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**Worldwide Facilities Group  
Environmental & Regulatory Support  
Remediation Team**

January 9, 2001

Ms. Cheryl Howe  
Senior Environmental Engineer  
Hazardous Waste Program Section  
Waste Management Division  
P.O. Box 30241  
Lansing, Michigan 48909-7741

Re: Responses to Michigan Department of Environmental Quality's Technical Review  
Comments on the Paint Storage Building Drum Storage Area Report  
Saginaw Metal Casting Operations  
Saginaw Michigan  
MID 041 793 340

Dear Ms. Howe:

General Motors (GM) has reviewed the Michigan Department of Environmental Quality's (MDEQ) Technical Review Comments dated May 24, 1999, on the Paint Storage Building Drum Storage Area Report (Report). The following presents the MDEQ's comments followed by GM's responses. For the purpose of maintaining a complete record, copies of all relevant correspondence related to the closure of this unit, including those referenced in the responses below, have been attached to this letter in chronological order.

Paint Storage Building Drum Storage Area Report

The September 1989 Closure Report, that was received on November 17, 1989, was reviewed and compared to the approved May 1988 Closure Plan. The following comments/concerns are related to the Paint Storage Building Drum Storage Area Report:

1. Page 7, Section 3.3.1: The Report states that the analytical results from the background samples were used to establish the upper 99 percent (%) prediction limit for arsenic, barium, chromium, cadmium, copper, lead, mercury, selenium, silver, and zinc. However, in the May 1988 approved addendum to the closure plan, page 5, response 5, bullet 3, it states that soil samples collected near the drum storage area will be analyzed for metals and statistically compared to background. It also states that the

comparison will use the mean background values with an upper limit for delineating significant concentrations of a "mean plus three standard deviations." The background values must either be recalculated using the approved "mean plus three standard deviations" or the Report must be revised to justify the change of the statistical method to the upper 99% prediction limit, including an explanation as to why it would be more appropriate and include the calculations, normality check and population sufficiency test.

*Response:* In a Michigan Department of Natural Resources (MDNR) letter to GM dated June 10, 1988 (Attachment 4), MDNR approved a closure plan which indicated that the comparison will use the mean background value with an upper limit for delineating significant concentrations of a "mean plus three standard deviations". Prior to a March 10, 1989, meeting between MDNR, GM and GM's consultant RMT, RMT submitted a document (Attachment 6) to MDNR containing the findings and conclusions of the recent investigation at the Paint Storage Building Drum Storage Area (Unit) and the proposed approach for closing the Unit (document dated February 27, 1989). In this document, RMT compared the soil analytical results from the Phase 1 and Phase 2 soil sampling to the background 99% upper prediction limit. Additionally, RMT proposed to compare additional clean closure samples to the background 99% upper prediction limits.

Based on a RMT internal memo documenting an August 8, 1989, meeting with GM, MDNR and RMT (Attachment 7), RMT presented laboratory data analysis from the closure samples which indicated that none of the samples were above the 99% upper prediction limits. MDNR approved GM's proposal to backfill the area with clean sand at the August 8, 1989, meeting.

GM believes that, between the time that the Closure Plan was approved and the Closure Report was prepared, the federal guidelines for conducting statistical analyses were published both in the Code of Federal Regulations and as a separate document entitled, "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities (Interim Final Guidance, April 1989) which utilized the UPL, etc.... This is the likely explanation for RMT choosing the alternative statistical procedure for determining background concentrations, as outlined in the published documents.

For comparison purposes, GM's consultant Conestoga Rovers and Associates (CRA) recalculated the background data set using the originally planned "mean plus three times the standard deviation" (Attachment 9). This recalculation excluded the higher lead results in a couple of background samples (sample number BB-1, 0-2', and 1-3') and the sample collected from

*the 16 to 18 feet depth (these results were excluded from the background set because the sample may have been collected from the underlying clay, rather than from the upper-saturated zone, where the remaining samples were collected). These background calculations compared to closure sampling results confirm that all post-excavation/closure samples were below the calculated background limit, as included in the original Closure Plan.*

2. Figure 3-2 and Section 3.3.2 on page 10: The Report indicates that one sample was collected beneath the cement pad (PSB-1C), one sample was collected beneath a sloped entrance (PSB-2E) and three samples were collected on the east side of the pad, in an unpaved area (PSB-3SE, PSB-4E and PSB-5NE). On page 2 of the approved May 1988 addendum to the closure plan, response 1, it states that three samples of the perimeter soils would be collected. In the same response, it continues that the samples would be collected near the mid-point of the southern edge of the concrete pad. The Report must be revised to justify the change of sample locations, including an explanation of why these locations would be better than the original, approved locations. The above can be done or the additional samples (mid-point of the northern edge and mid-point of the southern edge) could be collected and tested for the same, approved parameters.

*Response: In a MDNR letter to GM dated April 28, 1988 (Attachment 2), MDNR indicated that the Closure Plan for the Paint Storage Building Drum Storage Area was not approved. MDNR included review comments on the Closure Plan. Comment 1 stated:*

*Concrete samples should be at the entrance of the area and at the crack in the concrete. Also samples should be taken from around the outer perimeter of the storage area if unpaved.*

*On May 26, 1988, GM's consultant RMT submitted an Addendum to the Closure Plan (Attachment 3) which responded to the MDNR's review comments on the Closure Plan. In Response 1, paragraph 1, the Addendum addressed the number of samples and sample locations by stating that "... three samples would be collected of the perimeter soils in the unpaved areas." In paragraph 3 of Response 1, the Addendum also stated that a soil sample would not be collected at the mid-point of the western edge since it was connected to a paved area. The intent of the response was to comply with MDNR's April 28, 1988, review comment of collecting soil samples around the outer perimeter, if unpaved.*

*MDNR indicated it's approval of the revised Closure Plan in a letter to GM dated June 10, 1988 (Attachment 4). As shown on Figure 3-2 of the Report and in the Photographic Documentation of Closure Activities included as*

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*Appendix A of the Report, the northern and southern perimeters of the pad were paved, as was the western perimeter. Therefore, soil samples were collected in the appropriate locations, as specified and approved by MDNR in their June 1988 letter to GM.*

Based on the documentation contained in the file and presented above, all of the requirements of the MDNR-approved Closure Plan and Addendum were successfully achieved and presented in the Closure Report for this unit. GM respectfully requests that the closure be granted for the Paint Storage Building Drum Storage Area at the Former Nodular Iron Plant, Saginaw, Michigan.

If you have any questions or comments, or would like any additional information, please contact me at (313) 556-9032.

Sincerely,



Ms. Cheryl R. Hiatt  
GM Project Coordinator

Attachments

cc: Mirtha Capiro, USEPA Region 5  
James Sygo, MDEQ-WMD  
Ed Haapala, MDEQ-WMD  
Lisa Williams, USDOJ  
Tony Thrubis, GM Legal Staff  
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