BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF SHELL CHEMICAL LP AND SHELL OIL COMPANY SHELL DEER PARK CHEMICAL PLANT HARRIS COUNTY, TEXAS PROPOSED PERMIT NUMBER O1668 SHELL DEER PARK REFINERY HARRIS COUNTY, TEXAS PROPOSED PERMIT NUMBER O1669 ISSUED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY	)	PETITION NUMBERS VI-2014-04 AND VI-2014-05 ORDER RESPONDING TO THE PETITIONERS' REQUESTS THAT THE ADMINISTRATOR OBJECT TO THE ISSUANCE OF STATE OPERATING PERMITS

ORDER GRANTING IN PART AND DENYING IN PART TWO PETITIONS FOR OBJECTION TO PERMITS

I. INTRODUCTION

On May 19, 2014, the United States Environmental Protection Agency (EPA) received two petitions from Environmental Integrity Project (EIP), Sierra Club, and Air Alliance Houston (Petitioners) pursuant to section 505(b)(2) of the Clean Air Act (Act or CAA), 42 U.S.C. § 7661d(b)(2) and 40 C.F.R. § 70.8(d) and 30 Texas Administrative Code (TAC) § 122.360. The petitions request that the EPA object to the title V operating permits issued by the Texas Commission on Environmental Quality (TCEQ) to the Shell Chemical LP Deer Park Chemical Plant (Chemical Plant), Permit No. O1668, and Shell Oil Company Deer Park Refinery (Refinery), Permit No. O1669, co-located in Deer Park, Harris County, Texas.

II. STATUTORY AND REGULATORY FRAMEWORK

A. Title V Permits

Section 502(d)(1) of the CAA, 42 U.S.C. § 766la(d)(1), requires each state to develop and submit to the EPA for approval an operating permit program that meets the requirements of title V of the CAA and the EPA's implementing regulations at 40 C.F.R. part 70. The EPA granted interim approval to Texas for the title V (part 70) operating permits program on June 25, 1996. 61 *Fed. Reg*. 32693. The EPA granted full approval to Texas for its operating permit program on

December 6, 2011. 66 *Fed. Reg.* 66318. The EPA-approved program is found in 30 TAC Chapter 122.

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and other conditions as necessary to assure compliance with applicable requirements of the CAA, including a Prevention of Significant Deterioration (PSD) permit. CAA §§ 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program generally does not impose new substantive air quality control requirements, but does require permits to contain adequate monitoring, recordkeeping, reporting, and other requirements to assure sources' compliance with applicable requirements. 57 *Fed. Reg.* 32250, 32251 (July 21, 1992). One purpose of the title V program is to "enable the source, States, the EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." *Id.* Thus, the title V operating permit program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and for assuring compliance with such requirements.

B. Review of Issues in a Petition

State and local permitting authorities issue title V permits pursuant to the EPA-approved title V programs. Under CAA § 505(a), 42 U.S.C. § 766ld(a) and the relevant implementing regulations found at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to the EPA for review. Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the permit if the EPA determines that the permit is not in compliance with applicable requirements of the Act. CAA §§ 505(b)(1), 42 U.S.C. § 7661d(b)(1); *see also* 40 C.F.R. § 70.8(c) (providing that the EPA will object if the EPA determines that a permit is not in compliance with applicable requirements or requirements under 40 C.F.R. part 70). If the EPA does not object to a permit on its own initiative, § 505(b)(2) of the Act and 40 C.F.R. § 70.8(d) provide that any person may petition the Administrator, within 60 days of the expiration of the EPA's 45-day review period, to object to the permit.

The petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period). CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). In response to such a petition, the Act requires the Administrator to issue an objection if a petitioner demonstrates to the Administrator that a permit is not in compliance with the requirements of the Act. CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1); *see also New York Public Interest Research Group, Inc. (NYPIRG) v. Whitman,* 321 F.3d 316, 333 n.11 (2nd Cir. 2003). Under § 505(b)(2) of the Act, the burden is on the petitioner to make the required demonstration to the EPA. *MacClarence v. EPA,* 596 F.3d 1123, 1130–33 (9th Cir. 2010); *Sierra Club v. Johnson,* 541 F.3d 1257, 1266–67 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA,* 535 F.3d 670, 677–78 (7th Cir. 2008); *WildEarth Guardians v. EPA*, 728 F.3d 1075, 1081–82 (10th Cir. 2013); *Sierra Club v. EPA,* 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden

of proof in title V petitions); *see also NYPIRG,* 321 F.3d at 333 n.11. In evaluating a petitioner's claims, the EPA considers, as appropriate, the adequacy of the permitting authority's rationale in the permitting record, including the response to comments (RTC).

The petitioner's demonstration burden is a critical component of CAA § 505(b)(2). As courts have recognized, CAA § 505(b)(2) contains both a "discretionary component," to determine whether a petition demonstrates to the Administrator that a permit is not in compliance with the requirements of the Act, and a nondiscretionary duty to object where such a demonstration is made. *NYPIRG*, 321 F.3d at 333; *Sierra Club v. Johnson*, 541 F.3d at 1265–66 ("[I]t is undeniable [CAA § 505(b)(2)] also contains a discretionary component: it requires the Administrator to make a judgment whether a petition demonstrates a permit does not comply with clean air requirements."). Courts have also made clear that the Administrator is only obligated to grant a petition to object under CAA § 505(b)(2) if the Administrator determines that the petitioners have demonstrated that the permit is not in compliance with requirements of the Act. *See, e.g., Citizens Against Ruining the Environment*, 535 F.3d at 667 (stating § 505(b)(2) "clearly obligates the Administrator to (1) determine whether the petition demonstrates noncompliance and (2) object *if* such a demonstration is made") (emphasis added); *NYPIRG*, 321 F.3d at 334 ("§ 505(b)[2] of the CAA provides a step-by-step procedure by which objections to draft permits may be raised and directs the EPA to grant or deny them, *depending on* whether non-compliance has been demonstrated.") (emphasis added); *Sierra Club v. Johnson*, 541 F.3d at 1265 ("Congress's use of the word 'shall' … plainly mandates an objection *whenever* a petitioner demonstrates noncompliance.") (emphasis added). When courts review the EPA's interpretation of the ambiguous term "demonstrates" and its determination as to whether the demonstration has been made, they have applied a deferential standard of review. *See, e.g., Sierra Club v. Johnson*, 541 F.3d at 1265–66; *Citizens Against Ruining the Environment*, 535 F.3d at 678; *MacClarence*, 596 F.3d at 1130–31. A more detailed discussion of the petitioner demonstration burden can be found in *In the Matter of Consolidated Environmental Management, Inc. – Nucor Steel Louisiana*, Order on Petition Numbers VI-2011-06 and VI-2012-07 (June 19, 2013) (*Nucor II Order*) at 4–7.

The EPA has looked at a number of criteria in determining whether the petitioner has demonstrated noncompliance with the Act. *See generally Nucor II Order* at 7. For example, one such criterion is whether the petitioner has addressed the state or local permitting authority's decision and reasoning. The EPA expects the petitioner to address the permitting authority's final decision, and the permitting authority's final reasoning (including the RTC), where these documents were available during the timeframe for filing the petition. *See MacClarence*, 596 F.3d at 1132–33; *see also, e.g., In the Matter of Noranda Alumina, LLC*, Order on Petition No. VI-2011-04 (December 14, 2012) (*Noranda Order*) at 20–21 (denying title V petition issue where petitioners did not respond to state's explanation in RTC or explain why the state erred or the permit was deficient); *In the Matter of Kentucky Syngas, LLC*, Order on Petition No. IV-2010-9 (June 22, 2012) (*2012 Kentucky Syngas Order*) at 41 (denying title V petition issue where petitioners did not acknowledge or reply to state's RTC or provide a particularized rationale for why the state erred or the permit was deficient). Another factor the EPA has examined is whether a petitioner has provided the relevant analyses and citations to support its claims. If a petitioner does not, the EPA is left to work out the basis for the petitioner's objection, contrary to Congress' express allocation of the burden of demonstration to the petitioner in CAA § 505(b)(2). *See*

MacClarence, 596 F.3d at 1131 ("[T]he Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive."); *In the Matter of Murphy Oil USA, Inc.*, Order on Petition No. VI-2011-02 (September 21, 2011) (*Murphy Oil Order*) at 12 (denying a title V petition claim where petitioners did not cite any specific applicable requirement that lacked required monitoring). Relatedly, the EPA has pointed out in numerous orders that, in particular cases, general assertions or allegations did not meet the demonstration standard. *See, e.g., In the Matter of Luminant Generation Co. – Sandow 5 Generating Plant*, Order on Petition Number VI-2011-05 (January 15, 2013) (*Luminant Sandow Order*) at 9; *In the Matter of BP Exploration (Alaska) Inc., Gathering Center #1*, Order on Petition Number VII-2004-02 (April 20, 2007) (*BP Order*) at 8; *In the Matter of Chevron Products Co., Richmond, Calif. Facility*, Order on Petition No. IX-2004-10 (March 15, 2005) (*Chevron Order*) at 12, 24. Also, if the petitioner did not address a key element of a particular issue, the petition should be denied. *See, e.g., In the Matter of Public Service Company of Colorado, dba Xcel Energy, Pawnee Station,* Order on Petition No. VIII-2010-XX (June 30, 2011) at 7–10; and *In the Matter of Georgia Pacific Consumer Products LP Plant,* Order on Petition No. V-2011-1 (July 23, 2012) at 6–7, 10–11, 13–14.

III. BACKGROUND

A. The Deer Park Chemical Plant and Permitting History

Located in Harris County, Texas, the Chemical Plant is primarily engaged in the production of diacetone alcohol, hexylene glycol, methyl isobutyl ketone, and methyl isobutyl carbonyl. Chemical Plant Statement of Basis for the Final Title V Permit (April 1, 2014) (Chemical Plant Statement of Basis) at 2. The Chemical Plant utilizes offgas streams and raw materials from the Deer Park Refinery, in addition to other refineries, to produce materials used in the production of the chemicals mentioned above. The Chemical Plant is composed of multiple process areas with sources of emissions including chemical manufacturing processes; storage tanks; combustion sources (catalytic cracker feed hydrotreater, furnaces, engines, heaters, flares, etc.); wastewater treatment facilities; fugitive emissions; and vacuum-producing systems. Chemical Plant Final Title V Permit (April 1, 2014) (Chemical Plant Final Permit) at 28–80. The Chemical Plant is a major stationary source subject to the requirements of title V of the Act (42 U.S.C. §§ 7602 and 7661) and the EPA-approved title V program for Texas, codified at 30 TAC Chapter 112. Chemical Plant Statement of Basis at 4.

The Chemical Plant was issued seven separate title V permits in the past, and all of these title V permits were consolidated into title V Permit No. O1668 as part of the 2009 renewal. The TCEQ issued the draft renewal permit for O1668 on May 18, 2012. Notice of the draft permit was published on June 15, 2012. EIP and Sierra Club submitted comments to the TCEQ for draft renewal title V permit O1668 on July 16, 2012. The TCEQ submitted the revised permit and the RTC documents to the EPA on February 4, 2014. The EPA's 45-day review period ended on March 21, 2014, and the EPA did not object to the proposed permit.

On July 10, 2013, the EPA simultaneously filed a complaint and lodged a proposed Consent Decree (CD) to resolve an enforcement action against Shell Oil and affiliated partnerships for violations of the CAA at its integrated Refinery and Chemical Plant in City of Deer Park, Texas.

The Shell CD resolves alleged violations of CAA requirements at Shell's twelve steam assisted flares at the Chemical Plant and the Refinery that allegedly resulted in excess emissions of volatile organic compounds (VOCs) and various hazardous air pollutants (HAPs), including benzene. The Shell CD also resolves alleged violations of New Source Review (NSR)/ PSD and minor NSR, 40 C.F.R. parts 51 and 52; New Source Performance Standards (NSPS), 40 C.F.R. part 60, Subparts A, J, VV, VVa, GGG, and GGGa; National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 C.F.R. part 63, Subparts A, CC, G, FF, and UUU; title V and the title V permits at Shell's facilities; and the Texas State Implementation Plan (SIP) requirements. On July 17, 2013, the Department of Justice published a notice in the *Federal Register* asking for public comment on the Shell CD. *See* 78 *Fed. Reg.* 42547 (July 16, 2013). The court entered the Shell CD without comment on June 4, 2014. *See United States v. Shell Oil Company, Deer Park*, No. 4:13-cv-2009 (S.D.T.X. June 4, 2014).

B. The Deer Park Refinery and Permitting History

Located in Harris County, Texas, the Refinery is primarily engaged in the production of fuels and lubricants derived from various crude oils or unfinished petroleum derivatives. Refinery Statement of Basis for the Final Title V Permit (April 1, 2014) (Refinery Statement of Basis) at 2. The Refinery produces gasoline, naphtha, kerosene, jet fuels, distillate fuel oils, residual fuel oils, other transportation fuels, heating fuels, lubricating oils and base stocks, asphalt, and sulfonates. *Id.* Sources of emissions at the site include storage tanks; combustion sources (catalytic cracker feed hydrotreater, furnaces, engines, heaters, flares, etc.); loading racks; process vents; control devices; wastewater treatment facilities; fugitive emissions; and vacuum-producing systems. Refinery Final Title V Permit (April 1, 2014) (Refinery Final Permit) at 27–96. The Refinery is a major stationary source subject to the requirements of title V of the Act (42 U.S.C. §§ 7602 and 7661) and the EPA-approved title V program for Texas, codified at 30 TAC Chapter 112. Refinery Statement of Basis at 2.

