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May 31, 2013

Mr. Richard Nussbaum  
Missouri Department Natural Resources  
Chief, Permits Section - Hazardous Waste Program  
PO Box 176  
Jefferson City, MO 65102

**Subject: Sampling and Analysis Plan (Version 9) – Class 2 Permit Modification  
Eaton Hydraulics LLC/Unisys - Former Vickers Facility  
Joplin, Missouri  
Missouri Hazardous Waste Management Facility Permit No: MOD007155781**

Dear Mr. Nussbaum:

Pinnacle Engineering, Inc., (Pinnacle), on behalf of the Eaton Hydraulics LLC/Unisys – Former Vickers (Vickers) Facility (Facility) located at 2800 West 10<sup>th</sup> Street, Joplin, Missouri, is updating the *Sampling and Analysis Plan* (SAP), for the Former Vickers Facility, Joplin, Missouri, Missouri Hazardous Waste Management Facility Permit No.: MOD007155781, dated May 31, 2013. We believe that this report fulfills the requirements of **Special Permit Condition IV.D.2, IV.D.3.b, IV.D.4.c, IV.E.2.d and V.A.2 (F)**, compliant with 40 CFR §270.42 - *Permit modification at the request of the permittee*. These changes require a Class 2 Permit Modification as both the number of sampling points are being modified in addition to changes in sampling parameters. The purpose of this correspondence is to provide the Missouri Department of Natural Resources (MDNR) – Hazardous Waste Program (HWP) with a summary of proposed changes from the previous SAP (Version 8 – dated July 29, 2009) to this SAP, Version 9, dated May 31, 2013.

A copy of this letter outlining the Class 2 Permit Modifications is being sent to all interested individuals on the mailing list maintained by the Director, as specified in 40 CFR 124.10(c)(ix).

Pursuant to 40 CFR §270.42(b), notice for this Permit Modification is being published in the *Joplin Globe*, as well as on KQYX-FM radio. A public availability meeting is scheduled for Tuesday, June 18, 2013, from 5:00 PM to 7:00 PM at the Everett J. Ritchie Tri-State Mineral Museum, located at Schifferdecker Park, 4<sup>th</sup> Street and Schifferdecker Avenue, Joplin, Missouri. Copies of the SAP (Version 9) and other relevant documents are available for public review at the Joplin Public Library, 300 South Main Street, Joplin, Missouri. Copies of the SAP will also be available at the public meeting. A copy of the *Fact Sheet* accompanying the notice to adjacent landowners and individuals on the Facility mailing list is enclosed with this letter.

Changes to the number and location of groundwater monitoring wells requires a Class 2 Permit Modification, in accordance with **Special Permit Condition IV.D.3.b**, and criteria pertaining to these changes are outlined in 40 CFR §270.42(b). In accordance with 40 CFR §270.42(b)(iii), this Permit Modification is necessary to update the Facility's monitoring plan, analytical parameters, monitoring schedule, as well as optimize groundwater, surface water, and remediation system

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sampling to be reflective of the evolving corrective action program. Permitting changes reflected in this SAP include the elimination of Outfall 004; sampling changes at Outfall 002 and Outfall 003 related to revisions to Missouri State Operating Permit (MSOP) MO-0002411, and the development of a Stormwater Pollution Prevention Plan (SWPPP) for Outfall 002.

Pursuant to **Special Permit Condition IV.D.3.b** material changes to the number of wells and sampling points requires a Class 2 Permit modification. The Facility last revised the SAP (Version 8) in response to MDNR comments on May 20, 2010. Since that date, MDNR has provided the Facility with additional documents and comments pertaining to the overall sampling and analysis programs, well construction concerns, and regulatory reviews of submitted *Semi-Annual Groundwater Corrective Action Reports* (SAGCARs), including:

