



July 15, 2010

Michelle Mullin  
Project Manager  
USEPA, Region 5  
77 West Jackson Boulevard  
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Chicago, IL 60604-3590

**Subject: RCRA 3008(h) Consent Order (RCRA-05-2010-0012) – Tecumseh Products Company, Inc.  
Quarterly Progress Report – MID 005-049-440**

Dear Ms. Mullin:

Pursuant to Section VI of the above referenced Consent Order effective March 29, 2010, RMT, Inc. (RMT), on behalf of Tecumseh Products Company, Inc. (TPC) submits this Quarterly Progress Report. This report covers activities related to the Consent Order completed by the Respondent during the Second Quarter 2010 and planned for completion in the near future. The organization of this document includes as major headings the items required under Sections V through VIII of the Consent Order.

## V. Project Manager

- The TPC Project Manager is Graham Crockford of RMT.
- The USEPA Project Manager is Michelle Mullin.

## VI. Work to be Performed – Remedial Investigation Report and Environmental Indicators Reports

### 1. A Description of activities related to the completion of the Remedial Investigation (RI) Report and the Environmental Indicator (EI) Reports:

- **Investigation Activities**
  - **Characterize Releases at or from the Facility** – Results of the preliminary on-site investigations are presented in the following documents: Environmental Site Assessment for Tecumseh Products Company, Tecumseh, Michigan (ENVIRON, October 2007), Phase I Environmental Site Assessment for the Tecumseh Products

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(Atwell-Hicks, October 2009), Phase II Environmental Site Assessment, Tecumseh Products Company (ATC, September 2009), and the Current Conditions Report (RMT, September 2009).

- **Define Appropriate Screening Criteria** – As described in the September 2009 Current Conditions Report (CCR), Michigan Department of Natural Resources and Environment (MDNRE) Part 201 Criteria will typically be used to assess risk related to ingestion of or direct contact with affected media. Alternate screening levels for the volatilization to indoor air migration pathway were proposed in the March 2010 Preliminary Off-Site Soil Gas Sampling Workplan. Non-residential screening levels were revised in accordance with USEPA comments dated April 7, 2010, and site specific deep soil gas screening criteria were calculated to address USEPA verbal comments received May 6, 2010 regarding the deep soil gas attenuation factor. A Technical Memorandum titled “Summary of Off-Site Soil Gas Investigation Activities – March through April 2010, Former Tecumseh Products Company Site, Tecumseh, Michigan” includes the revised calculation sheets and the site specific attenuation factor calculations. This Technical Memorandum is included as Appendix A. Currently groundwater data do not indicate that groundwater is venting to the River Raisin above generic Part 201 groundwater/surface water interface (GSI) criteria. However if further investigation indicates that groundwater concentrations near the River Raisin do exceed generic GSI criteria, a mixing zone determination requesting site specific GSI criteria may be submitted to MDNRE.
- **Define Any Unacceptable Risks to Human Health** – Potential exposure pathways are evaluated in the CCR. As described in the CCR, potentially complete human exposure pathways include the ingestion of affected groundwater and volatilization to indoor air. Water supply sources that are, or have the potential to be, affected by the off-site migration of contaminants were defined in the CCR. An investigation of the potentially complete, volatilization to indoor air migration pathway is ongoing.
- **Define Any Unacceptable Risks to the Environment** – The potential for unacceptable risk to the environment related to the discharge of affected groundwater to nearby surface water and wetlands was partially defined in the September 2009 CCR and the February 2010 Technical Memorandum titled Status Update – Characterization of Volatile Organic Compounds in Groundwater. Further investigation was conducted between March 2010 and June 2010 to define the maximum extent of affected groundwater. The results of this investigation are included in a Technical Memorandum titled “Summary of Groundwater Investigation Activities – March 2010 through June

2010, Former Tecumseh Products Company Site, Tecumseh, Michigan.” This Technical Memorandum is included as Appendix B.

- **Groundwater Modeling to Determine the Stability of Contaminated Groundwater** – Aquifer properties for input into the model including hydraulic gradient, in situ hydraulic conductivity, and fraction organic carbon have been determined. A preliminary conceptual site model for use in groundwater modeling has been developed and will be updated and revised as additional data becomes available.