Title V permit O1669 was first issued to the Refinery on November 22, 2004, and authorized the operation of approximately 422 emission units at the Refinery. Shell filed a renewal application on May 20, 2009. The TCEQ issued the draft renewal permit for O1669 on May 16, 2012. Notice of the draft renewal permit was published on June 14, 2012. EIP and Sierra Club submitted comments to the TCEQ for draft renewal title V permit O1669 on July 16, 2012. The TCEQ submitted the revised permit and the response to public comments to the EPA on January 30, 2014. The EPA's 45-day review period ended on March 21, 2014, and the EPA did not object to the proposed permit.

The Refinery is subject to the same CD described in Section III.A above.

C. Timeliness of Petitions

Pursuant to the CAA, if the EPA does not object during its 45-day review period, any person may petition the Administrator within 60 days after the expiration of the 45-day review period to object. CAA § 505(b)(2); 42 U.S.C. § 7661d(b)(2). Thus, any petition seeking the EPA's objection to either of the Shell Deer Park Permits was due on or before May 20, 2014. The Shell

Deer Park Chemical Plant and the Shell Deer Park Refinery Petitions were each dated May 19, 2014. The EPA finds the Petitions were timely filed.

IV. EPA DETERMINATIONS ON THE ISSUES RAISED BY THE PETITIONERS

Claim 1. The Proposed Permits' Incorporation by Reference of Minor New Source Review (NSR) Permits Fails to Assure Compliance.

Claim 1 on pages 6–19 of the Chemical Plant Petition and pages 5–17 of the Refinery Petition includes several sub-claims that are summarized below. Because these claims include substantially overlapping issues, the EPA's response will address all the Claim 1 issues together following the summaries of the Petitioners' claims.

Petitioners' Claim. The Petitioners generally claim that the Proposed Permits' use of incorporation by reference (IBR) of minor NSR permits is inconsistent with title V requirements under 42 U.S.C. § 7661c(a) to include all conditions necessary to assure compliance with applicable requirements and is objectionable for the same reason the EPA has objected to IBR of major NSR permits. Chemical Plant Petition at 6–7; Refinery Petition at 5–7. Specifically, the Petitioners claim that the Proposed Permits' use of IBR for minor NSR permits fails to put members of the public, regulators, and TCEQ on notice as to which requirements and limits apply to significant emission units at the Deer Park Chemical Plant and the Deer Park Refinery and fails to assure compliance with those limits. Chemical Plant Petition at 8; Refinery Petition at 7. Further, the Petitioners claim that the Proposed Permits' use of IBR for minor NSR permits "poses a much greater obstacle to enforcement" than the use of IBR for major NSR permits. Chemical Plant Petition at 8; Refinery Petition at 7–8.

Claim 1.A. The Proposed Permits' IBR of Minor NSR Permits is Objectionable for the Same Reason that TCEQ's Practice of IBR of Major NSR Permits is Objectionable.

Petitioners' Claim. The Petitioners claim that the Proposed Permits' use of IBR for minor NSR is objectionable because the minor NSR permits incorporated into the Chemical Plant and Refinery permits authorize more tons of emissions than the sum of emissions from three different major NSR permits where EPA objected to the use of IBR for major NSR permits. Chemical Plant Petition at 8–9; Refinery Petition at 8–9. For support, the Petitioners provide what they claim is the total sum of the emissions, by pollutant, authorized by nineteen minor NSR permits, flexible permits, and standard permits incorporated by reference into Chemical Plant Proposed Permit. Chemical Plant Petition at 8. Likewise, the Petitioners provide what they claim is the total sum of the emissions, by pollutant, authorized by four minor NSR permits incorporated by reference into the Refinery Proposed Permit. Refinery Petition at 8. The Petitioners reference three EPA objections regarding the use of IBR for major NSR permits and include a summary of the total emissions, by pollutant, authorized by these major NSR permits. Chemical Plant Petition at 9; Refinery Petition at 8–9. The Petitioners conclude that, like Major NSR permits, the benefits of transparency and enforceability from the direct inclusion of minor NSR limits and requirements into the Proposed Permits outweighs the administrative burden of including them. Chemical Plant Petition at 10; Refinery Petition at 9.

Claim 1.B. The Proposed Permits' Use of IBR Presents a More Significant Burden on Enforcement of Minor NSR Permit Requirements than the TCEQ's Impermissible Practice of Incorporating Major NSR Permit Limits by Reference.

Petitioners' Claim. The Petitioners claim that the Proposed Permits' use of IBR for minor NSR permits poses a more significant burden on enforcement than IBR for major NSR permits because the limits and requirements are spread across many different permits and kinds of permits, the permits are frequently revised, and changes to one permit can affect requirements in another. Chemical Plant Petition at 10–13; Refinery Petition at 9–12. Specifically, the Petitioners claim that it is unreasonable to have to obtain more than twenty minor NSR permits, "and then reconcile various limits and requirements contained in multiple permits that apply to the same emission[] unit or units." Chemical Plant Petition at 11; Refinery Petition at 10–11. Further, the Petitioners contend that it is difficult to obtain all the minor NSR permits and ensure that the copies are current with all revisions. Chemical Plant Petition at 11–12; Refinery Petition at 11. The Petitioners assert that the Proposed Permits do not clearly identify which federally enforceable NSR requirements and limits apply to the source as required by title V. Chemical Plant Petition at 11–12; Refinery Petition at 11.

Claim 1.C. NSR Permits for the Chemical Plant and Refinery Are Not Easily Found by Accessing the TCEQ's Permit Database.

Petitioners' Claim. The Petitioners claim that not all of the NSR permits for the Chemical Plant and Refinery are easily found on the TCEQ's Remote Document Server as claimed by TCEQ in the RTC. Chemical Plant Petition at 13; Refinery Petition at 12. In particular, the Petitioners claim that they could not locate minor NSR Permit No. 1119 for the Chemical Plant and minor NSR Permit No. 3179 for the Refinery. Chemical Plant Petition at 13–14; Refinery Petition at 13. The Petitioners contend that their searches produced irrelevant files, and the files "were not organized by date and did not provide any summary information for the listed documents." Chemical Plant Petition at 14; Refinery Petition at 13.

Claim 1.D. The Fact that Texas Has Separate Rules and Administrative Process for Preconstruction Permits and Title V Operating Permits Does not Justify the TCEQ's Reliance on IBR in this Case.

Petitioners' Claim. The Petitioners claim that the administrative benefit of incorporating by reference minor NSR permits into title V permits does not justify the burden imposed on the public and regulators by the use of IBR for minor NSR permits. Chemical Plant Petition at 15–16; Refinery Petition at 14–15. The Petitioners assert that TCEQ should require sources to include the current limits and requirements from minor NSR permits in their title V permits. Chemical Plant Petition at 16; Refinery Petition at 15. In response to the TCEQ's comment that the "TCEQ would have trouble constantly revising Texas Title V permits to reflect frequent changes to incorporated NSR authorizations," the Petitioners contend that Texas' title V rule 30 TAC § 122.10(a) requires sources to revise their title V permits whenever an applicable requirement in an underlying NSR permit is changed. Chemical Plant Petition at 15; Refinery Petition at 14. The Petitioners conclude that the TCEQ can take the information Shell is already required to provide in its minor NSR permits and put it into the title V permits without Texas

having to revise its title V rules or change its title V program. Chemical Plant Petition at 16; Refinery Petition at 15.

Claim 1.E. The EPA Has Not Approved Any Texas Title V Rule Concerning IBR.

Petitioners' Claim. The Petitioners claim that the EPA has not approved Texas' title V program with respect to the use of IBR for minor NSR because Texas' title V rules are silent as to what factors TCEQ must consider to determine if and when IBR may be used in title V permits. Chemical Plant Petition at 17. Refinery Petition at 15–16. The Petitioners assert CAA § 505(a) and (c) and 40 C.F.R. § 70.6(a)(1) and (3) require title V permits to explicitly state all emission limits and operating requirements for emission units at the source. Chemical Plant Petition at 18; Refinery Petition at 16. Further, the Petitioners contend that in *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program* (March 5, 1996) (*White Paper Number 2*), the EPA balanced the benefits in administrative efficiency arising from IBR against the increased transparency and enforceability of more detailed title V permits and cautioned states to exercise care when using IBR in title V permits. Chemical Plant Petition at 18; Refinery Petition at 16–17. The Petitioners claim that in Shell's case, the benefits of increased enforceability and transparency outweigh the administrative benefits. Chemical Plant Petition at 18; Refinery Petition at 17.

EPA's Response. The EPA is responding to the entirety of Claim 1 together due to the interrelatedness of each of the sub-claims. For the reasons described below, the EPA denies the Petitioners' claims that the EPA must object to the Proposed Permits on the bases identified above.

As a preliminary matter, Claims 1.A, 1.C, and 1.D were not raised with reasonable specificity during the public comment period, as required by CAA § 505(b)(2) and 40 C.F.R. § 70.8(d). In addition, the Petitioners did not demonstrate that it was impracticable to raise such objections during the comment period, and there is no basis for finding that grounds for such objection arose after that period. First, nowhere did the public comment letters for the Chemical Plant and the Refinery Draft Permits expressly identify the claim under 1.A that the emissions from Shell's minor NSR permits are more than the major NSR permits listed in the petitions. Second, nowhere did the public comment letters for the Chemical Plant and the Refinery Draft Permits expressly identify the claim under 1.C that the minor NSR permits, specifically NSR Permit Nos. 1119 and 3179, were not easily found on the TCEQ's Remote Document Server. Finally, the public comment letters for the Chemical Plant and the Refinery Draft Permits did not expressly identify the claim under 1.D. that the TCEQ can include all of the information from minor NSR permits in title V permits because Texas' title V rules already require TCEQ to revise their title V permits whenever an applicable requirement in an underlying NSR permit is changed. The public comments presented no argument, evidence, or analysis to the TCEQ during the public comment period raising these very specific claims they are now presenting. Further, the public comments did not present to the TCEQ the major NSR permits referenced in Claim 1.A, the difficulty of locating NSR Permit Nos. 1119 and 3179 explained in Claim 1.C or the regulations referenced in Claim 1.D. Thus, the TCEQ did not have an opportunity to consider and respond to the claims raised in the petitions in Claims 1.A, 1.C, 1.D. *See, e.g.*, *In the Matter of Luminant Generating Station*, Order on Petition No. VI-2011-05 (August 28, 2011) at 5 ("A title V petition

should not be used to raise issues to the EPA that the State has had no opportunity to address."); *Operating Permit Program*, 56 *Fed. Reg.* 21712, 21750 (May 10, 1991) ("Congress did not intend for Petitioners to be allowed to create an entirely new record before the Administrator that the State has had no opportunity to address.").

In the RTC documents, the TCEQ responded to public comments claiming that the permits use of IBR for minor NSR failed to assure compliance. The TCEQ explained that the "inclusion of minor [NSR] permit requirements in title V permits through incorporation by reference was approved by the EPA when granting Texas' operating permits program full approval in 2001." Chemical Plant RTC (February 4, 2014) Response 2, at 14; Refinery RTC (February 4, 2014) Response 2, at 13 (citing to Final Interim Approval, 61 *Fed. Reg.* 32693 (June 25, 1996); Final Full Approval, 66 *Fed. Reg.* 63318, 63324 (December 6, 2001)). Furthermore, the TCEQ explained that Special Condition 22.B of the Chemical Plant permit and 23.B of the Refinery permit "requires Shell to collocate all NSR permits with this operating permit—thereby providing inspectors easy access to all authorizations." Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at 13; *see* Chemical Plant Proposed Title V Permit (February 4, 2014) (Chemical Plant Proposed Permit) at 21; Refinery Proposed Title V Permit (February 3, 2014) (Refinery Proposed Permit) at 20. The TCEQ concluded that EPA has approved IBR for minor NSR permits and that approval was upheld in *Public Citizen v. EPA*, 343 F.3d 449, 460–61 (5th Cir. 2003). Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at 13.

