



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1201 ELM STREET, SUITE 500  
DALLAS, TEXAS 75270

November 2, 2022

Mr. Samuel Short, Acting Director  
Office of Air  
Texas Commission on Environmental Quality (MC 122)  
Post Office Box 13087  
Austin, Texas 78711-3087

Re: Objection to Title V Permit No. O1668  
Shell Chemical LP, Deer Park Chemical Plant  
Harris County, Texas

Dear Mr. Short:

This letter is in response to the Texas Commission on Environmental Quality submittal to our office containing the proposed renewal of the title V permit for the Shell, Deer Park Chemical Plant referenced above. The United States Environmental Protection Agency has a 45-day review period which began on September 20, 2022 and ends on November 4, 2022. We have reviewed the TCEQ's proposed title V permit action, Statement of Basis, and response to public comments. In accordance with 40 CFR § 70.8(c) and 42 U.S.C. § 7661d(b)(1), EPA is objecting to the proposed permitting action. Section 505(b)(1) of the federal Clean Air Act requires EPA to object to the issuance of a proposed title V permit during its 45-day review period if EPA determines that the permit is not in compliance with applicable requirements of the Act or requirements under 40 CFR Part 70. The Enclosure to this letter provides the specific reasons for each objection and a description of the terms and conditions that the permit must include to respond to the objections.

Section 505(c) of the Act and 40 CFR § 70.8(c)(4) provide that if the permitting authority fails, within 90 days of the date of the objection, to submit a permit revised to address the objections, then EPA will issue or deny the permit in accordance with the requirements of 40 CFR Part 71. Because the State must respond to our objection within 90 days, we suggest that the revised permit be submitted with sufficient advance notice so that any outstanding objection issues may be resolved prior to the expiration of the 90-day period.

We are committed to working with the TCEQ to ensure that the final title V permit is consistent with all applicable title V permitting requirements and the EPA approved Texas title V air permitting program.

If you have questions or wish to discuss this further, please contact Cynthia Kaleri, Air Permits Section Chief at (214) 665-6772, or Aimee Wilson, Texas Permit Coordinator at (214) 665-7596. Thank you for your cooperation.

Sincerely,

David F. Garcia, P.E.  
Director  
Air & Radiation Division

Enclosure

cc: Shell Chemical Site Manager

**ENCLOSURE**  
**EPA Objections to TCEQ Title V Permit O1668**

*EPA views monitoring, recordkeeping, and reporting adequacy in NSR permits that are incorporated by reference into a title V permit to be part of the title V permitting process and will therefore review whether a title V permit contains adequate monitoring, recordkeeping, and reporting provisions sufficient to assure compliance with the terms and conditions established in the preconstruction permit. The statutory obligations to ensure that each title V permit contains “enforceable emission limitations and standards” supported by “monitoring . . . requirements to assure compliance with the permit terms and conditions,” 42 U.S.C. § 7661c(a), (c), apply independently from and in addition to the underlying regulations and permit actions that give rise to the emission limits and standards that are included in a title V permit.” See *South Louisiana Methanol Order* at 10; *Yuhuang II Order* at 7-8; *PacifiCorp-Hunter Order* at 16, 17, 18, 18 n.33, 19; *Big River Steel Order* at 17, 17 n.30, 19 n.32, 20. Therefore, regardless of the monitoring, recordkeeping, and reporting initially associated with a minor NSR permit or PBR, TCEQ has a statutory obligation independent of the process of issuing those permits to evaluate monitoring, recordkeeping, and reporting in the title V permitting process to ensure that these terms are sufficient to assure compliance with all applicable requirements and title V permit terms. *Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008); see *Motiva Order* at 25-26.*