■ **Presumptive Corrective Measures**

- **Decommission Affected Private Wells** – One of the two off-site private wells with affected water was decommissioned in 2009. Negotiations are underway to decommission the second affected well, which is used for irrigation and is not used as a source of drinking water. Other private wells are being monitored to confirm that volatile organic compounds (VOCs) are not detected.
- **Declaration of Restrictive Covenant** – As part of the Purchase Agreement between TPC and Tecumseh Bakery a Declaration of Restrictive Covenant for the facility was filed. This Restrictive Covenant restricts the installation and use of on-site wells (excluding monitoring wells or other wells installed as part of the environmental work) and restricts Residential and Commercial I land use, as defined by the MDNRE, at the facility. The License Agreement Regarding Environmental Work provides provisions for additional restrictions to be placed on the property as needed.
- **Enact Local Well Ordinance** – A draft well ordinance has been prepared to restrict the installation of new wells and to decommission existing wells within the area potentially affected by the off-site migration of groundwater. The City of Tecumseh submitted the draft well ordinance to the MDNRE for review. MDNRE comments were received on June 29, 2010. Minor revisions to address MDNRE comments are being made.
- **Mitigation of Indoor Air (On-Site)** – Recommendations to control the potential for volatilization to indoor air in P-Building (the proposed primary use area for Tecumseh Bakery) were submitted to Tecumseh Bakery in March 2010. Recommendations to control the potential for volatilization to indoor air in the secondary use area were submitted to Tecumseh Bakery in June 2010. These areas remain unoccupied, and TPC is unaware of any plans for future building use. Characterization of the potential for volatilization to indoor air in the engineering area is in progress.
- **Mitigation of Indoor Air (Off-Site)** – Characterization of the potential for volatilization to indoor air at off-site locations is in progress. A technical memorandum describes investigation activities and data collected to date is included as Appendix A.

- **Control Unacceptable Risks to the Environment** – At present no unacceptable risks to the environment have been identified.
- **Stabilize Migration of Contaminated Groundwater** – The stability of the affected groundwater has not yet been determined. A monitoring well network has been installed, and quarterly monitoring is underway to determine stability.

■ **Reporting**

- **Environmental Indicators Report: Current Human Exposures under Control** – RMT will prepare the Environmental Indicators (Human Exposures) Report following completion of the tasks listed above which relate to the control of current human exposures. This Environmental Indicators (Human Exposures) Report will be submitted to the USEPA no later than September 29, 2011.
- **Environmental Indicators Report: Groundwater Stabilized** – RMT will prepare the Environmental Indicators (Groundwater Stabilized) Report following completion of the tasks listed above which relate to the stabilization of groundwater. This Environmental Indicators (Groundwater Stabilized) Report will be submitted to the USEPA no later than September 29, 2012.
- **Remedial Investigation Report** – RMT will prepare the Remedial Investigation Report following completion of RI investigation activities which determine the nature and extent of any releases of hazardous waste and hazardous constituents at or from the facility. This Remedial Investigation Report will be submitted to the USEPA no later than September 29, 2012.

2. **Estimate of Percentage of Work Completed:**

- Work related to Remedial Investigation Report: 30% complete
- Work related to the Environmental Indicators Report – Current Human Exposures Under Control: 35% complete
- Work related to the Environmental Indicators Report – Groundwater Stabilized: 35% complete

3. **A Summary of Activities during the Reporting Period**

- Work related to controlling on-site human exposures:
  - May 2010 – non-residential indoor air criteria, soil gas screening levels and groundwater screening levels were re-calculated in accordance with USEPA comments received April 8, 2010;