In response to the portions of Claim 1 raised with reasonable specificity, the EPA notes that it has discussed the issue of IBR in *White Paper Number 2*. As the EPA explained in *White Paper Number 2*, IBR may be useful in many instances, though it is important to exercise care to balance the use of IBR with the obligation to issue permits that are clear and meaningful to all affected parties, including those who must comply with or enforce their conditions. *White Paper Number 2* at 34–38; *see also In the Matter of Tesoro Refining and Marketing*, Order on Petition No. IX-2004-6 (March 15, 2005) (*Tesoro Order*) at 8. Further, as the EPA noted in the *Tesoro Order*, the EPA's expectations for what requirements may be referenced and for the necessary level of detail are guided by sections 504(a) and (c) of the CAA and corresponding provisions at 40 C.F.R. § 70.6(a)(1) and (3). *Id.* Generally, the EPA expects that title V permits will explicitly state all emission limitations and operational requirements for all applicable emission units at a facility. *Id.* The EPA's decision approving the use of IBR in Texas' program was limited to, and specific to, minor NSR permits and Permits by Rule (PBRs) in Texas. *See* 66 *Fed. Reg.* 63318, 63324 (December 6, 2001); *see also, See Public Citizen*, 343 F.3d at 460–61. In approving Texas' limited use of IBR of emissions limitations from minor NSR permits, the EPA balanced the streamlining benefits of IBR against the value of a more detailed title V permit and found Texas' approach for minor NSR permits acceptable. *See Public Citizen*, 343 F.3d at 460–61. The EPA noted the unique challenge Texas faced in integrating requirements from these permits into title V permits. *See, e.g.*, 66 *Fed. Reg.* 63318, 63326; 60 *Fed. Reg.* 30037, 30039; 59 *Fed. Reg.* 44572, 44574; *In the Matter of CITGO Refining and Chemicals Company L.P. West Plant, Corpus Christi, Texas,* Order on Petition No. VI-2007-01 (May 28, 2009) (*CITGO Order*) at 11–12. Under the approved program, "Texas must incorporate all terms and conditions of the [minor NSR] permits and PBRs, which would include emission limits, operational and production limits, and monitoring requirements. 66 *Fed. Reg.* 63318, 63324. Therefore, "the terms and

conditions of the MNSR permits so incorporated are fully enforceable under the fully approved title V program." *Id.*

As explained above, the EPA has approved the TCEQ's use of IBR for minor NSR permits. In support of the EPA's approval of IBR for minor NSR permits in Texas, the 5th Circuit stated:

> Nothing in the CAA or its regulations prohibits incorporation of applicable requirements by reference. The Title V and part 70 provisions specify what Title V permits "shall include" but do not state how the items must be included. *See* 42 U.S.C. § 7661c(a) ("Each permit issued under this subchapter shall include enforceable emissions limitations and standards... and such other conditions as are necessary to assure compliance with applicable requirements of this chapter."); 40 C.F.R. § 70.6(a) (1) ("Each permit issued under this part shall include [elements including emissions limitations and standards]").

Public Citizen v. EPA, 343 F.3d at 460 (5th Cir. 2003). The IBR of minor NSR permits can be appropriate if implemented correctly, and the Petitioners did not demonstrate that there was improper implementation of the IBR of minor NSR permits in this case. In particular, the Petitioners did not demonstrate, as claimed, that the TCEQ's EPA-approved use of IBR for minor NSR permits in the Chemical Plant and Refinery Proposed Permits rendered the title V permit practicably unenforceable. The EPA has previously noted that the minor NSR permits are listed in the permit and their content is accessible to the public through the TCEQ's Remote Document Server, available online at *https://webmail.tceq.state.tx.us/gw/webpub*. *See Luminant Sandow Order* at 9. The website provides a search field that can search anywhere in a document, the subject only, or the author only. Further, a search can be narrowed to NSR Permits, Federal Operating Permits, or Air/Emission Banking.[1] Thus, the public and the EPA can access the minor NSR permits that are incorporated into the Chemical Plant and Refinery title V permits on the TCEQ's Remote Document Server.

The EPA has previously stated that the use of IBR can be appropriate where the "title V permit is clear and unambiguous as to how the emissions limits apply to particular emission units." *CITGO Order* at 11–12, n.5. The Petitioners did not demonstrate that use of IBR was improper in this case. The EPA interprets the "demonstration" requirement in CAA section 505(b)(2) as

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[1] As part of its review of the petitions, the EPA did perform the searches for the permits that the petitions claimed were not available online. Searching by the permit number in the Remote Document Server, using the default settings, will result in a large number of unrelated documents being returned from the search. The EPA's experience, using the Remote Document Server, is that the permit's project number provides the most accurate search results. Therefore, the EPA observes that it is advisable to look up the project number for the permitting action in question from the TCEQ "Status of Air New Source Review Permit Applications" database at *http://www2.tceq.texas.gov/airperm/index.cfm?fuseaction=airpermits.start*. For example, searching for all actions for "permit 1119" in the "Status of Air New Source Review Permit Applications" shows that the permit was renewed on March 30, 2006, and the project number was 117439. Then by selecting "Document Search" in the Remote Document Server, and the Fields to Search: "Anywhere," the "Air/NSRPermits (NSRP)" library, and entering "117439" into the search field, many permitting related documents for the renewal of NSR Permit No. 1119 can be located. Performing a search in the Remote Document Server for 117439 returns 13 documents. Of these 13, there are 3 that are unrelated to the Shell Deer Park Facility. However, the other 10 documents are related to the permit 1119. The documents returned include draft and final permits and TCEQ correspondence with Shell about these permits.

placing the burden on the Petitioner to supply information to the EPA sufficient to demonstrate the validity of the objection raised to the title V permit. Here the Petitioners appear to disagree with implementation of the IBR in Texas; however, the Petitioners did not demonstrate that the TCEQ's actions were inconsistent with the approved title V program or the CAA. The Petitioners' general assertions regarding its opinion on the balancing of the administrative benefits and enforcement burden did not demonstrate flaws in the permits. The EPA has pointed out in numerous orders that, in particular cases, general assertions or allegations do not meet the demonstration standard. *See, e.g.*, *Luminant Sandow Order* at 9; *BP Order* at 8; *Chevron Order* at 12, 24.

For the foregoing reasons, the EPA denies the Petitions as to these claims.

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

Claim 2 on pages 19–25 of the Chemical Plant Petition and pages 17–22 of the Refinery Petition include several sub-claims that are summarized below. Because these claims include substantially overlapping issues, the EPA's response will address all the Claim 2 issues together following the summaries of the Petitioners' claims.

Petitioners' Claim. The Petitioners raise five main points regarding the use of IBR of PBRs in the Proposed Permits: (A) the Proposed Permits do not identify how much pollution the sources can emit under each claimed PBR; (B) the Proposed Permits do not identify which pollutants the sources can emit under each PBR; (C) the Chemical Plant Proposed Permit does not identify how much claimed PBRs affect requirements and limits contained in case-by-case NSR permits; (D) the Proposed Permits do not identify which units are authorized under each PBR; and (E) the TCEQ did not adequately respond to the Petitioners' comments on IBR of PBRs.

First, the Petitioners claim that use of IBR of PBRs in the Proposed Permits does not provide enough information to determine how much pollution and which pollutants the Chemical Plant and Refinery can emit under each PBR. Chemical Plant Petition at 19–22; Refinery Petition at 17–20. The Petitioners contend that the Proposed Permits must be revised to "specify how many projects have been authorized under each claimed PBR" so that the public and regulators can determine the amount of pollution Shell can emit under each PBR. Chemical Plant Petition at 21; Refinery Petition at 19. Further, the Petitioners assert that the Proposed Permits do not include the information necessary to determine which pollutants are authorized by PBR 106.261 and 106.262. Chemical Plant Petition at 22; Refinery Petition at 20.

Then, the Petitioners claim that the Chemical Plant Proposed Permit does not contain information explaining how each PBR claimed for an emission unit that is also authorized under a case-by-case permit affects, strengthens, or relaxes requirements and/or limits established by the other permits that apply to the emission unit. Chemical Plant Petition at 22–23. The Petitioners provide a list of over fifty emission units or unit groups that are subject to both PBRs and case-by-case permits. *Id.* at 22, Exhibit K. The Petitioners contend that the Proposed Permit "fails to sufficiently specify the applicable requirements for these units and undermines the enforceability of those requirements." *Id.* at 23.

Next, the Petitioners claim that the Proposed Permits do "not identify any emission[] units or unit groups authorized" by numerous PBRs incorporated into the Proposed Permits. Chemical Plant Petition at 23; Refinery Petition at 20. For the Chemical Plant, the Petitioners assert that the permit does not specify units or unit groups authorized under Standard Exemptions and PBRs 051 (9/12/1989), 051 (10/4/1995), 080 (6/7/1996), 086 (11/5/1986), 106 (9/20/1993), 106 (10/4/1995), 106 (6/7/1996), 106.263 (9/4/2000), 106.355 (11/1/2001), 106.477 (9/4/2000), 106.532 (9/4/2000), and 118 (9/20/1993).[2] Chemical Plant Petition at 23–24. For the Refinery, the Petitioners claim that the permit does not specify units or unit groups authorized under Standard Exemptions and PBRs 106 (5/4/1994), 106.262 (3/14/1997), 106.262 (11/1/2003), and 118 (5/4/1994). Refinery Petition at 20–21. The Petitioners assert that the EPA has previously objected to two permits where the permits did not comply with 40 C.F.R. § 70.6(a)(1) because the permits did not list any emission units subject to incorporated PBRs.[3] Chemical Plant Petition at 24; Refinery Petition at 21. Further, the Petitioners contend that a court will not enforce the requirements authorized by these PBRs if the permits do not identify to which emission units they apply. Chemical Plant Petition at 24; Refinery Petition at 21 (citing to *United States v. EME Homer City Gen.*, 727 F.3d 274, 300 (3rd Cir. 2013)).

Lastly, the Petitioners claim that the TCEQ did not adequately respond to the public comments "regarding problems arising from the TCEQ's method of incorporating PBRs by reference." Chemical Plant Petition at 24; Refinery Petition at 21. Specifically, the Petitioners assert that the TCEQ "dismissed these arguments as 'beyond the scope of this [Federal Operating Permit] action, because they are arguments concerning PBR authorizations and not the [Federal Operating Permit] authorization.'" Chemical Plant Petition at 24 (quoting Chemical Plant RTC Response 2, at 15); Refinery Petition at 21–22 (quoting Refinery RTC Response 2, at 14).

EPA's Response. The EPA is responding to the entirety of Claim 2 together because the sub-claims are substantially related. For the reasons described below, the EPA grants the Petitions on these claims, as the Petitioners have demonstrated that TCEQ's record is inadequate regarding which PBRs, as applicable requirements, apply to which emission units.

In responding to comments, the TCEQ explained that PBRs were approved as part of the Texas SIP under 30 TAC Chapter 106, Subchapter A, and are applicable requirements as defined by the Texas operating permit program under 30 TAC Chapter 122. Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at 14. The TCEQ then explained that PBRs can only be used by specific categories of sources as approved by the TCEQ and the PBRs cannot be used to amend an individual NSR permit. Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at

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[2] The EPA notes that these Standard Exemptions and PBRs referenced in this claim first list Standard Exemption or PBR rule number as identified in the Texas Administrative Code followed by the date (in parentheses) that identifies the version of the Standard Exemption or PBR that was authorized.

[3] For support, the Petitioners cite to two EPA objections to title V permits in Texas. *See* Letter from Carl E. Edlund, Director of Multimedia Planning and Permitting Division, EPA, to Richard A. Hyde, Director of Office of Permitting and Registration, TCEQ, *Objection to Title V Permit No. O1420, CITGO Refinery and Chemicals Company, Corpus Christi Refinery—West Plant* (October 29, 2010) at 3–4; Letter from Carl E. Edlund, Director of Multimedia Planning and Permitting Division, EPA, to Richard A. Hyde, Director of Office of Permitting and Registration, TCEQ, *Objection to Title V Permit No. O2164, Chevron Phillips Chemical Company, Philtex Plant* (August 6, 2010) at 5–6.

14. The TCEQ noted that all PBRs, historical and current, are available on the TCEQ's website for review. Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at 14. Next, the TCEQ stated, "Regarding specific problems the commenter describes with using PBRs to amend facilities, these issues are beyond the scope of this [Federal Operating Permit] action because they are arguments concerning the PBR authorization and not the [Federal Operating Permit] authorization." Chemical Plant RTC Response 2, at 15; Refinery RTC Response 2, at 14. The TCEQ then explained:

> The NSR Authorization Reference table in the draft Title V permit incorporates the requirements of NSR Permits, including PBRs by reference. All "emission limits and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance" are specified in the PBR incorporated by reference or cited in the draft Title V permit.

Chemical Plant RTC Response 2, at 15–16; Refinery RTC Response 2, at 14. Further, the TCEQ stated that the "EPA has also supported the practice of not listing insignificant emission units for which 'generic' requirements apply." Chemical Plant RTC Response 2, at 16; Refinery RTC at Response 2, 15 (citing to *White Paper for Streamlined Development of Part 70 Permit Applications* (July 10, 1995) (*White Paper Number 1*); *White Paper Number 2*. The TCEQ provided additional details on any errors they corrected in the permit in response to these comments. Chemical Plant RTC Response 2, at 15–16; Refinery RTC Response 2, at 14–15.

In addition, the TCEQ provided information on why the Chemical Plant Proposed Permit satisfied PBR requirements under 30 TAC § 116.116(d). Specifically, the TCEQ stated:

> 30 TAC § 116.116(d), which is SIP approved, sets forth that all changes authorized under Chapter 106 to a permitted facility shall be incorporated into that facility's permit when the permit is amended or renewed. Changes under Chapter 106(a)(3) constitute, "a major modification, as defined in 40 C.F.R § 52.21, under the new source review requirements of the FCAA [Federal Clean Air Act], Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990."