- 1. Objection for Failure to Identify Specific Applicable Requirements under 40 CFR Part 61 and Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP).** Underlying NSR permits 3219/PSDTX974, 3179, and 3219 indicate that the facilities shall comply with 40 CFR Part 61 Subparts J, V, and FF. The Applicable Requirements Summary table shows that GRP-MON-FE as subject to Part 61 Subpart J for Benzene, yet the table identifies “none” for monitoring and testing requirements, recordkeeping requirements, and for reporting requirements. The textual description states “Each owner or operator subject to this subpart shall comply with the requirements of 40 CFR 61, Subpart V – National Emission Standard for Equipment Leaks (Fugitive Emission Sources)”. The permit shield on page 459 indicates that for GRP-MON-FE, that a permit shield exists for Part 61 Subpart V and the basis of the determination is stated as “Equipment subject to the requirements of 40 CFR 63, Subpart FFFF which is also subject to the provisions of 40 CFR 61 are required to comply with the provisions of 40 CFR 63, Subpart FFFF”. The applicable requirements summary table does include applicable requirements from 40 CFR Part 63 Subpart FFFF for GRP-MON-FE for HAPs.

The Title V permit should contain references that are detailed enough that the manner in which the referenced requirements apply to the facility is clear and is not reasonably subject to misinterpretation. See *In the Matter of Tesoro Refining, Order on Petition No. IX-2004-06* (March 15, 2005) at 8; see also White Paper Number 2 for Improved Implementation of The Part 70 Operating Permits Program, 34-38 (March 5, 1996). In the case of the Shell Chemical Plant permit, the permit does not contain enough information or detailed enough citations to determine how the specific requirements of the NESHAP requirements apply to the facility. Can TCEQ confirm that no additional requirements for Benzene are applicable for GRP-MON-FE and clarify the VOC requirements for the facility?

**2. Inadequate Monitoring for Flares.** As you are aware from petition orders recently published for other TCEQ title V permits<sup>1</sup>, EPA has discovered that meeting the requirements of 40 CFR § 60.18 does not always account for certain problems that can reduce combustion efficiency, such as those caused by excess steam or air assistance to the flare. Steam- and air-assisted flares for certain waste gas streams are susceptible to performance problems that may reduce VOC destruction efficiency below 98%. EPA seeks clarification on a few items in an effort to determine if the draft permit requires sufficient monitoring to ensure compliance with the stated 98% / 99% destruction efficiencies and the related lb/hr and TPY emission rates.

Special Condition 9.A. through 9.E. of NSR permit PSDTX974/3219 imposes permit conditions on flares covered by the NSR permit (OP-2 Elevated Flare, OP-3 Elevated Flare, and OP-3 Ground Flare). Condition 9.E. states, “In lieu of the monitoring requirements in Paragraph D of this condition, the flare may comply with the monitoring and testing requirements of 30 TAC §§ 115.725(d), effective December 23, 2004, as specified in 30 TAC Chapter 115 Subchapter H, Division 1”. None of the conditions in Special Condition 9 contain any required monitoring for the amount of assist steam or air that is sent to the flares. Nor does the permit identify the minimum destruction efficiency required of the flares. Special Condition 6 refers to applications dated November 20, 2017 and July 19, 2018 for documentation on how the emission limits were established. The Application dated November 20, 2017 identifies a destruction/removal efficiency (DRE) of 98%/99% for the ground flare. Is the 99% DRE for compounds containing no more than 3 carbons and the 98% DRE for all other compounds per TCEQ Tier 1 BACT? Neither application reference contained a destruction efficiency for the elevated flares. Can TCEQ provide additional details that identify what the destruction efficiency is for each flare and show the conditions in permit PSDTX974 that ensure compliance with the specified destruction efficiency of each flare?

