



Illinois EPA – Bureau of Land
ATTN: Mr. Chris Cahnovsky
2009 Mall Street
Collinsville, Illinois 62234

Shell Oil Products US
Environmental Services
17 Junction Drive
PMB #399
Glen Carbon, Illinois, 62034
Tel (618) 288-7237
Fax (618) 288-7451
Email kein.dyer@shell.com
Internet <http://www.shell.com>

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 10, 2011

Re: Violation Notice L-2011-01126

Dear Mr. Cahnovsky:

Shell Oil Products US (SOPUS) is in receipt of the above referenced Violation Notice, April 26, 2011. Herein, please find enclosed our substantive response to the subject notice, and proposed next steps where appropriate.

In addition to the enclosed response, SOPUS would state the following regarding Attachment A and the RCRA Nonfinancial Review, attached to the above VN.

- As it regards numbers 3 and 4 of Attachment A, while SOPUS acknowledges its responsibilities under the RCRA Order in this area, it would reiterate that ConocoPhillips operates and maintains the Water Production and Hydrocarbon Recovery Wells as part of its process water system for the refinery.
- As it regards the RCRA Nonfinancial Review:
 - o Page 3, First paragraph, lines 3 and 4 – SOPUS suspects the loss of flow referenced herein is not merely a product of any reduced pumping, but could be a combination of that and the location of the wells that were available for pumping at that time.
 - o Page 3, Third paragraph, lines 7 through 9 – It is acknowledged that Monitor Well P-60 has at times had product located within it. However, after May of 2009, when groundwater levels rose above the top of the well screen, no product has obviously been observed. This resulted in the skimmer pump being shut off due to not only the elevated groundwater, but lack of product recovery at that time from the screened interval.

SOPUS reserves all of its rights and defenses associated with this matter, and would request a meeting with IEPA representatives at their convenience in continuing to work with the agency in addressing these issues.



Mr. Chris Cahnovsky
June 10, 2011
Page 2 of 2

SAP: 357023

If you should have any question, please contact me at (618) 288-7237.

Sincerely,

SHELL OIL PRODUCTS US


Kevin E. Dyer
Staff Project Manager

Attachment: Enclosures

**SHELL OIL PRODUCTS US (SOPUS) RESPONSE TO
VIOLATION NOTICE, L-2011-01126**

SUGGESTED RESOLUTION 1: *Repair or replace out of service water production wells listed in the 30-day report – Groundwater Flow Control dated March 4, 2011.*

The 30 Day Report submitted by SOPUS dated March 4, 2011, listed five groundwater wells that at the time of the report were understood by SOPUS to be out of service. The following is a summary of the current status and plans to return select pumps back to service:

- Well 39: This well is currently out of service and determined by COP to be unsalvageable. Problems exist with the well header, pump and its motor and the well casing.
- Well 42: While this well was listed in the 30-day report as being out of service, COP's records indicate it has been online since 10/5/10 and may have been listed in the report in error. The well was taken offline by COP for cleaning on 9-29-10 but returned to service on 10/5/10.
- Well 72: COP returned this well to service (4/14/11).
- Well 73: This well is currently available for emergency use only (if operated, it will pump separate phase hydrocarbon in addition to water; and the oil will adversely impact operation of the groundwater biotreater). It has historically not been an effective well, as it operates at low rates.
- Well 78: This well has been returned to service (3/22/11).

In addition to the wells listed in the 30 day report, there are also three other wells whose status should be updated:

- Well 69: This well was shutdown on 5/18/11 when the pump lost suction. The Agency was notified of Well 69 being off line on May 31, 2011. The casing was found to be compromised and attempts are being made to re-case it.
- Well 76: This well is believed to have partially collapsed. The Agency was notified of Well 76 being off line on May 31, 2011. The well was re-cased and has been restarted.
- Well 82: This well is currently down and believed to have a collapsed casing. A new well is being drilled adjacent to this well (Well 86) which will replace Well 82. The replacement is anticipated to come online at the end of the second quarter of 2011.

As Wells 69, 76 and 86 (replacement for 82) are returned to service, SOPUS (as the permittee) will continue to evaluate the entire groundwater system performance. ConocoPhillips intends to work with SOPUS to determine which wells most affect

groundwater capture and how to maintain and operate those consistent with the facility's process water needs, and RCRA Permit compliance.

SUGGESTED RESOLUTION 2: *Provide documentation for the out-of-service wells including dates when they became inoperable and service records for all repairs and maintenance work.*

The following is a COP summary of downtime and maintenance work on the out of service groundwater production wells between October 28, 2010 (the date upon which the renewed RCRA post-closure permit became effective), and May 26, 2011 (the date of this survey).

Well 39:

- Offline 9/28/10 due to leaks and well failure. Remains off line (see Suggested Resolution 1 comments).
 - Services on 6/3/10 by Team Industrial Services

Well 42:

- On line the entire time period. (See note above.)