Chemical Plant RTC Response 5, at 22.

The EPA has addressed the issue of IBR in *White Paper Number 2*, the *Tesoro Order*, and the *CITGO Order* as discussed in the response to Claim 1 above. To satisfy CAA requirements, a title V permit must include the information necessary to determine "emission 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). PBRs are included in the definition of "applicable requirement," found at 30 TAC § 122.10(2) of the EPA-approved Texas title V program. The TCEQ correctly noted in its RTC that the EPA has approved Texas' use of IBR for PBRs. Specific to Texas' practice of IBR of emission limitations from PBRs, the EPA has balanced the streamlining benefits of IBR against the value of a more detailed title V permit and found Texas' approach acceptable if the program was implemented

correctly. *See Public Citizen*, 343 F.3d at 460–61; 66 *Fed. Reg.* 63318, 63324 n.4; *Luminant Sandow Order* at 9. Specifically, the title V permit should be "clear and unambiguous as to how the emission limits apply to particular emission units." *CITGO Order* at 11–12, n.5. Therefore, title V permits should identify PBR authorizations that are applicable to individual emission units and other PBR authorizations that are site-wide. *See Luminant Sandow Order* at 9.

With respect to the Petitioners' claims that some PBRs listed in the Proposed Permits' New Source Review Authorization Reference tables are not assigned to emission units, the permitting documents provide information on this point. The permit record contains various statements and conditions that attempt to explain the function of the New Source Review Authorization Reference table. First, the general terms and conditions in the Proposed Permits state, "The permit holder shall comply with 30 TAC Chapter 116 [(NSR regulations)] by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit." Chemical Plant Proposed Permit at 1; Refinery Proposed Permit at 1. Next, Special Conditions 22 and 23 of the Chemical Plant Proposed Permit and Special Conditions 23 and 24 of the Refinery Proposed Permit explain that the permit holder shall comply with the requirements of NSR authorizations issued to or claimed by the permit holder for the permitted area and with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements in effect at the time of the claim of any PBR. Chemical Plant Proposed Permit at 19–20; Refinery Proposed Permit at 20–21. Further, the Statement of Basis for both permits explains that some applicable requirements are site-wide requirements. Chemical Plant Statement of Basis at 5; Refinery Statement of Basis at 3. In addition, units that do not have specific applicable requirements other than the NSR authorization do not need to be listed in the New Source Review Authorization tables. Chemical Plant Statement of Basis at 6; Refinery Statement of Basis at 4. Finally, the New Source Review Authorization Reference table appears to list all PBRs that are applicable to the "Application Area" but it is unclear if all these PBRs are still applicable to the sources. In addition, the New Source Review Authorization References by Emission Unit table lists PBRs that are applicable to specific emission unit or unit groups. Chemical Plant Proposed Permit at 556–582; Refinery Proposed Permit at 550–577.

From the information raised in the petitions, the Petitioners demonstrated that some aspects of the Proposed Permits were unclear regarding which PBRs apply to which emission units, and, therefore, it was difficult to ascertain the applicable requirements, including emission limits, that apply to specific emission units. Specifically, the Petitioners demonstrated that the permit records did not establish what emission units the following PBRs and Standard Exemptions apply to: Chemical Plant PBRs and Standard Exemptions 106.263 (9/4/2000), 106.355 (11/1/2001), 106.532 (9/4/2000), 51 (9/12/1989), and 80 (6/7/1996); and Refinery PBRs and Standard Exemptions 106.262 (3/14/1997), 106.262 (11/1/2003), 106 (5/4/1994), and 118 (5/4/1994).[4] While the New Source Review Authorization References by Emission Unit table identified emission units for most of the PBRs in the Proposed Permits, neither this table nor any other portion of the permits identified the specific emission units to which the aforementioned

[4] The EPA notes that PBRs 106.477 (9/4/2000), 051 (10/4/1995), 086 (11/05/1986), 106 (9/20/1993), 106 (10/4/95), 106 (6/7/1996), and 118 (9/20/1993) raised in the Chemical Plant Petition are not referenced in the Chemical Plant Proposed Permit. In regards to these PBRs and Standard Exemptions, the Petitioners did not demonstrate that these authorizations are still applicable requirements or that the Chemical Plant Proposed Permit is not in compliance with the Act.

PBRs apply. Neither the Proposed Permit, Statement of Basis, nor the RTC document for either the Chemical Plant or the Refinery clearly explained the purpose of the New Source Review Authorization Reference table or how the table related to the New Source Review Authorization Reference by Emission Unit table. Therefore, the Petitioners demonstrated that the permit record did not establish whether the PBRs specified in the Petition apply to any particular emission units or apply site-wide.

In responding to this objection, the EPA directs the TCEQ to identify which PBRs apply to which emission units and which PBRs apply generally or site-wide for both the Chemical Plant and the Refinery.[5] Once TCEQ identifies which PBRs apply to which emission units, TCEQ is directed to revise the permit and/or the permit record to ensure the permit itself is clear as to this point. The permit record should explain the purpose of the New Source Review Authorization References table and New Source Review Authorization References by Emission Unit table. Moreover, the TCEQ should ensure that the Chemical Plant and Refinery title V permits include all current PBRs authorized at the source and do not reference minor NSR permits or PBRs that may no longer be applicable. The EPA does not agree with the TCEQ's interpretation that *White Paper Number 1* and *White Paper Number 2* support the practice of not listing in the title V permit those emission units to which generic requirements apply. As both White Papers state, such an approach is only appropriate where the emission units subject to generic requirements can be unambiguously defined without a specific listing and such requirements are enforceable. *See, e.g.*, *White Paper Number 1* at 14; *White Paper Number 2* at 31. Thus, not listing emission units for PBRs that apply site-wide may be appropriate in some cases. However, for other PBRs that apply to multiple and different types of emission units and pollutants, the Proposed Permits should specify to which units and pollutants those PBRs apply. Further, PBRs are applicable requirements for title V purposes. The TCEQ's interpretation of how *White Paper Number 1* and *White Paper Number 2* would apply to insignificant emission units does not inform how PBR requirements must be addressed in a title V permit. *See, e.g.,* 30 TAC 122.10(2)(H). The TCEQ should provide a list of emission units for which only general requirements are applicable, and if an emission unit is considered insignificant, it should be identified in the Statement of Basis as such. The TCEQ must revise the permits accordingly to address the ambiguity surrounding PBRs.

With regard to the TCEQ's specific statement in the RTC that the Special Conditions in the permits require records to assure compliance with PBRs, the EPA makes the following observations. First, the permit records for demonstrating compliance with PBRs must be available to the public as required under the approved Texas title V program. *See* Chemical Plant Proposed Permit at 21, Special Condition 24; Refinery Proposed Permit at 20, Special Condition 24; 30 TAC § 122.44. Second, the approved Texas title V program and the Proposed Permits require reporting of deviations from compliance with PBRs. *See* Chemical Plant Proposed Permit at 21, Special Condition 24; Refinery Proposed Permit at 20, Special Condition 24; 30 TAC § 122.45. The permits also require Shell Deer Park to comply with the general requirements of the SIP for PBRs, including the requirement to register emission units and to keep records of emissions. *See* Chemical Plant Proposed Permit at 20, Special Condition 23; Refinery Proposed

[5] TCEQ's explanation should include an explanation of the status of Chemical Plant PBRs and Standard Exemptions 106.263 (9/4/2000), 106.355 (11/1/2001), 106.532 (9/4/2000), 51 (9/12/1989), and 80 (6/7/1996) and Refinery PBRs and SEs 106.262 (3/14/1997), 106.262 (11/1/2003), 106 (5/4/1994), and 118 (5/4/1994).

Permit at 19, Special Condition 23; 30 TAC §§ 106.6, 106.8, 122.44. Based on these observations, the EPA finds that adherence to the recordkeeping and reporting requirements of the Texas SIP and Texas approved title V program, including the details stated above and required by the permits, is essential for implementation of the Texas minor NSR program, including PBRs, in the title V permitting process. While the EPA approved the use of the IBR for these types of permits generally, it is important that that the TCEQ ensure that referenced permits are currently applicable and part of the public docket or otherwise readily available. Additionally, the TCEQ should ensure that the title V permit is clear and unambiguous as to how the emissions limits apply to particular emission units. *See CITGO Order* at 12 n.5; *In the Matter of Premcor Refinery Group,* Order on Petition No. VI-2007-02 (May 28, 2009) at 6 n.3.

For the foregoing reasons, the EPA grants the Petitions as to these claims.

Claim 3.A The Chemical Plant Proposed Permit Does Not Specify Monitoring Requirements for PBR Limits.

Petitioners' Claim. The Petitioners claim that the non-exclusive list of recordkeeping options under 30 TAC § 106.8 and Chemical Plant Proposed Permit Special Conditions 23 and 24 do not specify monitoring methods for applicable PBRs, and, therefore, the Proposed Permit does not assure compliance with 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 70.6(a)(3). Chemical Plant Petition at 25–26. The Petitioners contend that the Chemical Plant Proposed Permit and Statement of Basis do not provide a rationale for the TCEQ's determination that the monitoring in the permit is sufficient to assure compliance with all applicable PBR requirements. Chemical Plant Petition at 27. The Petitioners assert that the Chemical Plant Proposed Permit should specify the monitoring method that will assure compliance with each applicable PBR limit or standard, and provide a reasonable basis for each determination. Chemical Plant Petition at 28. Additionally, the Petitioners claim that the TCEQ failed to respond to the Petitioners comments about monitoring for PBRs. Chemical Plant Petition at 27.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Chemical Plant Proposed Permit on the bases described above.

These objections, which are detailed and specific, were not raised with reasonable specificity in public comments as required by CAA § 505(b)(2) and 40 C.F.R. § 70.8(d), and the Petitioners did not demonstrate that it was impracticable to raise such objections within such period. Additionally, there is no apparent basis on which to find that the grounds for such objection arose after the comment period. CAA § 505(b)(2); 42 U.S.C. § 7661d(b)(2). The Petitioners never mentioned PBR rule 30 TAC § 106.8 or Special Conditions 23 and 24 in the public comments they submitted to TCEQ on the draft permit. The comments only made the following general statement: "[M]any of the PBRs incorporated by the Draft Permit fail to establish specific monitoring requirements. If an NSR permit—including minor NSR permits and PBRs—establishes an emission limit, but fails to specify any monitoring for that limit, or if the required monitoring is insufficient to assure compliance with the limit, the Executive Director must supplement the Draft Permit to require additional monitoring." Public Comments at 18–19 (citing 42 U.S.C. § 7661c(c)). In the Petition, however, the claims were different and even appear to contradict the claim raised in the comments. The comments stated that the permit does

not specify monitoring for "many of the PBRs" whereas the Petition actually identified the applicable monitoring and raised claims about the monitoring itself which were not raised in the public comments. As a result of the significant change between the comments and the Petition, the TCEQ was not able to consider and respond to the detailed claim in the Chemical Plant Petition. *See, e.g.*, *Luminant Sandow Order* at 5 ("A title V petition should not be used to raise issues to the EPA that the State has had no opportunity to address."); *Luminant Sandow Order* at 15 ("[T]he Petitioners did not identify in their comments any actual problems with the monitoring in the Sandow 5 title V permit in relation to these applicable Subchapter K PBR requirements."); *Kentucky Syngas Order* at 25–26 (denying on the basis that the petitioner's claim in the comments was different from that in the petition and thus was not raised with reasonable specificity); *Operating Permit Program*, 56 *Fed. Reg.* 21712, 21750 (May 10, 1991) ("Congress did not intend for Petitioners to be allowed to create an entirely new record before the Administrator that the State has had no opportunity to address.").

For the foregoing reasons, the EPA denies the Chemical Plant Petition as to this claim.

Claim 3.B. The Chemical Plant Proposed Permit Fails to Assure Compliance with Permit Limits for PM_{10} Emissions from Pyrolysis Furnaces Authorized by Permit No. 3219/PSDTX974.

Petitioners' Claim. The Petitioners claim that the Chemical Plant Proposed Permit does not specify any monitoring, recordkeeping, or reporting requirements to assure compliance with the PM_{10} emission limits for ten pyrolysis furnaces authorized by Permit No. 3219/PSDTX974 as required by 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 70.6(a)(3).[6] Chemical Plant Petition at 28. Specifically, the Petitioners assert that the Major NSR Summary Table in the Proposed Permit and special conditions in Permit No. 3219/PSDTX974 lack any monitoring, recordkeeping, or reporting for PM_{10}. *Id.* The Petitioners assert that the TCEQ did not respond to their public comments on this issue. *Id.*

EPA's Response. For the reasons described below, the EPA grants the Petitioners' claim that the EPA must object to the Chemical Plant Proposed Permit on the bases described above, as the Petitioners have demonstrated that the Chemical Plant Proposed Permit does not contain monitoring sufficient to assure compliance with the PM_{10} emission limits at the pyrolysis furnaces.

