



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Protecting Texas by Reducing and Preventing Pollution

February 4, 2016

Mr. Jeff Robinson, Chief
Air Permits Section
US EPA Region 6
1445 Ross Avenue
Suite 1200, Mail Code: 6MM
Dallas, TX 75202-2733

Re: Executive Director's Response to EPA Order on Petitions VI-2014-04 and VI-2014-05
Permit Numbers: O1668 and O1669
Shell Chemical LP and Shell Oil Company
Oxygenated Solvents Production Unit and Petroleum Refining
Deer Park, Harris County
Regulated Entity Number: RN100211879
Customer Reference Number: CN601542012

Dear Mr. Robinson:

On September 24, 2015, the U.S. Environmental Protection Agency (EPA) signed an order (Order) granting portions of a petition filed by Environmental Integrity Project objecting to the effective Federal Operating Permit (FOP) Numbers O1668 and O1669 for Shell Chemical LP and Shell Oil Company, that were issued on April 1, 2014.

On December 21, 2015, in accordance with Title 30 Texas Administrative Code § 122.360 (30 TAC § 122.360), the Texas Commission on Environmental Quality (TCEQ) offered responses and resolutions to the granted portions of the petition to EPA's order. TCEQ's response indicated that the New Source Review (NSR) summary tables would be revised to satisfy Claim 2, at the next revision of the FOPs; and that the Statement of Basis (SOB) for the two permits would be revised accordingly to more fully explain the rationale for why the monitoring contained in corresponding Prevention of Significant Deterioration (PSD) permits for the Pyrolysis furnaces (Claim 3.B), and storage tanks and wastewater treatment facilities (Claim 3.C.) is sufficient to assure compliance with the permit emission limits, and to explain the status of specific Permits by Rule (PBR)s and how incorporation of these PBRs is consistent with 30 TAC § 116.116(d)(2) (Claim 6).

In response to additional comments by EPA, TCEQ offers the following supplemental information to describe the changes that will be made to the permit records and/or permits and supporting SOB during the next permit revisions in accordance with the schedule provided below.

Claim 2. The Proposed Permits' IBR of PBR Requirements Fails to Assure Compliance.

EPA remarked that not all PBRs listed in the New Source Review Authorization References table can be found to be associated with a unit in the New Source Review Authorizations by Emission Unit table. EPA requests that all preconstruction authorizations in the New Source Review Authorization References table be associated with a specific unit, and that registration numbers be identified for registered PBRs. EPA also commented that the proposed Active PBR Inventory attachment was confusing.

Response to Claim 2.

The Executive Director agrees that it is helpful to explain the purpose of the NSR Authorization by Emissions Unit Table in the permit through the SOB document, and agrees to revise Shell's SOB to ensure that the Title V permits are clear and unambiguous as to how the emissions limits apply to particular emission units. Additionally, Permits O1668 and O1669 will be revised to identify which PBRs apply to which emission units and which PBRs apply generally or site-wide. This claim will be further addressed through the Title V process as identified in the timetable below.

Claim 3.B. The Chemical Plant Proposed Permit Fails to Assure Compliance with Permit Limits for PM₁₀ Emissions from Pyrolysis Furnaces Authorized by Permit No. 3219/PSDTX974.

For the pyrolysis furnaces EPA requested additional explanation on how the monitoring, recordkeeping, and reporting assure compliance with the PM₁₀ emission limits for the pyrolysis furnaces at the Chemical Plant. Further, the TCEQ was ordered to document the rationale for how those monitoring requirements assure compliance with applicable requirements as required by 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 70.6(a)(3). If necessary, the TCEQ must revise the title V permit accordingly.

Response to Claim 3.B.:

PM emissions are calculated using the firing rate of the furnace and a PM factor supplied by the vendor or AP-42. Since the pyrolysis furnaces are production units numerous operational parameters are tracked which allow the calculation of the PM emissions. During test runs the furnaces are required by the permit conditions to operate at the maximum firing rates. In addition, operational parameters such as firing rate and flow rates are monitored to establish the operational range of the furnaces during certification. These operational ranges should be maintained to keep the furnaces within the combustion zone established during testing and certification of the CEMs. The products of combustion should track with each other as the combustion zone changes. Since complete combustion of the natural gas fired in the pyrolysis furnaces goes to CO₂, a change in the combustion zone toward less efficient combustion would cause an increase in CO emissions before an increase in PM (carbon) emissions. Also, since the CO emissions are much larger than the PM emissions, increases and decreases in emissions would tend to be more noticeable in the CO CEM readings. For these reasons, monitoring of additional products of combustion is unnecessary.

