

January 26, 2004

Reference No. 17303

Mr. Peter T. Masson
Department of Environmental Quality
Jackson District Office
301 East Louis Glick Highway
Jackson, Michigan 49201-1556

Dear Mr. Masson:

Re: Response to Comments, December 4, 2003 MDEQ Letter
Company Vehicle Operations Area
Former Willow Run Assembly Plant
Washtenaw County, Michigan

On behalf of ENCORE, a wholly owned subsidiary of General Motors (GM), Conestoga-Rovers & Associates, Inc. (CRA) is providing this response to the Michigan Department of Environmental Quality (MDEQ) letter dated December 4, 2003 regarding several submittals for the Company Vehicle Operations (CVO) property located in Ypsilanti, Michigan (Site). For clarity, MDEQ comments are provided in italics, followed by CRA's response.

MDEQ Comment: Response to Comments Letter, dated October 24, 2003

The responses to my first two comments are appropriate and appreciated. Regarding monitoring parameters for future peroxide injections, let me offer some insight regarding two parameters on which we disagree. Although it is not certain that ammonia will be formed at the site, it has been recommended by management that this parameter be monitored in groundwater/surface water interface (GSI) wells as a standard surface water discharge parameter. It was recommended that BOD be monitored for similar reasons, and because of the large quantity of carbon compounds that are contaminating the aquifer. Regarding my last comment on the GSI monitoring wells, I appreciate your noting these and adding them to the map. I could not find them on maps included with previous reports. Please be aware, though, that even though these wells do not exceed the final acute values, and therefore do not require immediate action, as they do still exceed GSI, continued diligence is required.

CRA Response

If in-situ chemical oxidation is considered for further treatment of groundwater, monitoring will be discussed with the MDEQ prior to the initiation of any activities. Currently there are no plans for chemical oxidation of groundwater.

GM is aware that further diligence is required regarding GSI issues at the Site and is currently conducting investigations to complete delineation of groundwater impacts at the Site.

MDEQ Comment: Soil Interim Response Report

This report noted "strong solvent odors" in TP-5, yet I cannot find where any future work is planned or anticipated for this area. Please note how you plan to address this concern. Regarding the excavation that was done, although the removal of a likely source area is appreciated, the goal of this removal is not clear. It is not clear how the boundaries were determined or whether the excavation was verified afterwards. In addition, the overburden was placed back in the excavation, which may not be a problem, but does not appear to have been checked to insure it was not also contaminated. Lastly, there is no suggestion as to what the apparent source of this contamination was. Although a diesel line was noted and removed the report does not state what the depth of this line was and whether it may have been the source. It does note that the aboveground storage tanks likely were not the source, but that does not provide assurance that the product will not reappear. Please clarify these issues.

CRA Response

Solvent odors were observed in Test Pit 5 (TP-5) during the June 2003 test pitting activities between 5.5 feet and 11 feet below ground surface (bgs). A sample was collected from approximately 11 feet bgs and analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs), poly chlorinated biphenyls (PCBs) and metals. No VOCs, SVOCs, or PCBs were detected in the sample, while several metals were detected at low concentrations. The maximum photoionization detector (PID) reading at TP-5 was 20.3 parts per million. No actions specific to this area are currently planned.

The intent of the Soil Interim Response Action (IRA) was to remove residual light non-aqueous phase liquid (LNAPL) from the vicinity of Groundwater Remediation Area No. 1 (Area 1) as it was impacting the effectiveness of the groundwater remediation treatments. The criterion for the boundaries of the excavation was visual observation of free product. The initial boundaries were estimated based on conditions encountered during test pitting activities (June 2003), presence of LNAPL in two injection wells (February 2002 – June 2003) and staining observed during the installation of the Area 1 injection wells (November and December 2001). During the completion of the Soil IRA, visual observation of free product was used to determine the final boundaries.

The overburden was visually inspected during the Soil IRA and was sampled during the test pitting activities completed in June 2003. The results of the sampling indicate that the overburden was not contaminated in the area of the Soil IRA excavation.

The source of the LNAPL is likely residual diesel fuel from the former diesel fuel line. Free product was not observed during the installation of the injection wells (November and December 2001) but was first observed following the first injection of potassium permanganate (February 2002). Residual LNAPL globules were likely flushed by the injections from the smear zone into the two injection wells in which it was observed.

MDEQ Comment: Supplemental Phase III Extent of Contamination Work Plan

My only comment on the work plan regards the length of the well screens. The plan suggests in Section 3.1.1 that 10-foot screens will be used. However, the Department of Environmental Quality recommends the use of 5-foot screens, as we feel this more accurately represents the aquifer and correlates with the criteria determinations. Please use 5-foot screens at this site. If it is desired that more of the aquifer be profiled, it is recommended that a well nest be installed.

CRA Response

The field activities described in the Supplemental Phase III Extent of Contamination (EOC) Work Plan were initiated on November 11, 2003. Well installation, using 10-foot well screens, was completed by November 24, 2003, prior to receipt of the MDEQ letter dated December 4, 2003 commenting on the Supplemental Phase III EOC Work Plan. The saturated zone at the Site is approximately five feet thick, although seasonally it can vary to 7 feet thick. The 10-foot screen provides the opportunity to monitor for the presence of free product at both the top and bottom of the saturated zone. Historically 10-foot screens have been used for monitoring at the Site for this reason, dating back to the wells installed in the mid 1990's. Approximately half of the injection wells have five foot screens, a design consideration for the injections, and the three GSI wells located along the water have two foot screens due to the proximity to Tyler Pond and accessibility restrictions.

Based on the Supplemental Phase III EOC data review completed to date, it appears additional investigative work will be required before an investigation summary report can be completed. Therefore, submittal of the Supplemental Phase III EOC Summary Report is anticipated during the second quarter of 2004, following completion of additional EOC field activities in the first quarter of 2004. As we discussed, we have moved our next quarterly meeting to 1:30pm on February 18, 2004, at the CRA Plymouth office. This will afford us the opportunity to summarize Supplemental Phase III EOC data and discuss additional work planned to delineate the extent of groundwater impacts at the Site.

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We look forward to meeting with you to review Site issues. Please contact me with any questions at (734) 453-5123.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Fred W. Blickle, P.E.

BL/nl/4/Det.

Encl.

c.c.: Ken Richards, ENCORE
Beth Landale, CRA
Gary Klepper, CRA