In responding to comments regarding the issue described in this claim in the Petition, the TCEQ explained that the Chemical Plant Proposed Permit contains "monitoring sufficient to assure compliance with the terms and conditions of the permit." Chemical Plant RTC Response 6, at 26. The TCEQ stated:

> For those requirements that do not include monitoring, or where the monitoring is not sufficient to assure compliance, the federal operating permit includes such

[6] The EPA notes that Claim 3.B in the Chemical Plant Petition refers to Permit No. 3219/PSDTX974 and 3215/PSDTX974 interchangeably. Since Permit No. 3215 does not exist and the Petitioners correctly cited to Permit No. PSDTX974 in all instances, the EPA bases its analysis on the assumption that the entirety of the Petitioners claim references Permit No. 3219/PSDTX974.

> monitoring for the emission units affected. Additional periodic monitoring was identified for emission units after a review of applicable requirements indicated that additional monitoring was required to assure compliance. The additional monitoring appears in the Additional Monitoring attachment of the Title V permit.

Id.

Title V Requirements for Monitoring Sufficient to Assure Compliance

The CAA requires, "Each permit issued under [title V] shall set forth … monitoring … requirements to assure compliance with the permit terms and conditions." CAA § 504(c); 42 U.S.C. § 7661c(c). EPA's part 70 monitoring rules (40 C.F.R. § 70.6(a)(3)(i)(A)–(B), (c)(l)) are designed to address this statutory requirement. As a general matter, permitting authorities must take three steps to satisfy the monitoring requirements in EPA's part 70 regulations. First, under 40 C.F. R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the title V permit. Second, if the applicable requirements contain no periodic monitoring, permitting authorities must add periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. 40 C.F.R. § 70.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(l); *see In the Matter of Mettiki Coal, LLC*, Order on Petition No. III-2013-1 (September 28, 2014) at 6–7. *CITGO Order* at 6–7; *In the Matter of United States Steel Corporation - Granite City Works*, Order on Petition No. V-2009-03 (January 31, 2011) (*Granite City Order*) at 15–16. The Act and the EPA's title V regulations require permitting authorities to issue permits specifying the monitoring methodology needed to assure compliance with the applicable requirements in the title V permit. *In the Matter of Wheelabrator Baltimore, L.P.*, Order on Permit No. 24-510-01886 (April 14, 2010) at 10. Thus, the title V monitoring requirements must be adequate to assure compliance with emissions limits, including PSD emissions limits.

EPA Response to the Petitioners' Claims Concerning the Pyrolysis Furnaces

The Chemical Plant Proposed Permit includes a Major NSR Summary Table for Permit No. 3219/PSDTX974 where the PM_{10} emission limits for the pyrolysis furnaces are listed. *See* Chemical Plant Proposed Permit, Appendix B, at 587–589. The monitoring, recordkeeping, and reporting requirements columns in the table are blank for the PM_{10} emission limits for the pyrolysis furnaces. *See id.* Further, neither the emission tables nor special conditions of Permit No. 3219/PSDTX974 identify any applicable monitoring, recordkeeping, or reporting requirements for these emission limits. *See* Permit No. 3129/PSDTX974. When public comments presented this information to the TCEQ, the permitting authority did not identify any particular monitoring requirements contained in the permit to assure compliance with these emission limits. As a result, the EPA cannot determine what monitoring, recordkeeping, and reporting requirements the Chemical Plant Proposed Permit relies on to assure compliance with the PM_{10} emission limits for the pyrolysis furnaces in Permit No. 3219/PSDTX974. Therefore, the Petitioners demonstrated that it was not clear what, if any, monitoring, recordkeeping, or

reporting requirements in the Chemical Plant Proposed Permit assure compliance with the PM_{10} emission limits for the pyrolysis furnaces.

In responding to this order, the TCEQ is directed to identify the monitoring, recordkeeping, and reporting to be used to assure compliance with the PM_{10} emission limits for the pyrolysis furnaces. If the Chemical Plant Proposed Permit does not currently contain requirements that assure compliance with the PM_{10} emission limits, the TCEQ must add such requirements. Further, The TCEQ must 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.

For the foregoing reasons, the EPA grants the Chemical Plant Petition as to this claim.

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

Petitioners' Claim. The Petitioners generally claim that the permits do not contain the adequate monitoring required by 42 U.S.C. § 7661c(c) and 40 C.F.R. §§ 70.6(a)(3) for VOC and benzene emissions from storage tanks and wastewater treatment plants to assure compliance with the emission limits. Chemical Plant Petition at 29; Refinery Petition at 22–23. For support, the Petitioners cite to a recent study using differential absorption light detection and ranging (DIAL) technology at the Shell Chemical Plant and Refinery.[7] Chemical Plant Petition at 29; Refinery Petition at 22–23. The Petitioners assert that this study indicated that emission factors and calculation protocols often used to estimate VOC and benzene emissions from storage tanks and wastewater treatment plants are "unreliable and likely drastically underestimate actual [] emissions." Chemical Plant Petition at 29; Refinery Petition at 22–23. The Petitioners contend that the Chemical Plant and Refinery Proposed Permits rely on the generic emission factors that the DIAL Study proves underestimate actual emissions from storage tanks and wastewater treatment plants. Chemical Plant Petition at 30; Refinery Petition at 26.

With Respect to the Chemical Plant Storage Tanks

The Petitioners claim that the Chemical Plant Proposed Permit does not "specify how Shell must calculate tank emission to demonstrate compliance with NSR permit tank emission limits." Chemical Plant Petition at 30. Specifically, the Petitioners claim that neither the permit nor the TCEQ's RTC provided the necessary information for the Petitioners to determine what methods were used to calculate VOC tank emissions at the Chemical Plant. *Id.* The Petitioners assert that the TCEQ's response referred to Special Condition 18 of Permit No. 3219/PSDTX974, which

[7] The study cited by the Petitioners is the Ruan and Hoyt, City of Houston, Bureau of Pollution Control and Prevention, *Measurement and Analysis of Benzene and VOC Emission in the Houston Ship Channel Area and Selected Surrounding Major Stationary Sources Using DIAL (Differential Absorption Light Detection and Ranging) Technology to Support Ambient HAP Concentration Reductions in the Community* (July 2011) 92–93, Table 4.4(a) (DIAL Study).

the Petitioners claim does not specify how tank emission are actually calculated. *Id.* at 29–30.[8] The Petitioners claim that since the TCEQ's response did not specify the method for calculating emissions, the TCEQ's RTC was inadequate. *Id.* at 30. The Petitioners contend that they suspect the "approved" protocol referred to in the response is EPA's TANKS 4.0,[9] which they state is the same emission factor-based protocol that the DIAL Study cited. *Id.* The Petitioners claim that the DIAL study shows that if the title V permit relies on the use of generic emission factors for storage tanks, then the permit's monitoring based on emissions calculations is inadequate to assure compliance. *Id.*

With Respect to the Refinery Storage Tanks

The Petitioners similarly claim that the Refinery Proposed Permit does not "specify how Shell must calculate tank emissions to demonstrate compliance with NSR permit tank emission limits." Refinery Petition at 26. Specifically, the Petitioners claim that neither the permit nor the TCEQ's RTC provided the necessary information for the Petitioners to determine what methods were used to calculate tank emissions at the Refinery storage tanks J327, J328, J331, and J332. *Id.*; *see* Refinery Petition at 22–23 (citing to Refinery Public Comments at 10). The Petitioners assert that the TCEQ's response referred to Special Conditions 17.G[10] and 30 of Permit No. 21262/PSDTX928, which the Petitioners claim do not specify how tank emission are actually calculated. *Id.* at 25.[11] Further, the Petitioners assert Special Conditions 17.G and 30 incorporate "various application documents," and the Petitioners contend that they were unable to determine what method Shell used from these documents. *Id.* The Petitioners claim that since the TCEQ's response did not specify the method for calculating emissions, the TCEQ's RTC was inadequate. *Id.* at 26. The Petitioners contend that they suspect the "approved" protocol referred to in the response is EPA's TANKS 4.0, which they state is the same emission factor-based protocol that the DIAL Study cites. *Id.* The Petitioners claim that the DIAL study shows that if the title V permit relies on the use of generic emission factors for storage tanks, than the permit's monitoring based on emissions calculations is inadequate to assure compliance. *Id.*

With Respect to the Refinery Wastewater Treatment Plants

The Petitioners claim that the Refinery Proposed Permit does not contain "adequate monitoring to assure compliance with applicable requirements." Refinery Petition at 25. Further, the

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[8] Permit No. 3219/PSDTX974 is a PSD permit authorizing construction and operation of major facilities at the Chemical Plant. This permit contains emission limits, monitoring, recordkeeping, and reporting requirements applicable to the storage tanks at the Chemical Plant.

[9] EPA's TANKS is a Windows-based computer software program that estimates VOC and hazardous air pollutant (HAP) emissions from fixed- and floating-roof storage tanks. TANKS is based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42). *See* EPA, *AP-42, Compilation of Air Pollutant Emission Factors: Volume I: Stationary Point and Area Sources*, Chapter 7 (November 2006). The latest version, TANKS 4.09D, is available at: *http://www.epa.gov/ttn/chief/software/tanks/index.html*.

[10] The EPA notes that Claim 3.C in the Refinery Petition refers to Special Condition 18.G of Permit No. 21262/PSDTX928. Special Condition 17.G was previously identified as Special Condition 18.G in earlier versions of Permit No. 21262/PSDTX928. Refinery Petition at 25–26. For consistency purposes, the EPA refers to Special Condition 17.G for all issues addressing the Refinery storage tanks.

[11] Permit No. 21262/PSDTX928 is a PSD permit authorizing construction and operation of major facilities at the Chemical Plant. This permit contains emission limits, monitoring, recordkeeping, and reporting requirements applicable to the storage tanks and wastewater treatment plants at the Refinery.

Petitioners assert that the permit record does not contain "information necessary for the public to fully assess potential problems with the methods Shell uses to monitor wastewater treatment facility emissions." *Id.* Specifically, the Petitioners contend that neither Special Condition 30 of Permit No. 21262/PSDTX928 nor the Compliance Guidelines documents referenced in Special Condition 30 assure compliance with VOC and benzene limits at the wastewater treatment facilities at the Refinery. *Id.* at 23–24 (citing Exhibit K, *Flexible Permit Compliance Document*, Permit No. 21262/PSDTX928 (August 14, 1995) (submitted with the August 14, 1995, permit application) (1995 Compliance Guidelines); Exhibit L, *Compliance Plan*, Permit No. 21262/PSDTX928 (January 20, 1997) (submitted with the January 20, 1997, permit amendment) (1997 Compliance Guidelines); Exhibit M, *Compliance Plan*, Permit No. 21262/PSDTX928 (December 21, 1998) (submitted with the December 21, 1998, permit amendment) (1998 Compliance Guidelines)). The Petitioners quote portions of the Compliance Guidelines from the 1995, 1997, and 1998 Permit No. 21262 applications, which the Petitioners claim contain the existing monitoring for the wastewater treatment plants.[12] *Id.* at 23–24. The Petitioners assert that the Compliance Guidelines from the 1996, 1997, and 1998 Permit No. 21262 applications contain conflicting methods and "rely on information included in confidential applications that Petitioners have been unable to review." *Id.* at 24. Specifically, the Petitioners claim that the 1995 Compliance Guidelines and the 1998 Compliance Guidelines contain different monitoring methods for wastewater treatment plants. *Id.* Next, the Petitioners assert that the 1997 Compliance Guidelines document "does not contain any provisions regarding monitoring for Shell's wastewater treatment facilities." *Id.*

In addition, the Petitioners claim that the DIAL Study reveals that actual VOC emissions were 108 times higher and benzene emissions 67 times higher "than predicted by emission factors Shell uses to demonstrate compliance with its permit limits." *Id.* at 23. The Petitioners contend that the TCEQ's response does not "demonstrate that Shell does not rely on generic emission factors to calculate wastewater treatment facility emissions." *Id.* at 25.

EPA's Response. For the reasons described below, the EPA grants the Petitioners' claim that the EPA must object to the Proposed Permits on the bases described above.

A brief overview of the title V monitoring requirements is described above in the response to Claim 3.B, and is also relevant to this response. This response first addresses the Petitioners' contention that the Chemical Plant Proposed Permit does not contain adequate monitoring to assure compliance with the PSD VOC emission limits for storage tanks. Next, this response addresses the Petitioners' additional contentions that the Refinery Proposed Permit does not contain adequate monitoring for assuring compliance with the PSD VOC and benzene emission limits for storage tanks and wastewater treatment plants.

EPA Response to the Petitioners' Claims Concerning the Chemical Plant Storage Tanks

In responding to comments regarding the issue of monitoring for the Chemical Plant storage tanks, the TCEQ stated:

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[12] The 1995, 1997, and 1998 Compliance Guidelines are incorporated by reference in Special Condition 17.G and 30 of Permit No. 21262 and the Refinery title V permit.

> The calculation methodology used to determine VOC emission from storage tanks is not a general emission factor. The equation currently accepted for use by the TCEQ and the Environmental Protection Agency was developed from rigorous testing following an approved protocol and requires the use of data specific to the storage tank and the material stored in the tank.

