



February 22, 2013

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, IL 62794-9276

**Subject: Shell Oil Products US – I.D. No.: 119090AAO
SVE System with RTO Control – Application Number 11060036
Report of Deviation from Permit Conditions**

Dear Sir or Madam:

The subject source was issued a Construction and Operating Permit by the Illinois Environmental Protection Agency (IEPA) for the installation of systems installed to treat subsurface vapors in Roxana, Illinois. Application Number 11060036 allowed construction of a Soil Vapor Extraction (SVE) system with Regenerative Thermal Oxidizer (RTO). That unit began operation on January 31, 2012. The unit is operated by URS Corporation (URS) for Shell Oil Products US (SOPUS).

Pursuant to Special Condition No. 10 of the Permit, URS, on behalf of SOPUS, is submitting this report of a deviation from Special Condition Nos. 8b and 9 of the Permit. In addition, we would like to provide information concerning the July emission measurement as detailed below.

January, February and March RTO Air Flow Rate Data

1. Special Condition No. 8b.

This special condition requires measurement of air flow rate from the SVE/RTO system at start-up and during the first three weeks of operation, and once every month thereafter. URS, on behalf of SOPUS, collected and has records of this data for April 2012 forward. Records of this parameter cannot be located for the period January 2012 through March 2012. SOPUS became aware that this data could not be located on January 28, 2013.

Due to the absence of month-specific air flow rate data, in order to calculate monthly emissions for the months of January, February, and March, URS used the maximum design flow rate of the RTO system together with measured VOM and HAP values. The results of these calculations show that the SVE/RTO system emissions were less than monthly and the twelve month permit limits for HAPs and VOM.



2. Special Condition No. 9.

Special Condition No. 9 requires that exhaust air flow rate data be retained for five years. Since the exhaust air flow data are missing for January through March 2012, the records cannot be retained for the required period.

July 2012 PID Data

URS also would like to provide IEPA information concerning the July 2012 RTO emission measurement. In July 2012, URS collected an exhaust sample and analyzed it using a photoionization detector instrument (PID) as expressly allowed by special condition 8a of the subject permit. When the results from this analysis were used to calculate monthly emissions, it was found that the result was 0.956 tons. This result is less than the 2.4 tons per month VOM limit listed in special condition 3a and the 1.9 tons per month total HAP limit listed in special condition 3b. However, because this measurement technique does not allow the result to be speciated, it was not possible to directly determine that the monthly individual HAP emissions were less than 0.79 tons as required by special condition 3b.

For comparative purposes, URS compared the July 2012 PID measurements to the October 25, 2012 measurements. The October 25, 2012 data was chosen because the PID measurement and a summa canister sample were collected on the same day. The monthly estimated total HAP emissions using the July PID measurement was calculated using the measured exhaust air flow rate of 8,474 scfm. The calculated total July HAP emissions were 0.956 tons. In comparison, the October 25, 2012 total calculated HAP emissions based on the PID measurement collected and using the measured flow of 5,537 scfm were 1.118 tons. However, the reported analytical results from the summa canister collected on October 25, 2012 show that the concentrations of the individual HAPs were below the permit emission limits. The October 25, 2012 PID measurement (33) was approximately 1.7 times as high as the July 2012 PID measurement (19.2). Based on this comparison of PID measurements and corresponding reported analytical data, the July individual HAP concentrations would have been below the permit limit for individual HAP emissions set forth in special condition 3b.

Since the photoionization measurement technique does not allow direct confirmation that individual HAP emissions are less than the permit requirement, URS reinstated use of method TO-15 for required analyses in August 2012. Please note that the method TO-15 analysis was used for the January through June of 2012 emission measurement.



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If you have any questions concerning this notification, please contact Kevin Dyer, Principal Program Manager for SOPUS, at 618-288-7237.

Very truly yours,

URS CORPORATION for
Shell Oil Products US

A handwritten signature in blue ink, appearing to read "Robert E. Mooshegian".

Robert E. Mooshegian, CHMM
Senior Project Manager

A handwritten signature in blue ink, appearing to read "Kenneth Hagg".

Kenneth Hagg, P.E.
Vice President

cc: Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, IL 62234

Mr. K. Dyer, Shell Oil Products US