- June 2010 – results of the secondary use area evaluation, were submitted to Tecumseh Bakery; and
  - April 2010 – June 2010 – an evaluation of the potential for vapor intrusion in the leased engineering area is ongoing.
  - Work related to controlling off-site human exposures:
    - April 2010 – June 2010 – Negotiations regarding the decommissioning of the remaining affected private well, used for irrigation purposes, are ongoing;
    - April 2010 – installation of 14 off-site soil gas monitoring points was completed;
    - April 2010 – the first round of off-site soil gas data was collected;
    - April 2010 - preliminary soil gas data was submitted to USEPA for review;
    - May 2010 – an off-site soil gas re-sample event was conducted; and
    - June 2010 – MDNRE provided comments on the draft well ordinance prepared by TPC. Negotiations with the City of Tecumseh to implement the well ordinance are ongoing.
  - Work related to the migration of affected groundwater:
    - April 2010 – groundwater sample is collected at new well MW-26s and a surface water sample, WL-01, is collected from the wetland east of the site;
    - April 2010 – groundwater data from monitoring wells installed in March were received;
    - May 2010 – the second quarter groundwater sample event is conducted; and
    - June 2010 – One additional monitoring well (MW-31) is installed and sampled to further define/refine the extent of VOCs in groundwater.
4. **A Summary of Contacts with Representatives of Local Community, Public Interest Groups, or State Government during the Reporting Period**
- As described above TPC communicated with the City of Tecumseh regarding the proposed well ordinance. The City of Tecumseh communicated with the MDNRE directly.
  - TPC communicated with the City of Tecumseh regarding the establishment of a public repository. The City of Tecumseh agreed to make documents available at City Hall.
5. **A Summary of Problems and Potential Problems Encountered During the Reporting Period**
- None

## 6. Action Taken to Rectify Problems Identified Above

- Not Applicable

## 7. Changes in Personnel during Reporting Period

- None

## 8. Projected Work for the Next Reporting Period

- Work related to controlling on-site human exposures:
  - Evaluate indoor air and sub-slab soil gas sample data from the engineering areas occupied by Tecumseh Products Company. Develop a strategy to address indoor air criteria exceedences, if any;
  - Conduct a passive soil gas survey in the northern portion of the former manufacturing building; and
  - Continue the evaluation of potential source area control measures.
- Work related to controlling off-site human exposures
  - Finalize negotiations to decommission the irrigation well which is affected by VOCs;
  - Continue negotiations with the City of Tecumseh to implement the proposed well ordinance;
  - Finalize soil gas screening levels and groundwater screening levels to be used to evaluate the volatilization to indoor air migration pathway; and
  - Collect and analyze another round of off-site soil gas samples.
- Work related to the migration of affected groundwater:
  - Submit a Quality Assurance Project Plan (QAPP) for USEPA review and comment.
  - Conduct the third quarter sampling event.

## VI. Work to be Performed – Final Corrective Measures Proposal

Preparation of the Final Corrective Measures Proposal will be initiated following completion of the Remedial Investigation Report and the Environmental Indicators Reports.

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## VI. Work to be Performed – Final Corrective Measures Implementation

Work related to the Final Corrective Measures Implementation will be initiated following USEPA's Final Decision.

## VI. Work to be Performed – Establish Public Repository of Information

TPC and the City of Tecumseh have agreed to establish a public repository at City Hall. TPC will begin to populate the proposed public repository during the third quarter of 2010.

## VII. Access

Prior to the installation of three monitoring wells (MW-16s, MW-17s, and MW-22) TPC obtained an access agreement with an offsite property owner so that RMT could access these wells for routine groundwater sampling. TPC obtained a revised access agreement which also provides access for USEPA and its representatives on May 11, 2010. No other access agreements are required at this time.

## VIII. Cost Estimates and Assurances of Financial Responsibility

The Initial Cost Estimate was submitted to the USEPA on April 28, 2010. USEPA approved the Cost Estimate in a letter dated June 22, 2010. TPC submitted a draft Financial Assurance document to the USEPA for review on June 23, 2010. USEPA provided comments to the draft Financial Assurance document on June 25, 2010. Financial Assurance will be obtained no later than August 21, 2010, in accordance with the schedule outlined in the Consent Order.

Sincerely,

RMT, Inc.



Graham Crookford  
Project Manager

cc: Lynn Dennison, Tecumseh Products Company  
Jason Smith, Tecumseh Products Company  
Douglas McClure, Conlin, McKenney and Philbrick, PC  
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