Chemical Plant RTC Response 6, at 27. The TCEQ explained that the monitoring for storage tank VOC emission limits is contained in Special Condition 18 of Permit No. 3219/PSDTX974 and the Major NSR Summary Table of the Chemical Plant Proposed Permit. Chemical Plant Proposed Permit at 590–91. *Id.* The TCEQ then explained that Special Condition 18 of Permit No. 3219/PSDTX974 "is sufficient to assure compliance with emission limits authorized by the NSR permit." *Id.* The TCEQ also noted that the Maximum Allowable Emission Rate Table (MAERT) from Permit No. 3219/PSDTX974 was incorporated into Appendix B of the Chemical Plant Proposed Permit. *Id.* at 26.

Special Condition 18 requires that tanks with floating roofs undergo "visual inspections and seal gap measurements" and that records be maintained of the "results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted." Permit No. 3219/PSDTX974, Special Condition 18.D (September 30, 2013). Special Condition 18 then states, "For purposes of assuring compliance with VOC emission limitations for storage vessels, the holder of this permit shall maintain an annual record of tank identification number, name of the material stored or loaded, VOC annual average temperature in degrees Fahrenheit, VOC vapor pressure at the annual average material temperature in pounds per square inch absolute (psia) and VOC throughput on a rolling 12-month basis." *Id.* at Special Condition 18.G.

A review of the permit and the permit record in light of the Petitioners' claims, in particular a comparison between what the permit actually provides and TCEQ's response, indicates that it was not clear from Special Condition 18 how the rolling 12-month VOC emissions from the storage tanks are determined despite the numerous monitored parameters. As a result, compliance assurance for purposes of title V is unclear. Although Special Condition 18 includes numerous monitored parameters and recordkeeping requirements, it is not clear how maintenance of records of the name of material stored or loaded, annual average temperature, and VOC vapor pressure are used to determine throughput and actual VOC emissions. Further, the permit and permit record do not explain how throughput relates to the VOC emissions limits in the title V permit. In addition, the TCEQ did not explain how the specific records required by Special Condition 18.G relate to the TCEQ's assertion that VOC emissions will be calculated using an "approved protocol and requires the use of data specific to the storage tank and the material stored in the tank." Chemical Plant RTC Response 6, at 27. Therefore, the Petitioners demonstrated that the record, including the permit and the RTC, does not explain what monitoring methods assure compliance with VOC emission limits for storage tanks as required by 42 U.S.C. § 7661c(c). *See* 40 C.F.R. §§ 70.6(c)(1), 70.6(a)(3)(i)(B); *see, e.g., In the Matter of Mettiki Coal, LLC*, Order on Petition No. III-2013-1 (September 28, 2014) at 6–7; *In the Matter of Consolidated Environmental Management, Inc. – Nucor Steel Louisiana*, Order on Petition Numbers VI-2010-05, VI-2011-06, and VI-2012-07 (January 30, 2014) (*Nucor III Order*) at 46–51. *In the Matter of Wheelabrator Baltimore, L.P.*, Order on Permit No. 24-510-01886 (April 14, 2010) at 10.

In responding to this objection, the EPA directs the TCEQ to include in the title V permit monitoring sufficient to assure compliance with VOC emissions limits for the storage tanks and explain on the record the rationale for the selected monitoring. The record should explain how the Chemical Plant Proposed Permit's monitoring is used to ascertain compliance with the emissions limits. If necessary, the TCEQ must revise the title V permit accordingly. The EPA notes that it is possible that the Chemical Plant permit and permit record already include sufficient monitoring, recordkeeping, and reporting; however, due to the use of references to other permits and parts of the permit record, the title V permit itself does not clearly explain how the VOC emissions are calculated or how such calculations are used to assure compliance with the emissions limits. In reviewing the Chemical Plant permit and permit record as part of this grant, TCEQ may find that the existing monitoring is in fact inadequate and decide to include additional monitoring in the title V permit. In determining the appropriate monitoring, the TCEQ may consider whether there are elements of the Special Conditions identified in the monitoring, testing, recordkeeping, and reporting requirement columns in the Major NSR Summary Table that may be capable of providing an adequate means to assure compliance with the VOC emissions limits for the storage tanks. The TCEQ may also consider how the monitoring in these Special Conditions is related to the monitoring in Special Condition 18 of the PSD Permit. If the TCEQ determines that elements of the monitoring already set forth in Chemical Plant title V permit are capable of providing an adequate means to assure compliance with the title V VOC limits for storage tanks, originally in the underlying PSD permit, then the TCEQ should identify this monitoring and explain the rationale for the selected monitoring.

EPA Response to the Petitioners' Claims Concerning the Refinery Storage Tanks

In responding to comments regarding the issue of monitoring for the Refinery storage tanks, the TCEQ explained that the calculation methodology for storage tanks is not a general emission factor and uses data specific to the storage tanks. Refinery RTC Response 5, at 19. Specifically, TCEQ stated:

> The calculation methodology used to determine VOC emissions from storage tanks is not a general emission factor. The equation currently accepted for use by the TCEQ and the Environmental Protection Agency was developed from rigorous testing following an approved protocol and requires the use of data specific to the storage tank and the material stored in the tank.

Refinery RTC Response 5, at 19.

The TCEQ then explained that Special Conditions 17.G and 30 of Permit No. 21262 "require[] sufficient records to demonstrate compliance with the permit emission limits." *Id.* Finally, the TCEQ stated:

> Permit condition 17.G states emissions from all tanks and loading operations associated with this permit shall be calculated using the methods described in Appendix A to the flexible permit application submitted on August 15, 1995, February 10, 1997, and December 23, 1998. And permit condition 30 states

> compliance with the emission limits for each shall be demonstrated according to the "Source Specific Compliance Guidelines" outlined in the document entitled, "Flexible Permit Compliance Document," submitted with the permit applications dated August 15, 1995, February 10, 1997, and December 23, 1998.

Id. In the RTC, the TCEQ explained that the monitoring and recordkeeping requirements for VOC and benzene emissions limits at storage tanks J327, J328, J331, and J333 were contained in Special Conditions 17.G and 30 of Permit No. 21262/PSDTX928 and the Major NSR Summary Table of the Refinery Proposed Permit. Refinery Proposed Permit at 668–69. *Id.* Special Conditions 17.G and 30 referred to the Source Specific Compliance Guidelines from the 1995, 1997, and 1998 applications/amendments for Permit No. 21262/PSDTX928. These guidelines provided monitoring for hourly and annual emissions from the storage tanks.

The TCEQ accurately summarized the monitoring requirements of Special Conditions 17.G and 30. *See* Refinery RTC Response 5, at 19. The 1995, 1997, and 1998 Compliance Guidelines referenced in both Special Conditions 17.G and 30 provide further monitoring, recordkeeping, and reporting requirements. For storage tanks, the 1995, 1997, and 1998 Compliance Guidelines all state, "[M]aximum hourly emissions from each tank will be calculated" using the pump's designed maximum transfer rate and maximum vapor pressure of stored material. 1995 Compliance Guidelines at 21; 1997 Compliance Guidelines at 16; 1998 Compliance Guidelines at 17. Next, the 1995, 1997, and 1998 Compliance Guidelines all explain that annual emissions monitoring will be accomplished by annually determining "the equivalent throughput for each tank" and calculating emissions using "methods detailed in the 'Proposed Calculation Methodologies for the Shell Deer Park Manufacturing Complex Flexible Permit Application.'" 1995 Compliance Guidelines at 21; 1997 Compliance Guidelines at 16; 1998 Compliance Guidelines at 17. For annual monitoring, the three guidelines also provide four methods for determining speciation of streams. 1995 Compliance Guidelines at 21; 1997 Compliance Guidelines at 16; 1998 Compliance Guidelines at 17. In addition, the 1995, 1997, and 1998 Compliance Guidelines require the inspection of floating roof seals. 1995 Compliance Guidelines at 21; 1997 Compliance Guidelines at 16; 1998 Compliance Guidelines at 18. The 1995, 1997, and 1998 Compliance Guidelines all provide for records to be kept for each tank of calculated emissions, speciation of streams, and seal inspections. 1995 Compliance Guidelines at 22; 1997 Compliance Guidelines at 17; 1998 Compliance Guidelines at 18.

A review of the permit and permit record in light of the Petitioners' claims indicates that the TCEQ did not adequately explain how Special Condition 17.G, Special Condition 30, and the compliance guidelines relate to the TCEQ's assertion that VOC emissions are calculated using an "approved protocol and requires the use of data specific to the storage tank and the material stored in the tank." Refinery RTC Response 5, at 19. Further, the TCEQ did not identify any monitoring, including any rationale for the monitoring, for the permit's storage tank benzene emissions limits in the RTC. Therefore, the Petitioners demonstrated that the record, including the RTC, did not explain what monitoring methods assure compliance with VOC and benzene emissions limits for storage tanks as required by 42 U.S.C. § 7661c(c). *See* 40 C.F.R. §§ 70.6(c)(1), 70.6(a)(3)(i)(B); *see, e.g., In the Matter of Mettiki Coal, LLC*, Order on Petition No. III-2013-1 (September 28, 2014) at 6–7; *Nucor III Order* at 46–51. *In the Matter of Wheelabrator Baltimore, L.P.*, Order on Permit No. 24-510-01886 (April 14, 2010) at 10.

In responding to this objection, the EPA directs the TCEQ to include in the title V permit monitoring sufficient to assure compliance with VOC and benzene emissions limits for the storage tanks and explain on the record the rationale for the selected monitoring. The record should explain how monitoring requirements are used to ascertain compliance with the emissions limits. If necessary, the TCEQ must revise the title V permit accordingly to add additional monitoring to assure compliance with the VOC and benzene emission limits for the Refinery storage tanks. The EPA notes that it is possible that the Refinery permit and permit record already include sufficient monitoring, recordkeeping, and reporting; however, due to the use of references to other permits and parts of the permit record, the title V permit itself does not clearly explain how the VOC and benzene emissions are calculated or how such calculations are used to assure compliance with the emissions limits. In reviewing the Refinery permit and permit record as part of this grant, TCEQ may also find that the existing monitoring is in fact inadequate and decide to include additional monitoring in the title V permit. In determining the appropriate monitoring, the TCEQ may consider whether there are elements of the Special Conditions identified in the monitoring, testing, recordkeeping, and reporting requirement columns in the Major NSR Summary Table that may be capable of providing an adequate means to assure compliance with the VOC and benzene emission limits for the storage tanks. The TCEQ may also consider how the monitoring in these Special Conditions is related to the monitoring in Special Condition 18 of the PSD Permit. If the TCEQ determines that elements of the monitoring already set forth in Refinery title V permit are capable of providing an adequate means to assure compliance with the title V VOC and benzene limits for storage tanks, originally in the underlying PSD permit, then the TCEQ should clearly identify this monitoring in the title V permit and explain the rationale for the selected monitoring.

EPA Response to the Petitioners' Claims Concerning the Wastewater Treatment Plants

In responding to comments regarding the issue of monitoring for the Refinery wastewater treatment plants, the TCEQ explained that the calculation methodology for wastewater treatment plants is not a general emission factor and uses data specific to the wastewater treatment plants. Refinery RTC Response 5, at 19. Specifically, TCEQ stated, "Wastewater emissions are calculated using an approved wastewater process simulation program which requires knowledge of the wastewater system design, as well as, chemical data and properties of the wastewater stream." *Id.* The TCEQ then explained that Special Condition 30 of Permit No. 21262 "requires sufficient records to demonstrate compliance with the permit emission limits." *Id.* Next, the TCEQ stated:

> [P]ermit condition 30 states compliance with the emission limits for each shall be demonstrated according to the "Source Specific Compliance Guidelines" outlined in the document entitled, "Flexible Permit Compliance Document," submitted with the permit applications dated August 15, 1995, February 10, 1997, and December 23, 1998.

Id. In the RTC, the TCEQ explained that the monitoring for VOC and benzene emissions limits at the wastewater treatment plants were contained in Special Condition 30 of Permit No. 21262/PSDTX928 and the Major NSR Summary Table of the Refinery Proposed Permit.

Refinery Proposed Permit at 626–710. *Id.* Special Condition 30 referred to the Source Specific Compliance Guidelines from the 1995, 1997, and 1998 applications/amendments for Permit No. 21262/PSDTX928. Further, the TCEQ stated that these documents,

> [S]pecif[y] the process simulations to be used for each wastewater source. The data which must be collected to run the wastewater simulation is specific to each piece of wastewater treatment equipment and the chemical characteristics of the wastewater stream. The simulation program used to estimate the wastewater emissions for the permit is also used to demonstrate federally approved method of compliance using actual data for the required inputs. These calculations are much more accurate than a general emission factor and the complexity of the process simulations make them highly site specific.

Chemical Plant RTC Response 6, at 27.