Well 72:

- Offline 10/8/10 due to leak. Returned to service 4/14/11.
 - Services from 4/5/2011 to 4/13/2011 by COP craft labor, Team Industrial Services, URS, and RSC Equipment Rental.

Well 73:

- Offline through 5/26/11 but available for emergency use (see Recommended Resolution 1 comments).

Well 78:

- Online 10/28/10, but brought offline 12/2/10 due to motor tripping on overload. Pump pulled and cleaned 2/11. Returned to service 3/22/11.
 - Well cleaning service by Layne Western.
 - Other work performed by Dugan Tool & Die Inc., COP warehouse issues, COP craft labor

SUGGESTED RESOLUTION 3: *Maintain all water production wells in proper condition to ensure containment of contaminated groundwater to prevent migration.*

The following actions have been undertaken in order to maintain gradient control, since the potential loss of control notification was submitted to the Agency on February 4, 2011:

- COP increased the pumping rates in early February, where possible to rates above refinery needs based on well cleaning and system repairs including

wellhead and valve repairs, pump replacement, etc. (as described in the 30-day report).

- Repaired and restarted Well 72 and Well 78.

The following repairs are currently underway:

- Well 69: This well was shut down on 5/18/11 when the pump lost suction. The casing was found to be compromised and attempts are being made to re-case it.
- Well 76: This well is believed to have partially collapsed. The well was re-cased and has been restarted.
- Well 82: This well is currently down and believed to have a collapsed casing. A new well is being drilled adjacent to this well (Well 86) which will replace Well 82. The replacement is anticipated to come online at the end of the second quarter of 2011.

Once the above repairs have been completed and the wells are back online, it is expected that there should be sufficient capacity to consistently demonstrate gradient control. In addition, this should provide sufficient capacity in order to shut down some wells on a periodic basis for inspection and maintenance activities, while being able to maintain gradient control utilizing the remaining wells.

SUGGESTED RESOLUTION 4: *Repair or replace the out-of-service oil recovery system. In the contingency plan... include prompt notifications to IEPA when problems with the system arise.*

After being offline for much of 2010 for tank repairs COP determined were necessary following a 10-year regulatory tank inspection, the oil recovery system located on the WRB property was returned to service April 20, 2011. Currently the system is running with 11 of 16 skimmers online. Additional system repairs are planned to be completed prior to Fall 2011. These additional repairs do not currently affect operability but are needed to continue uninterrupted operation in the winter. These items are:

- Repair heat tracing and insulation on Benzene NESHAP Header line which routes recovered water from F-67 to the refinery wastewater treatment plant.
- Remove temporary clamps and make permanent repairs to the NESHAP Header.

SUGGESTED RESOLUTION 5: *Submit for the Illinois EPA's review and approval, a workplan to conduct an assessment to determine what pumping levels are necessary to maintain inward gradient control during periods of elevated groundwater levels and steady-state groundwater levels.*

A workplan will be developed which uses a groundwater model to determine pumping levels necessary to maintain inward gradient. Initially, the model will be calibrated to existing conditions. Then, various simulations will be run in order to be able to predict what changes in pumping (if any) would be necessary in order to maintain an inward gradient during times of varying groundwater levels. This workplan will be submitted within 120 days of receipt of the VN (i.e., by August 24, 2011).

SUGGESTED RESOLUTION 6: *Submit for the Illinois EPA's review and approval, a workplan to conduct an evaluation of the hydrocarbon recovery system. The plan should include contingency measures for recovery of hydrocarbon during elevated water table conditions.*

As described in the Agency's *RCRA Nonfinancial Record Review* (included with the VN), this item concerns free product in the piezometer ROST-4-PZ and well P-60 area along the west fenceline of the refinery's North Property. The following actions have been taken in response to the February 7, 2011 *Notification of Free Product*:

- Submitted investigation work plan to Agency March 15, 2011
- Received draft approval and comments on the workplan March 25, 2011
- Conducted field work in April and May (soil borings, well installations, groundwater sampling, surveying)
- Wells are gauged on a weekly basis for the presence of free product
- Prepared a procedure to develop wells with free product and submitted it to the Agency on May 12, 2011.
- Installed P-60-S on April 20, 2011. Well is located adjacent to P-60, and is screened at a higher (shallower) interval than P-60, to monitor for free product during higher groundwater levels.
- Developed well P-60-S on June 1, 2011.
- Scheduled to conduct bail-down testing by the end of June.

Baildown testing will be utilized to evaluate LNAPL recoverability (using transmissivity). Based on the evaluation of the data generated, SOPUS will propose a means to manage free product that is present in the area. This evaluation will be submitted in a report within 120 days of the VN (i.e., by August 24, 2011). The report will also include a standard procedure to be employed when free product is encountered during routine monitoring, and will address product recovery during elevated water table conditions.