On January 27, 2016, Shell informed TCEQ that the pyrolysis furnaces have been permanently shut down. Shell will submit a future revision application to request removal of those units. However, the SOB for O1668 will be revised during reopening in order to fully respond to this claim.

Claim 3.C. The Proposed Permits Do Not Assure Compliance with NSR Emission Limits for Storage Tanks and Wastewater Treatment Facilities.

EPA requested the TCEQ to identify monitoring sufficient to assure compliance with VOC and benzene emissions limits at the wastewater treatment plants in the underlying PSD permit, and explain the rationale for the selected monitoring.

Response to Claim 3.C:

The SOB for O1668 and O1669 will be expanded to include a discussion of the emission calculation methodology and the rationale for the selected monitoring for each wastewater unit associated with benzene emissions.

Claim 6. The Chemical Plant Proposed Permit Fails to Address Shell's Non-Compliance with 30 TAC § 116.116(d), which Requires PBRs for Previously Permitted Facilities to be Incorporated into Existing Permits on Renewal or Amendment.

EPA ordered the TCEQ to explain the status of these PBRs and how TCEQ's actions regarding incorporation of these PBRs is consistent with 30 TAC § 116.116(d)(2).

Response to Claim 6:

TCEQ's Policy and Guidance Memo dated September 26, 2006

http://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf defines the two different scenarios that will determine when and how a PBR or standard permit (SP) should be consolidated in the NSR permit for that facility when the permit is amended or renewed: consolidation by reference and consolidation by incorporation. If Standard Permits and PBRs occur at the permitted site, but do not directly affect permitted facilities, it is not required, but at the request of the permit holder they may be consolidated by reference. Referencing will not require a best available control technology (BACT) review but may require an impacts review based on commission guidance. Consolidation of all other PBRs and SPs by incorporation (rolled in) is voluntary. If the permit holder requests incorporation (that is, reauthorization under the permit), PBRs and SPs may be incorporated but will undergo BACT and impacts review based on commission guidance. When incorporated into the permit, the original authorization becomes void. The incorporation of PBRs and SPs requires an amendment, but no additional forms or fees are required if a complete renewal package with the above information is submitted. The SOB for both O1668 and O1669 will be revised to fully explain the status of the PBRs and how incorporation is consistent with TCEQ rules.

In order to facilitate resolution of the objections in the Order, TCEQ has initiated a reopening of FOPs O1668 and O1669 in accordance with 30 TAC § 122.231 on the following schedule:

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Action	Completion Date
Receipt of Supplemental Information/Reopening	February 12, 2016
Submit Public Notice Authorization Package to Shell	March 4, 2016
Begin 30-day public comment period	No later than April 4, 2016
Close of public comment period*	No later than May 4, 2016
Begin 45-day EPA concurrent review**	No later than April 12, 2016
Issue reopened permit***	No later than June 20, 2016

* May be later if hearing is requested and granted.

** In accordance with 30 TAC § 122.350(b)(1), in the event that a public comment is received during the 30-day public comment period, EPA review of the proposed permit will begin on date of Notice of Proposed Permit and Executive Director's Response to Public Comment.

*** May be later if comments and/or hearing request received.

Thank you for your cooperation in this matter. If you have any other questions, please contact Ms. Camilla Widenhofer (512) 239-1028.

Sincerely,



Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/cw

cc: Mr. Derrick Stanley, Staff Environmental Specialist, Shell Oil Products Company LLC,
Deer Park
Mr. Brett D. Woltjen, Production Manager, Shell Oil Company, Deer Park
Ms. Gina McCarthy, Administrator, U.S. Environmental Protection Agency
Director, Harris County, Pollution Control Services, Pasadena
Mr. John M. Minter, Staff Attorney, TCEQ
Ms. Amy L. Browning, Staff Attorney, TCEQ
Air Section Manager, Region 12 – Houston
Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 13765 and 13617