Special Conditions 14 and 15 of NSR permit 3179 contains requirements for the HIPA Flare (EPN A1333). This flare is steam assisted according to condition 14.C. The permit does not specify a destruction efficiency for the flare. Can TCEQ provide additional details that identify what the destruction efficiency is for the flare and show the conditions in permit 3179 that ensure compliance with the specified destruction efficiency of the flare? It is important that the NSR permits contain adequate monitoring to ensure compliance with any VOC emission limits specified by TCEQ in the permit on both a short term and long term basis to be practically enforceable. Where the NSR permit does not contain adequate monitoring, it is important that the title V permit fill the gap by requiring any needed monitoring, recordkeeping, and reporting to assure compliance,

**3. Objection for Failure to Include all Applicable Requirements.** EPA reviewed the Permit By Rule (PBR) Supplemental Table that was included with the permit application. The New Source Review (NSR) Authorization References by Emissions Unit table including registration numbers next to emission units authorized by registered PBRs conforms with TCEQ's EPA-approved regulations, 30 TAC § 122.142(2)(B)(i), as well as the agreements underpinning the EPA's approval of the Incorporation By Reference (IBR) of PBRs - namely that "PBRs will be cited to the lowest level of citation necessary to make clear what requirements apply to the facility." 66 Fed. Reg. at 63322 n.4. However, upon review of all registered PBRs associated with the Shell Chemical Plant, several effective PBRs appear to be omitted from title V permit O1668 (identified below by PBR rule number and registration number) and there are PBRs listed in the PBR Supplemental Table that are

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<sup>1</sup> See *In the Matter of Bp Amoco Chemical Company*, Order on Petition No. VI-2017-6 (July 20, 2021) at 19-25;

shown to be Cancelled on the TCEQ website and are not included in the title V permit:

- Shown to be cancelled:
  - 98473
  - 109247
  - 146255
- Missing from title V permit
  - 164009 for 106.478 for K306R1
  - 167075 for TOL910 (106.261, 106.478) and OP2FUG (106.261)
  - 168056 for K307R1 for 106.478
  - 168460 for TUT604 and TUT605 for 16.261
  - 168727 for HT2FUG, HT3FUG, and OP2FUG for 106.261 and 106.262

Because the title V permit omits direct reference to certain source-specific requirements (e.g., certified emission limits) derived from registered PBRs, it is not clear that the Shell Chemical Plant permit currently includes or incorporates all applicable requirements for the facility, as required by the CAA, the EPA's regulations, TCEQ's regulations, the agreements underlying the EPA's approval of IBR in Texas, and the EPA's longstanding position concerning IBR. Pursuant to 40 CFR § 70.8(c)(1), EPA objects to the issuance of the Shell Chemical Plant title V permit since it is not in compliance with the requirements of CAA § 504(a) and 40 CFR § 70.6(a)(1) & (3).

In response to this objection, TCEQ should review the listed PBR registrations to determine if they are applicable to the Shell Chemical Plant authorized by title V permit O1668. If so, the title V permit and/or PBR Supplemental Table should be revised to include all registered PBRs. EPA understands that the Shell Refinery and Shell Chemical Plant previously operated under a common Regulated Entity Reference Number (RN100211879), but the refinery now operates under a different RN number since the company and TCEQ have worked to separate their operating permits. To the extent that any of the aforementioned PBR registrations apply solely to units authorized by the Shell Refinery under title V permit O1669, please ensure that those PBR registrations are included in the O1669 permit or associated PBR Supplemental Table for that title V permit.

**4. Objection for Failure to Include Adequate Monitoring for PBRs.** EPA finds that the draft Response to Comments (RTC) and permit could benefit from more detailed monitoring information in the PBR Supplemental Table. The goal of this supplemental table is to explicitly incorporate monitoring/recordkeeping requirements and reduce ambiguity with respect to how emissions are calculated and how compliance is determined. When TCEQ relies on Table D to incorporate additional monitoring requirements, the monitoring and recordkeeping terms must be sufficient to assure compliance with emission limitations and operational requirements. When records are identified as being maintained, it would be practical to include a frequency for the recordkeeping. See below for a few relevant examples of units that need more detailed information - this list of examples is not comprehensive:

