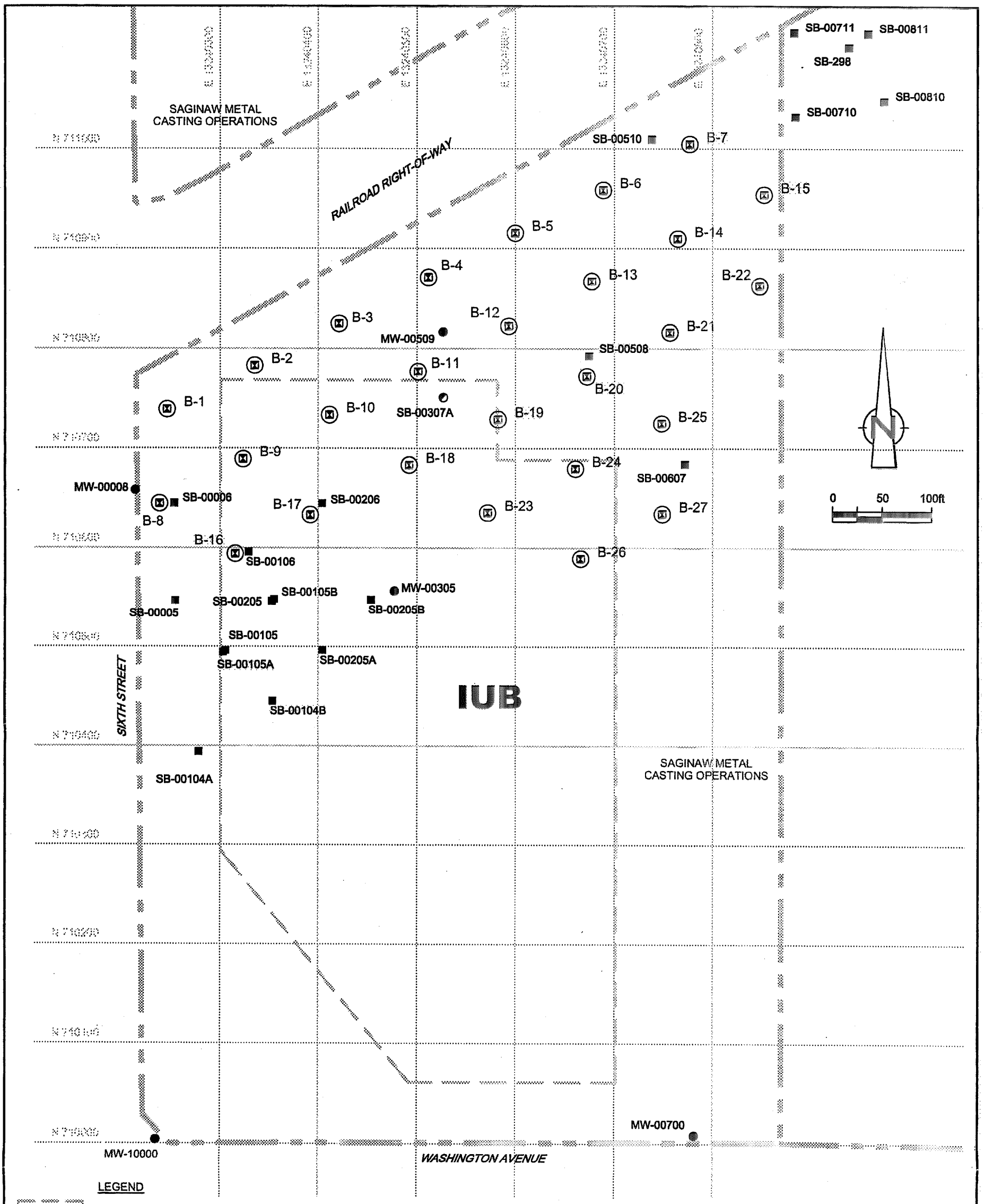
▩ SB-02010

DRAFT

figure --

#8 MOLD LINE (D.28)
GENERAL MOTORS CORPORATION
SAGINAW METAL CASTING OPERATIONS
Saginaw, Michigan

17075-15(SOURCE)GN-CO049 SEP 25/2001



LEGEND

- APPROXIMATE LOCATION OF FORMER PARTS PLANT
- INVESTIGATIVE UNIT BOUNDARY
- SB-00307A — RFI TEMPORARY MONITORING WELL LOCATION AND IDENTIFIER
- MW-10000 — MONITORING WELL LOCATION AND IDENTIFIER
- SB-00205 — RFI SOIL BORING LOCATION AND IDENTIFIER
- B-1 — SURFACE SOIL SAMPLE COLLECTED BY RC ASSOCIATES (JANUARY 2000)

DRAFT

FORMER PARTS PLANT AREA
GENERAL MOTORS CORPORATION
SAGINAW METAL CASTING OPERATIONS
Saginaw, Michigan

17075-15(SOURCE)GN-CO050 SEP 26/2001