- On October 20, 2011, MDNR – HWP provide the Facility with their review of the *2010 Semi-Annual Groundwater Corrective Action Reports*. The comments provided to the Facility largely included grammatical and general comments to the 2010 SAGCARs, but also provided a Report Review Checklist. This Checklist contained additional comments, recommendations, and suggestions for the Facility to incorporate into the Facility sampling program. The Facility incorporated these comments into the sampling program, and provided updates in a revised document to MDNR on December 7, 2011.
- On March 6, 2012, MDNR – HWP conducted a compliance evaluation inspection at the Facility. On March 23, 2012, HWP provided the Facility with a series of six (6) questions which were addressed in a letter to HWP on April 5, 2012. The final Compliance Evaluation Inspection Report was issued by HWP on May 18, 2012, which did not find any Unsatisfactory Features at the Facility. Comments and suggestions from the compliance inspection were incorporated into Facility operations.
- On July 9, 2012, modifications to MSOP MO-0002411 changed the sampling frequency for the light non-aqueous phase liquid (LNAPL) treatment plant (LTP) from monthly to quarterly, the addition of sampling locations with the installation of MPE wells, and the change in EPA Test Method from TO-14 to EPA Test Method TO-15.
- On December 26, 2012, MDNR - HWP provided a review and comment letter of the *2011 Semi-Annual Corrective Action Report* and Checklist. The requirements of this review necessitated a re-submittal of the *2nd Half 2011 Semi-Annual Groundwater Corrective Action Report* with replacement pages and CD-ROM, which occurred February 4, 2013. Suggestions provided in the Checklist were incorporated into this SAP.
- On January 16, 2013, MDNR- HWP provided the Facility with a comment letter containing an *Operation and Maintenance (O&M) Inspection* letter. This inspection provided comments on monitoring well inspections and well construction standards. This SAP incorporates the recommendations presented in that comment letter.

The installation and proposed abandonment of monitoring wells in this SAP also dictates a Class 2 permit modification. A summary of the changes and modifications are noted below.

#### **Modifications to the LTP Monitoring Program**

The Facility discontinued discharging non-contact cooling water to Outfall 004 on September 30, 2010 under MSOP MO-0002411. Effective September 30, 2010 the make-up water for Outfall 004 from the LTP was valved back to Outfall 003. This discharge and treatment process change was incorporated into MSOP revisions December 14, 2010.

Additional MSOP revisions published July 9, 2012, changed monitoring and reporting parameters for both Outfall 002 and Outfall 003. The notable permit changes in sampling and reporting requirements at Outfall 003 are Final Effluent Limitations for barium, cadmium, lead, nickel, zinc, benzene, carbon tetrachloride, chloroethane, chloroform, ethylbenzene, methylene chloride, tetrachloroethylene, toluene, trichloroethylene, vinyl chloride, xylenes (total), 1,2-cis-dichloroethene, 1,2-dichloroethane, 1,1-dichloroethylene, 1,2-trans-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and 1,1,2,2-tetrachloroethane were modified to '*Monitoring requirement only*' parameters. The notable permit changes in sampling and reporting requirements at Outfall 002 include Final Effluent Limitations for Total Suspended Solids, Settable Solids, and Oil & Grease were modified to '*Monitoring requirement only*' parameters. Table 8 of the SAP outlines the Outfall and LTP sampling criteria.

### **Modifications to the Groundwater Monitoring Network**

This SAP proposes abandonment of five (5) wells, including 6, 410, 830, T1-11obs and T1-2obs. In addition, soil vapor extraction (SVE pilot test monitoring points (1-inch installations) installed in December 1993 in the Former UST and Drum Rack Areas will be abandoned. The water quality data summaries for these wells are included in Appendix 29 of this SAP. Well completion details for these wells are included on Table 13, and well abandonment locations are shown on Figure 21 of the SAP.

### **MPE Well Installation**

With the imposition of Interim Stabilization Measures (ISM) for MPE, additional extraction and observation wells were installed across several SWMUs to increase VOC mass removal. During October and November 2012, MPE extraction and observation wells DR-1, EW-4, EW-5, EW-6, EW-7, EW-8, DD1, DD1obs, DD2, DD2obs, DD2v, DD4, DD5, MPE-DW1, MPE-DW2, MPE-DW3, MPE-DW4, MPE-DW6, T1-11obs, and well T1-22obs were installed. Table 1 of the SAP identify these wells and the construction details of each well. Figure 19 in the SAP identifies the MPE pilot test wells. Wells T1-11obs and T1-22-obs are scheduled for abandonment.