- Unit V392 – This unit is subject to 40 CFR Part 63 Subparts F, G, and H according to the PBR registration application. The monitoring listed in the PBR supplemental table is not very descriptive and the Applicable Requirements Summary table in the title V permit only shows applicable requirements for 30 TAC Chapter 115 and 40 CFR Part 63 Subpart G.
- Unit ACNLOAD – This unit shows it is subject to 40 CFR Part 63 Subpart G according to

the PBR registration application. The PBR supplemental table only states “loading dates, volumes will be monitored”. The PBR registration contained more information on how the emissions were to be calculated which included that the vapors are collected and sent to a flare for control and that emissions were estimated using chapter 5 of AP-42 for VOC emissions and the NOx and CO were calculated using AP-42 emission factors for steam assisted flares, In addition, the title V permit contains additional monitoring requirements under 30 TAC Chapter 115.

- Various tanks subject to 106.472, 106.473, 106.476, 106.478, 16.261, and 106.262 – Many tanks listed “Monitor tank throughput and material stored”. It is preferable that it be stated that this information will be recorded on a monthly basis and that calculation of a rolling 12-month total for emissions is calculated using whatever calculation methodology has been chosen by the company (AP-42 or other reference material).

**5. Objection to Improperly Incorporating Confidential Emission Calculations.** In reviewing the PBR Supplemental Table, EPA found it necessary to look at the application for some PBR registrations to review the monitoring requirements. When doing so, it was found that at least one PBR that was incorporated by reference into the title V permit contained confidential information in the application. PBR registration 112344 referred to emission calculations contained in the confidential file.

The CAA limits the types of information that may be treated as confidential under title V, and therefore withheld from the public. As a general matter, some information may be protected as a trade secret under section 114(c) of the CAA. 42 U.S.C. § 7414(c). However, the CAA specifically limits this protection: “The contents of a [title V] permit shall not be entitled to [confidential] protection under section [114(c)].” 42 U.S.C. § 7661b(e). Regarding the contents of a title V permit, the CAA further requires that “Each permit issued under this subchapter shall include enforceable emission limitations and standards, … and such other conditions as are necessary to assure compliance with applicable requirements ....” 42 U.S.C. § 7661c(a). EPA regulations further require that the contents of a title V permit include “emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance.” 40 C.F.R. §70.6(a)(1). Further, “terms and conditions in a part 70 permit... are enforceable by the Administrator and citizens under the Act.” 40 C.F.R. §70.6(b)(1). Additionally, information which is considered emission data, as well as standards or limitations, are also not entitled to confidential treatment. *See* CAA § 114(c) (“other than emissions data”); 40 C.F.R. §2.301(f). It is not clear in the current permit record whether the title V permit contains all the necessary emissions limitations and standards, including those emission methodologies and inputs, operational requirements and limitations that assure compliance with all applicable requirements, or if some of that information may be inappropriately treated as confidential resulting in the title V permit not complying with the CAA.

In responding to this objection, TCEQ should review the PBR registration 112344 in order to determine if the relevant emissions data, standards, or limitations and emissions calculation methodologies and inputs required to determine compliance needs to remain in the confidential portion of the permit record. TCEQ should conduct a reevaluation to ensure that this information is neither part of the title V permit, establishing binding, enforceable permit terms, nor considered emissions data for purposes of CAA 503(e) and 40 C.F.R. § 2.301(a)(2)(i)(B). If TCEQ can establish that this confidential information is not part of the title V permit operational limit, emissions data, or

contains emissions calculation methodologies and inputs to determine compliance, TCEQ will still need to establish the basis or details in the permit record for why it is not necessary to enforce these as a term or condition of the title V permit. Otherwise, TCEQ should take appropriate action to ensure the emission calculations (including calculation methodologies and inputs required) and/or throughput and operation limits are transferred into non-confidential portion of the permitting record.