The TCEQ accurately summarized the monitoring requirements of Special Condition 30. *See* Refinery RTC Response 5, at 19. The 1995 and the 1998 Compliance Guidelines referenced in Special Condition 30 provide further monitoring, recordkeeping, and reporting requirements. For hourly emissions monitoring at the wastewater treatment plants, the 1995 Compliance Guidelines state, "[H]ourly emissions will be calculated assuming maximum throughput through each waste management unit." 1995 Compliance Guidelines at 24. Further, emissions from streams are assumed to have "emissions equivalent to 0.31 * the total VOC throughput of streams." *Id.* For annual emission monitoring, the 1995 Compliance Guidelines state:

> a) The throughput through each of the tanks and total crude fed to the refinery will be determined annually. The tank emissions, fugitive emissions, flare emissions and biotreater emissions will be calculated using methods detailed in the "Proposed Calculation Methodologies for the Shell Deer Park Manufacturing Complex Permit Application."
>
> b) Emissions from streams to be controlled according to the Reg V requirements will be assumed to have emissions equivalent to 0.31 * the total VOC throughput of the streams. The maximum VOC throughput of the streams will be used to determine the internal limit. . . .
>
> Speciation of steams will be done using one of the following methods as appropriate:
>
> 1) Sampling or analysis
> 2) Process knowledge
> 3) Material balance
> 4) Process simulation

Id. Next, the 1995 Compliance Guidelines explain that wastewater treatment plants "will be inspected as specified by Texas Reg V or, if applicable, as specified by the [NESHAP] subpart

FF." *Id.* Finally, the 1995 Compliance Guidelines require records to be kept of all emissions, speciation of streams, and inspections. *Id.* at 25.

In contrast, the 1998 Compliance Guidelines explain that hourly emissions will be calculated based off annual emissions. 1998 Compliance Guidelines at 21. The 1998 Compliance Guidelines then state that annual emissions will be calculated by:

> [O]btaining actual sample and wastewater flow data. These data will be used as input to the Shell version of the EPA wastewater treatment emissions calculations model ("CHEMISETS"). The model and the actual data together will be used to determine the annual emissions from the wastewater treatment facilities. Please refer to the Confidential Volume of the Flexible Permit Application 21262 (December 1998) for more detailed information.
>
> Speciation of steams will be done using one of the following methods as appropriate:
>
> 1) Sampling or analysis
> 2) Process knowledge
> 3) Material balance
> 4) Process simulation

Id. at 24. Next, the 1998 Compliance Guidelines list "N/A" under the Inspections section. *Id.* Finally, the 1998 Compliance Guidelines require records to be kept of annual emissions, "sample and flow data used in the model," and speciation of streams. *Id.*

A review of the permit and permit record in light of the Petitioners' claims indicate that the TCEQ did not explain how Special Condition 30 and the compliance guidelines relate to the TCEQ's assertion that VOC emissions are calculated using an "approved wastewater process simulation program which requires knowledge of the wastewater system design, as well as, chemical data and properties of the wastewater streams." Refinery RTC Response 5, at 19. In particular, the permit record is unclear as to whether VOC emissions will be determined using VOC emission factors in the 1995 guidance or using actual sampling data in a wastewater treatment model as described in the 1998 guidelines. Further, the TCEQ did not identify any monitoring, including any rationale for the monitoring, for the permit's wastewater treatment plant benzene emissions limits in the RTC. Therefore, the Petitioners demonstrated that the record, including the RTC, did not identify the monitoring methods that assure compliance with wastewater treatment plant VOC and benzene emissions limits as required by 42 U.S.C. § 7661c(c). *See* C.F.R. §§ 70.6(c)(1), 70.6(a)(3)(i)(B); *see, e.g., In the Matter of Mettiki Coal, LLC*, Order on Petition No. III-2013-1 (September 28, 2014) at 6–7; *Nucor III Order* at 46–51. *In the Matter of Wheelabrator Baltimore, L.P.*, Order on Permit No. 24-510-01886 (April 14, 2010) at 10.

In responding to this objection, the EPA directs the TCEQ to identify title V permit monitoring sufficient to assure compliance with VOC and benzene emissions limits at the wastewater treatment plants and explain on the record the rationale for the selected monitoring. The EPA

notes that the permit must assure compliance with the applicable requirements, but the permit is not required to include all "information necessary for the public to fully assess potential problems" with the monitoring methods as suggested by the Petitioners. *See* Refinery Petition at 25. If necessary, the TCEQ must revise the title V permit accordingly. It is possible that the Refinery permit and permit record already include sufficient monitoring, recordkeeping, and reporting; however, due to the use of references to other permits and parts of the permit record, the title V permit itself does not clearly explain how the VOC and benzene emissions are calculated or how such calculations are used to assure compliance with the emissions limits. In reviewing the Refinery permit and permit record as part of this grant, TCEQ may also find that the existing monitoring is in fact inadequate and decide to include additional monitoring in the title V permit. In determining appropriate monitoring, the TCEQ may consider whether there are elements of the Special Conditions identified in the monitoring, testing, recordkeeping, and reporting requirement columns in the Major NSR Summary Table that may be capable of providing an adequate means to assure compliance with the VOC and benzene emissions limits for the wastewater treatment plants. The TCEQ may also consider how the monitoring in these Special Conditions is related to the monitoring in Special Condition 18 of the PSD Permit. If the TCEQ determines that elements of the monitoring already set forth in Refinery title V permit are capable of providing an adequate means to assure compliance with the title V VOC and benzene limits for wastewater treatment plants, originally in the underlying PSD permit, then the TCEQ should identify this monitoring and explain the rationale for the selected monitoring.

For the foregoing reasons, the EPA grants the Petitions as to these claims.

Claim 3.D. The Proposed Permits Do Not Assure Compliance with NSR Emission Limits for Flares.

Petitioners' Claim. The Petitioners claim that the Proposed Permits do not contain adequate monitoring for flares as required by the Shell CD, entered in *United States v. Shell Oil Company, Deer Park*, No. 4:13-cv-2009 (S.D.T.X. June 6, 2014). Chemical Plant Petition at 34; Refinery Petition at 30. The Petitioners assert that various studies at the Chemical Plant and Refinery show that additional monitoring is required to assure a flare destruction efficiency of 98% and prevent over-steaming, which is required to assure compliance with the VOC and benzene emissions limits contained in Chemical Plant Permit No. 3219/PSDTX974 and Refinery Permit No. 21262/PSDTX928. Chemical Plant Petition at 31–32; Refinery Petition at 27.

In response to TCEQ's statements in the RTC, the Petitioners explain that the provisions identified by the TCEQ for monitoring the flares do not require Shell to adequately monitor their flares to maintain the destruction efficiency and prevent over-steaming. Specifically, the Petitioners assert that the EPA has determined that the "monitoring requirements established in applicable MACT rules, including 63.11, are not sufficient to assure compliance with those requirements. Refinery Petition at 28–29 (citing Exhibit N, *Proposed Petroleum Refinery Sector Risk and Technology Review and New Source Performance Standards*, 79 *Fed. Reg.* 36880, 36904–05 (May 15, 2015) (Proposed Rule)). Further, the Petitioners assert that Shell has failed to comply with 40 C.F.R. § 60.18, as demonstrated by the Shell CD, and, therefore, the Proposed Permits do not assure compliance with the flare control efficiency requirements. Chemical Plant Petition at 33; Refinery Petition at 29. The Petitioners claim that the Proposed Permits must be

revised to include flare monitoring requirements consistent with the Shell CD. Specifically, the Petitioners claim that the Proposed Permit should require the installation and operation of a vent gas flow meter, steam flow meter, steam control equipment, gas chromatograph or net heating value analyzer, and a meteorological station. Chemical Plant Petition at 34; Refinery Petition at 29–30. Further, the Petitioners claim the Proposed Permit should require Shell to "maintain a steam to vent gas ratio (S/VG) of S/VG $\leq$ 3.0 and add supplemental gas when wind effects make the flare unstable." Chemical Plant Petition at 34; Refinery Petition at 30.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Proposed Permits on the bases described above.

The claims raised here regard the sufficiency of flare monitoring at the Shell Chemical Plant and Refinery, all of which are issues that relate to the alleged violations that were resolved as part of the Shell CD. The Shell CD between the EPA and Shell Oil and affiliated partnerships was lodged with the United States District Court for the Southern District of Texas on July 10, 2013, and entered by the court on June 4, 2014. As explained in Section III.A of this order, the Shell CD resolved alleged violations of CAA requirements at Shell's twelve steam-assisted flares that allegedly resulted in excess emissions of VOCs and various HAPs, including benzene.

In the title V context, the EPA has previously explained that once a CD is final or entered by a court, certain compliance requirements included in the CD are applicable requirements for title V purposes. *See, e.g., CITGO Order* at 12–14 (explaining that conditions from an entered CD are applicable requirements and requiring the title V permit to add the CD conditions to the compliance schedule); *In the Matter of Dynergy Northeast Energy Generation*, Petition No. II-2001-06 (February 14, 2003) at 29–30 (explaining that conditions from an entered CD are applicable requirements that must be included in the source's title V permit). However, when a CD is only proposed or lodged, the EPA has previously denied petitions requesting that the terms of the CD be incorporated into the title V permit. *See, e.g., In re East Kentucky Power Cooperative, Inc. Hugh L. Spurlock Generating Station*, Order on Petition No. IV-2006-4 (August 30, 2007) at 16–17 (denying a similar claim where the CD was not yet entered by the court); *see also Sierra Club v. EPA*, 557 F.3d at 411 (noting the EPA's view that once a CD is final, it will be incorporated into the source's title V permit).

In this case, the Shell CD was not entered when the final title V permits were issued to the Chemical Plant and the Refinery on April 1, 2014. At the time of permit issuance, the Shell CD was only lodged with the court. In light of the Shell CD's being lodged but not yet entered by the court at the time of permit issuance, the Petitioners did not demonstrate that the terms of the CD were, at that point in time, applicable requirements and thus did not demonstrate that the title V permits were not in compliance with all applicable requirements at the time they were issued. *See* CAA § 503(b); 40 C.F.R. § 70.5(c)(8)(iii)(C), 70.6(c)(3); 30 TAC § 122.142(e) (requiring a title V permit to include a schedule of compliance for requirements with which the source is not in compliance *at the time of permit issuance* (emphasis added)). Therefore, the EPA denies the Petitioners' claim that the title V permits must include the flare monitoring requirements that are now included as part of the Shell CD.

To the extent that these petitions were attempting to raise issues that do not regard CD implementation—that is, new issues that regard the alleged violations, the EPA has previously explained that it will not determine that a demonstration of noncompliance with the Act has been made in the title V context when a CD has been lodged. *See, e.g.*, *In the Matter of Wisconsin Public Service Corp., JP Pulliam Power Plant*, Order on Petition V-2009-01 (June 21, 2010) at 10–11 (denying a petition because the EPA had reached a settlement with the source and lodged a consent decree with the court); *In Re WE Energies Oak Creek Power Plant*, Order on Petition, at 6–10 (June 12, 2009) (explaining that EPA adopts the approach that, once EPA has resolved a matter through enforcement resulting in a CD approved by a court, the Administrator will not determine that a demonstration of noncompliance with the Act has been made in the title V context).

For the foregoing reasons, the EPA denies the Petitions as to this claim.

Claim 4. The Refinery Proposed Permit Impermissibly Uses the Permit Shield Provisions.

Petitioners' Claim. The Petitioners state that in their public comments, they explained, "[T]he permit record did not include meaningful information demonstrating that the negative applicability determinations listed in the Permit Shield were properly made" as required by 30 TAC § 122.148(b). Refinery Petition at 30–31. Specifically, the Petitioners assert that the permit shield does not provide adequate information for exempting duct burners CG1 and CG2 from 40 C.F.R. part 60, Subpart D. *Id.* at 31. The Petitioners contend that 40 C.F.R. § 60.40, Subpart D applies to "'each fossil-fuel-fired steam generating unit of more than 73 megawatts [(MW)] heat input rate (250 million British thermal units per hour [(MMBtu/hr)])' constructed or modified after August 17, 1971." *Id.* (quoting 40 C.F.R. §§ 60.40(a)(1), (c)). The Petitioners note that the Refinery Proposed Permit exempts CG1 and CG2 from 40 C.F.R. part 60, Subpart D because the "[s]team generating unit[s] [are] greater than 73 MW (250 MMBtu/hr) and [were] constructed after June 19, 1986." *Id.* Based on this information, the Petitioners conclude that this applicability determination "is not based on relevant information." *Id* at 32. Further, the Petitioners contend that the TCEQ did not adequately respond to their public comments because the TCEQ did not provide the "information justifying each of the permit shield provisions." *Id* at 31.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Refinery Proposed Permit on the bases described above.

The Refinery Draft Permit originally stated that 40 C.F.R. part 60, Subpart D was not applicable to CG1 and CG2 because the "[h]eat input of [each] unit is less than 250 MMBtu/hr." Refinery Draft Permit at 437. In responding to comments regarding the permit shield determination for CG1 and CG2, the TCEQ explained that the TCEQ reviewed information submitted by Shell to make all permit shield determination in accord with 30 TAC 122.142(f). Refinery RTC Response 4, at 17. Further the TCEQ stated, "The permit shield for CG1 and CG2 has been updated to change the Basis of Determination for 40 C.F.R. part 60, Subpart D to read, 'Steam generating unit greater than 73 MW (250 MMBtu/hr) and constructed after June 19, 1986.'" *Id.*

Under section 111 of the Act, the EPA has promulgated the NSPS, located at 40 C.F.R. part 60, for source categories that "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." CAA § 111(b)(1)(A); 42 U.S.C. § 7411(b)(1)(A). These standards apply to sources that have been constructed or modified since the proposal of each standard. Under the CAA and EPA's title V regulations, a source may request the permitting authority to include a permit shield in the title V permit, which can include the requirements, like particular NSPS regulations, that do not apply to the source. *See* CAA § 504(f); 40 C.F.R. § 70.6(f).

