



October 14, 2010

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

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

Dear Ms. Mullin:

Pursuant to Section VI of the above referenced Administrative Order on Consent (Consent Order) effective March 29, 2010, RMT, Inc. (RMT), on behalf of the Respondent, Tecumseh Products Company, Inc. (TPC) submits this Third Quarter 2010 Progress Report. This report covers activities related to the Consent Order completed by TPC during the Third 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

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Tecumseh Products Company, Tecumseh, Michigan (ENVIRON, October 2007), Phase I Environmental Site Assessment for the Tecumseh Products (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. Proposed screening levels for the volatilization to indoor air migration pathway were included in Technical Memorandum titled “Summary of Off-Site Soil Gas Investigation Activities – March through April 2010, Former Tecumseh Products Company Site, Tecumseh, Michigan” which was submitted as part of the Second Quarter 2010 Progress Report. Proposed groundwater screening levels for the volatilization to indoor air migration pathway were accepted by USEPA in a comment letter dated August 24, 2010. In the comment letter dated August 24, 2010 USEPA provided alternative residential soil gas screening levels calculated using an attenuation factor of 0.1. TPC is evaluating the residential attenuation factor proposed by USEPA.

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 were included in a Technical Memorandum titled “Summary of Groundwater Investigation Activities – March 2010 through June 2010, Former Tecumseh Products

Company Site, Tecumseh, Michigan," which was submitted with the Second Quarter 2010 Progress Report.

- **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 was 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. Negotiations are underway to address MDNRE comments and to finalize the ordinance.
- **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. Options to address the potential for volatilization to indoor air in the engineering area are under review.

- **Mitigation of Indoor Air (Off-Site)** – Characterization of the potential for volatilization to indoor air at off-site locations is in progress.
- **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: 40% complete
- Work related to the Environmental Indicators Report – Current Human Exposures Under Control: 40% complete
- Work related to the Environmental Indicators Report – Groundwater Stabilized: 40% complete

3. A Summary of Activities during the Reporting Period

- Work related to evaluating the potential need for, and if necessary, the control of on-site human exposures
 - July 2010 – A passive soil gas survey in the northern portion of the former manufacturing building was performed;
 - September 2010 – Two monitoring wells (MW-32s and MW-33s) and seven soil borings (NS-11 through NS-17) were installed in the Northern Source Area;
 - September 2010 – A monitoring well (MW-34s) was installed in the Southern Source Area; and
 - July 2010 - September 2010 – An evaluation of options to address the potential for vapor intrusion in the leased engineering area is ongoing.
- Work related to evaluating the potential need for, and if necessary, the control of off-site human exposures
 - July 2010 - September 2010 – Negotiations regarding the decommissioning of the remaining affected private well, used for irrigation purposes, are ongoing;
 - July 2010 - September 2010 – Negotiations with the City of Tecumseh and MDNRE to implement the well ordinance are ongoing;
 - August 2010 – USEPA accepted proposed groundwater screening levels for vapor intrusion;
 - September 2010 – A groundwater sample was collected from the true (non-perched) water table at the location of B-35;
 - September 2010 – Installation of 2 additional off-site soil gas monitoring points was completed; and
 - September 2010 – A second round of off-site soil gas data was collected.
- Work related to evaluating the stabilization/migration of affected groundwater
 - August 2010 – A Draft Quality Assurance Project Plan was submitted for USEPA review; and
 - August 2010 - September 2010 – the third quarter groundwater sample event was conducted.

4. A Summary of Contacts with Representatives of Local Community, Public Interest Groups, or State Government during the Reporting Period

- Michelle Mullin of USEPA was on site on September 21, 2010 to meet with TPC/RMT and to observe soil gas sampling procedures.
- As described above TPC communicated with the City of Tecumseh and MDNRE regarding the proposed well ordinance.
- TPC communicated with the City of Tecumseh regarding the establishment of a public repository at City Hall.
- RMT communicated with MDNRE regarding soil gas attenuation factors. MDNRE continues to support the use of an attenuation factor of 0.02 for sub-slab soil gas and of 0.002 for deep soil gas.

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 evaluating the potential need for, and if necessary, the control of on-site human exposures
 - Continue to evaluate options to address the potential volatilization to indoor air migration pathway in the engineering areas occupied by Tecumseh Products Company;
 - Evaluate data from the September 2010 source area investigation; and
 - Continue the evaluation of potential source area control measures.
- Work related to evaluating the potential need for, and if necessary, the control of off-site human exposures
 - Finalize negotiations to decommission the irrigation well which is affected by VOCs;

- Continue negotiations with the City of Tecumseh and MDNRE to implement the proposed well ordinance;
 - Evaluate data from the September 2010 soil gas sample event;
 - Evaluate groundwater data from B-35;
 - Finalize soil gas 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 evaluating the stabilization/migration of affected groundwater:
- Evaluate third quarter groundwater sample event data;
 - Begin development of a groundwater model;
 - Finalize the Quality Assurance Project Plan (QAPP); and
 - Conduct the fourth quarter groundwater 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.

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 has established a public repository in the City Clerk's office at City Hall. A notice sheet has been posted on the bulletin board at City Hall which lists and briefly describes the documents included in the public repository. TPC will update the public repository as appropriate.

VII. Access

Prior to the installation of four monitoring wells (MW-16s, MW-17s, MW-22, and MW-31), 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

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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. The Financial Assurance documents were finalized on August 20, 2010.

Sincerely,

RMT, Inc.



Graham Crockford
Project Manager

cc: Lynn Dennison, Tecumseh Products Company
Jason Smith, Tecumseh Products Company
Douglas McClure, Conlin, McKenney and Philbrick, PC
Stacy Metz, RMT
City of Tecumseh
Central Files