



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

17075

REPLY TO THE ATTENTION OF:

NOV 03 1998

VIA FACSIMILE AND
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DE-9J

Mr. Joseph B. Medved
Environmental and Regulatory Support
General Motors Corporation
Mail Code: 482-310-004
485 W. Milwaukee Avenue
Detroit, MI 48202-3220

Re: General Motors Corporation
Chevrolet Castings and Parts Plant,
Nodular and Grey Iron Foundries
MID 041 793 340
"Saginaw River Sediment Chemistry in the
Vicinity of the Saginaw Metals Casting
Operations"

Dear Mr. Medved:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the technical memorandum (TM) titled "Saginaw River Sediment Chemistry in the Vicinity of the Saginaw Metals Casting Operations" for the General Motors Corporation (GM) facility located in Saginaw, Michigan. The TM was prepared by Exponent and submitted to U.S. EPA by GM on March 13, 1998, pursuant to the Unilateral Administrative Order, U.S. EPA Docket No. V-W-003-95. A corrected copy of the TM was submitted to U.S. EPA by GM on April 24, 1998.

U.S. EPA's review was focused on (1) whether historical data in the TM adequately assess the status of sediment in the Saginaw River and (2) identifying data gaps that need to be addressed under Phase II or subsequent phases of the Resource Conservation and Recovery Act facility investigation (RFI).

U.S. EPA's review indicates that additional information regarding the available historical data is necessary to adequately assess the sediment status and that data gaps exist. Specifically, the

TM figures and tables are inadequate to support GM's conclusion that there is a temporal trend of decreasing contaminant concentrations in sediments with no spatial patterns. The U.S. EPA's general and specific comments below detail these deficiencies. For further consideration, GM needs to submit to U.S. EPA a revised TM addressing these deficiencies. U.S. EPA would review the revised TM to determine if data gaps remain. The reference used to prepare the TM is cited at the end of the U.S. EPA's comments.

GENERAL COMMENTS

1. The target analytes for the sediment studies are not consistent with the RFI target analytes. The TM provides data for polychlorinated biphenyls (PCB) and metals only, but the RFI would generate data for Appendix IX volatile and semivolatile organic compounds, PCBs, and metals. Also, Table 4 provides data for only 6 of the 16 Appendix IX metals. The TM should be revised to provide a rationale for the limited list of analytes. Specifically, the TM should explain why no sediment samples were collected for semivolatile organic compound analysis and why sediment samples were not analyzed for the full list of Appendix IX metals.
2. Tables 1 and 2 of the TM cite a total of 41 studies over the past 22 years. Also page 2, paragraph 1, of the TM states that "these data underwent a quality assurance screening prior to entry into the data base to ensure that only data from reputable studies with verifiable sampling and analysis protocols were used." The TM should be revised to describe how the quality assurance screening was conducted and detail the results of this screening for each of the 41 studies. Specifically, the TM needs to demonstrate that the following elements were considered in the quality assurance screening:
 - Percentage of data validated
 - Types and frequency of both field and laboratory quality control (QC) checks
 - Results of the above QC checks

SPECIFIC COMMENTS

1. Figures 1 through 24. These figures are presented in groups of three and show data for a specific analyte over various periods, typically from 1976 to present, from 1987 to present, and from 1991 to present. It is extremely difficult to determine the presence of a

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temporal trend by examining such figures because of data repetition. The figures should be modified to show results from 1976 to 1986, from 1987 to 1990, and from 1991 to the present. This change would clarify if any trends are present.

2. Figures 19 through 24. These figures show data distributions as a line with a single circle near the midpoint. The significance of the line and the circle are not explained. The figures should be modified to present more information on the distribution of the data using box and whisker plots (as detailed in EPA 1996 and other publications) or a similar format that would show skewness, outliers, and other possibly relevant features of data distribution.
3. Table 3. Page 4 of the TM states that Table 3 summarizes data used to generate the figures. These data could be used to evaluate the TM conclusions; however, Table 3 is missing. The table should be added to the TM to supplement the figures.

REFERENCE:

U.S. Environmental Protection Agency (EPA). 1996. "Guidance for Data Quality Assessment, Practical Methods for Data Analysis." EPA QA/G-9. QA96 Version. Document EPA/600/R-96/084. July.

Within thirty (30) days of receipt of this letter, GM should submit a revised TM that addresses the above U.S. EPA's comments.

If you have any questions regarding this letter, please contact me at (312) 886-7567.

Sincerely yours,



Mirtha Capiro
Project Coordinator/Manager
Enforcement and Compliance Assurance Branch

cc: Lisa Williams, U.S. F&WS
Lori Sargent, MDNR
Ed Haapala, MDEQ
Robert Wolfe, MDEQ



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77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 02 1999

REPLY TO THE ATTENTION OF:

DE-9J

VIA FACSIMILE AND
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Cheryl Hiatt
General Motors Worldwide Facilities - Remediation Team
Mail Code 482-310-004
185 West Milwaukee Street
Detroit, Michigan 48202

Re: General Motors Corporation
Saginaw Metals Castings Operations
MID 041 793 340
"Saginaw River Sediment Chemistry in the
Vicinity of the Saginaw Metals Castings
Operations"

Dear Ms. Hiatt:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the revised technical memorandum (TM) entitled "Saginaw River Sediment Chemistry in the Vicinity of the Saginaw Metals Castings Operations" for the General Motors Corporation Metals Casting Operations (GM) facility, dated December 1998. The revised TM was prepared by Exponent on behalf of GM pursuant to the Unilateral Administrative Order, U.S. EPA Docket No. V-W-003-95.

U.S. EPA's review focused on (1) whether historical data in the TM adequately assess the status of sediment in the Saginaw River and (2) identifying data gaps that need to be addressed under Phase 2 or subsequent phases of the Resource Conservation and Recovery Act Facility Investigation (RFI).

U.S. EPA's review indicates that the historical data in the TM adequately assess the status of sediment in the Saginaw River with respect to concentrations of polychlorinated biphenyls, arsenic, cadmium, copper, lead, mercury and zinc. The revised TM demonstrates that surface sediments concentrations for such constituents in the main part of the river are irrelevant to the

RFI. Also, the historical data adequately support the conclusion of the TM that there is a temporal trend of decreasing concentration with respect to those constituents.

Page 2 of the TM states that "the reports that Exponent reviewed did not include complete data submittals or data validation reports." Because historical data may be used as a mean of suggesting hazardous materials releases (Niedergang, 1998), it is acceptable to use the historical data to support the evaluation presented in the TM.

However, the following two data gaps still remain:

- No data are available for other constituents to be sampled during the RFI, especially polycyclic aromatic hydrocarbons and other Appendix IX metals.
- No data are available for areas where water, soil and sediment from the facility enters the river (spots where contaminants can potentially be more concentrated in sediments).

The data gaps should be addressed through collection and analysis of additional water and sediment samples during the RFI. GM may take into consideration the results from the Phase 1A and Phase 1B RFI when designing this sampling and analysis.

If you have any questions regarding this letter, please contact me at (312) 886-7567.

Sincerely yours,



Mirtha Capiro
Project Coordinator/Manager
Enforcement and Compliance Assurance Branch

cc: Jacqueline Kline
Lisa Williams, U.S. F&WS
Lori Sargent, MDNR
Ed Haapala, MDEQ
Robert Wolfe, MDEQ
Gene Suuppi, MDEQ

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