### **Analytical Modifications**

To improve reporting and analytical sampling, the LTP air sampling program will change volatile organic analysis from EPA Test Method TO-14 to EPA Test Method TO-15. The analytical parameter list for these methods are identical, but TO-15 allows for better detection of polar VOCs (e.g., methanol, alcohols, ketones), and the high resolution gas chromatograph (GC) coupled to a mass spectrometer (MS) allows for lower detection limits. Laboratory calibration difficulties are noted with TO-15 for compounds such as formaldehyde and diazomethane, however, these compounds are not detected at or compounds associated with Facility operations.

The change in sampling methods extends to MPE wells in addition to LTP efficiency sampling (SP-12, SP-13). Table 5 of the SAP identifies the analyte list for each Test Method, and Table 8 of the SAP outlines the LTP sampling criteria.

Analytical test methods for pH are differentiated for NPDES sampling versus pH determination for groundwater and surface water monitoring programs. At the direction of MDNR – Water Pollution Section (WPS), the Facility shall incorporate EPA Test Method 150.1 for pH determination for NPDES sampling. This test method is included in Appendix 16 of this SAP.

Copies of the SAP and other relevant documents are available for public review at the following location:

Joplin Public Library  
300 South Main Street  
Joplin, MO 64801-2384

Copies of the SAP and relevant documents will be available for review at the public meeting. Facility representatives will be available at the meeting to answer questions regarding the SAP.

A legal notice to announce the Public Meeting and Class 2 Permit Modification was submitted on May 31, 2013 for publication in the *Joplin Globe*. A certificate of publication will be forwarded to MDNR under separate cover. Additionally, a broadcast announcement for the June 18, 2013 Public Meeting and Class 2 Permit Modification was submitted May 31, 2013 to *KQYX-FM*. A certificate of radio broadcast will also be forwarded to MDNR under separate cover.

We anticipate that MDNR will extend the public comment period for this Class 2 Permit Modification into July 2013. If sufficient written or public comment and involvement warrants further commitment by the Facility in response to this public meeting, we would entertain additional steps to address that issue.

If you have any questions please feel free to contact me at (763) 277-8422.

Sincerely,



Keith B. Rapp, RG-0942  
Senior Hydrogeologist\Senior Project Manager  
PINNACLE ENGINEERING, INC.



cc:	The Honorable Claire McCaskill The Honorable Roy Blunt The Honorable Billy Long The Honorable Ron Richard The Honorable Charlie Davis The Honorable Bill White The Honorable John Bartosh The Honorable Melodee Colbert-Kean Ms. Leanne Tippett Mosby Ms. Demetra Salisbury Ms. Carolyn Trout Sara Parker Pauley Ms. Cindy Davies David Noble, Esq. Lisa Sutton, Esq. Terry Satterlee, Esq. Mr. Bill Anthony Mr. Ken Herstowski Roger Dickey Kavan Stull Jim Price, Esq. Thomas Meitner Tayloe Paper Company Western Communications Acorn Teleproductions	- U.S. Senator - U.S. Senator - U.S. House Representative – District 7 - Missouri State Senator – District 32 - Missouri State House Representative – District 162 - Missouri State House Representative – District 161 - Jasper County Commissioner - Mayor, City of Joplin - MDNR, Director Environmental Quality - State Coordinator U.S. EPA, Region VII - Joplin Public Library - MDNR Director - MDNR - Southwest Regional Office - Unisys\Blue Bell - Eaton\Cleveland - Shook, Hardy & Bacon\Kansas City - Pinnacle Engineering\Joplin - EPA\Kansas City - Able Manufacturing\Joplin - Empire District Electric\Joplin - Spencer Fane\Kansas City - Modine Manufacturing\Racine
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