The TCEQ determined in the Refinery Proposed Permit that CG1 and CG2 were subject to 40 C.F.R. part 60, Subpart Db because each of these units is a "steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr)." Refinery Proposed Permit at 98; *see* 40 C.F.R. § 60.40b(a). Subpart Db also provides, "Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40)." 40 C.F.R. § 60.40b(j). In the permit shield table of the Refinery Proposed Permits, the TCEQ then determined that CG1 and CG2 fell within this exemption from 40 C.F.R. part 60, Subpart D because CG1 and CG2 were each a "[s]team generating unit greater than 73 MW (250 MMBtu/hr) and constructed after June 19, 1986." Refinery Proposed Permit at 456.

The Petitioners did not demonstrate that CG1 and CG2 did not fall within Subpart Db's exemption from Subpart D. The Petitioners did not provide an analysis demonstrating that CG1 and CG2 are not steam generating units or have heat input capacities less than 100 MMBtu/hr or were not constructed, modified, or reconstructed after June 19, 1986. Further, the Petitioners did not provide sufficient information to support their claim that Shell's application does not include the information required by 30 TAC § 122.148(b) for the TCEQ to make the determination. Therefore, the Petitioners did not demonstrate that CG1 and CG2 are subject to Subpart D or that the permit record does not contain adequate information to support the TCEQ's determination that Subpart D is not applicable to these units. *See, e.g.*, *MacClarence*, 596 F.3d at 1131 ("[T]he Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive."); *Nucor II Order* at 7 (explaining that EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)).

For the foregoing reasons, the EPA denies the Refinery Petition as to this claim.

Claim 5. The Proposed Permits Fail to Require Shell to Obtain SIP-Approved Authorizations for Qualified Facilities Changes.

Petitioners' Claim. The Petitioners claim that the Proposed Permits must establish a schedule for Shell to obtain SIP-approved permits for its Qualified Facilities changes conducted under Texas' disapproved Qualified Facilities program. Chemical Plant Petition at 35; Refinery Petition at 32–33. Specifically, the Petitioners include a list of qualified facility changes to the Proposed

Permits' NSR permits that do not assure compliance with the Texas SIP. Chemical Plant Petition at 35, Exhibit O; Refinery Petition at 32, Exhibit Q. The Petitioners assert that the Proposed Permits and RTC documents do not provide any information showing that Shell has received SIP-approved authorizations for these changes or information sufficient to show that the changes at the Chemical Plant and Refinery did not trigger minor NSR or nonattainment NSR (NNSR) permitting obligations. Chemical Plant Petition at 36; Refinery Petition at 33. The Petitioners claim that many portions of the TCEQ's RTC on this issue are "irrelevant" and do not address Shell's non-compliance with the SIP. Chemical Plant Petition at 36–38; Refinery Petition at 33–35. The Petitioners contend that the EPA must approve state SIPs and SIP revisions before they may be implemented and that the "TCEQ's implementation of this unapproved program violates both the spirit and letter of the Clean Air Act." Chemical Plant Petition at 37–38; Refinery Petition at 36 (citing to 40 C.F.R. § 51.105; 42 U.S.C. § 7604(a)(2); 42 U.S.C. § 7410(i)). The Petitioners also claim that the "TCEQ should revise the Proposed Permit[s] to include a schedule for Shell to obtain SIP-approved permit authorizations for Qualified Facilities projects." Chemical Plant Petition at 39; Refinery Petition at 37.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Proposed Permits on the bases described above.

In responding to comments on the issues raised in this claim, the TCEQ explained why all projects cited by the commenters satisfied minor and major NSR requirements under the EPA-approved Texas SIP. First, the TCEQ acknowledged that the Texas Qualified Facilities program is not SIP-approved and that the current version of the Qualified Facilities program is currently before the EPA for review and action on the SIP submittal. Chemical Plant RTC Response 7 at 30; Refinery RTC Response 6 at 20. The TCEQ then explained the details of the Qualified Facilities program and states, "[A]ny change made at a qualified facility must comply with PSD and nonattainment NSR." Chemical Plant RTC Response 7, at 30–31; Refinery RTC Response 6, at 21. TCEQ also explained that:

> Specifically, 30 TAC Chapter 116 requires that all new major sources or major modifications be authorized through nonattainment or PSD permitting under Subchapter B, Divisions 5 and 6, and reiterates that documentation must be kept for changes at Qualified Facilities that demonstrates that the change meets the requirements of Subchapter B, Divisions 5 and 6. *Id.*

Finally, the TCEQ provides a detailed explanation of why each project noted in the public comments satisfies NSR requirements:

> With regard to use of Texas's Qualified Facilities Program to amend, alter, or revise Permit Nos. 21262, 3179, 3214, 3219, and 9334, for all projects Shell met BACT requirements, and did not trigger PSD. The modification to permit 21262 was to reallocate 98.1 [tons per year (tpy)] of SO2 emissions from permit 21262 as 96.3 tpy of SO2 to permit 18738, which is now owned by Momentive; the change to permit 3179 was for a Phenol Cleavage Reactor Upgrade Project to reduce phenolic heavy ends; for permit nos. 3214 and 3219, Shell proposed an increase of 95.4 tpy VOC for rerouting a Heavy Olefins units' vent gas stream to the flare system. Net increases and decreases did not trigger PSD; Changes to

> permit 9334 were to group tanks so that the tanks can operate interchangeably, and to reallocate tank emissions resulting in negligible impacts. Changes in emissions from these projects were none or negligible.

Chemical Plant RTC Response 7, at 31; *see* Refinery RTC Response 6, at 22.

The Petitioners did not provide relevant citations or analysis to support their claim that some of the NSR permits incorporated into the title V permits were amended under the Qualified Facilities Rule. The Petitioners generally claimed that the TCEQ improperly circumvented the Texas SIP permitting requirements, but the Petitioners did not identify any requirements that the TCEQ has allegedly circumvented. While the Petitioners generally referenced NNSR and minor NSR, the Petitioners did not provide analysis for the contention that the amended permits do not comply with these programs. *See, e.g., Luminant Sandow Order* at 9; *In the Matter of BP Exploration (Alaska) Inc., Gathering Center # 1*, Order at 8 (April 20, 2007); *Chevron Order* at 12, 24. Specifically, the Petitioners did not identify any particular permit term or condition for which there may be a flaw in one of the permits. Although the Petitioners generally pointed to Exhibit O of the Chemical Plant Petition and Exhibit Q of the Refinery Petition as evidence that TCEQ improperly circumvented permitting requirements, these exhibits listed multiple permitting actions and the Petitioners did not identify which of the permitting actions may be inconsistent with the SIP. In their public comments on this issue, the Petitioners specifically identified permit nos. 21262, 3179, 3214, 3219, and 9334 as being amended using the Qualified Facilities Rule. Assuming these five permits are at issue, the Petitioners did not explain how the information in Exhibit O and Exhibit Q demonstrates that they were improperly amended using the Qualified Facilities Rule. In fact, the Petitioners merely attached Exhibit O and Exhibit Q to the petitions without making any specific arguments about, or explanation of, the information in them. In particular, the Petitioners did not explain how the information in Exhibit O and Exhibit Q demonstrates that the TCEQ used the Qualified Facilities Rule to amend the five permits or that, if in fact the Qualified Facilities rule was used to amend the five permits, these actions resulted in a flaw in the permit related to an applicable requirement. The Petitioners did not provide sufficient citations or analysis to demonstrate that the TCEQ amended the five permits using the Qualified Facilities Rule.

Furthermore, the Petitioners did not address key parts of the TCEQ's rationale. In the RTC, the TCEQ explained that the Texas SIP does not allow sources to utilize the Qualified Facility authorization to circumvent major NSR requirements. The TCEQ also explained that changes made at a qualified facility must comply with PSD and nonattainment NSR, must be reported annually to the commission, and may be incorporated into the minor NSR permit at amendment or renewal. Finally, the TCEQ provided a detailed explanation why its use of the Qualified Facilities Program to amend the five permits was appropriate and did not trigger PSD. As explained in Section II.B of this Order, consistent with CAA requirements, the Petitioners must address the permitting authority's final reasoning (including the RTC). *See MacClarence*, 596 F.3d at 1132–33; *see also, e.g.*, *Noranda Order* at 20–21 (denying a title V petition issue where petitioners did not respond to state's explanation in RTC or explain why the state erred or the permit was deficient); *2012 Kentucky Syngas Order* at 41 (denying a title V petition issue where petitioners did not acknowledge or reply to state's RTC or provide a particularized rationale for why the state erred or the permit was deficient). In this case, the Petitioners did not address the

TCEQ's rationale on the points described above. As explained in Section II of this Order, the EPA interprets the "demonstration" requirement in CAA section 505(b)(2) as placing the burden on the Petitioner to supply information to the EPA sufficient to demonstrate the validity of the objection raised to the title V permit. The Petitioners' mere assertion that permit nos. 21262, 3179, 3214, 3219, and 9334 were amended under Texas' Qualified Facilities program does not demonstrate that the permit is not in compliance with the Act. Chemical Plant Petition at 35, Exhibit O; Refinery Petition at 32, Exhibit Q. The Petitioners did not demonstrate that these five permits or that the Proposed Permits are not in compliance with the Act or the Texas SIP.

Further, the Petitioners did not demonstrate that the TCEQ "improperly circumvented" Texas SIP permitting requirements by using the Qualified Facilities Rule. The Petitioners did not demonstrate that a compliance schedule is necessary because the Petitioners did not demonstrate that the Proposed Permits were not in compliance with an applicable requirement at the time of permit issuance. *See* CAA § 503(b); 40 C.F.R. § 70.5(c)(8)(iii)(C), 70.6(c)(3); 30 TAC § 122.142(e) (requiring a title V permit to include a schedule of compliance for requirements with which the source is not in compliance *at the time of permit issuance* (emphasis added)).

With regard to the Petitioners' discussion regarding the history of the Qualified Facilities Rule, the history of the rule speaks for itself and this section does not raise a basis on which the EPA could object to the permit. The EPA observes that the Administrator determines whether to grant a petition based on the criteria outlined in Section II.B. of this Order.

For the foregoing reasons, the EPA denies the Petitions as to this claim.

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.

Petitioners' Claim. The Petitioners claim that the Chemical Plant Proposed Permit does not comply with 30 TAC § 116.116(d) because Shell did not incorporate six PBRs into existing case-by-case permits when those permits were last amended or renewed. Chemical Plant Petition at 39–41. The Petitioners state, "TCEQ must evaluate the impact of emissions authorized by PBRs at previously permitted facilities. . . The Process of incorporation required by 30 Tex. Admin. Code §116.116(d)(2) provides the specific mechanism for conducting these evaluations." *Id* at 40. Specifically, the Petitioners contend that Shell must incorporate the following PBRs into a case-by-case permit:

1. Permit No. 3179
    - PAUFE—PBR authorizations 106.262 (9/4/2000) and 106.478 (9/4/2000).
    - D398—PBR authorizations 106.262 (9/4/2000) and 106.478 (9/4/2000).
    - FUGPAU3—PBR authorization 106.262 (9/4/2000).
2. Permit No. 3214
    - TOL912—PBR authorization 106.472.

Id at 41. The Petitioners cite to the public comments on this issue, which claimed, "Permit No. 3179 was last amended in March, 2011 (Project No. 160508)" and "Permit No. 3214 was most recently amended in November, 2010 (Project No. 158269)." Chemical Plant Public Comments at 13–14; *see* Chemical Plant Petition at 40. The Petitioners conclude that the Chemical Plant Proposed Permit should "include a schedule for Shell to incorporate the PBRs identified above into existing permits." Chemical Plant Petition at 41.

EPA's Response. For the reasons described below, the EPA grants the Petitioners' claim that the EPA must object to the Chemical Plant Proposed Permit on the bases described above.

In responding to comments on this issue, the TCEQ stated:

> 30 TAC §116.116(d), which is SIP-approved, sets forth that all changes authorized under Chapter 106 to a permitted facility shall be incorporated into that facility's permit when the permit is amended or renewed. Changes under Chapter 106(a)(3) constitute, "a major modification, as defined in 40 C.F.R §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990."

Chemical Plant RTC Response 5 at 22. The TCEQ then provided an explanation of the status of incorporation for the PBRs identified in the public comments. *Id.* at 22–24. First, in responding to the PBR authorizations for the PAUFE, the TCEQ stated, "PBR authorizations 106.262 (9/4/2000) and 106.478 (9/4/2000) are from PBR permit 54061 and this PBR has not been rolled into the NSR Permit." *Id.* at 22. Next, in responding to the PBR authorizations for D398, the TCEQ stated, "PBR authorizations 106.262 (9/4/2000) and 106.478 (9/4/2000) are from PBR permit 54061 and this PBR has not been rolled into an NSR permit. Therefore, the PBR is still active." *Id.* Then, in responding to the PBR authorization for FUGPAU3, the TCEQ stated, "PBR authorization 106.262 (9/4/2000) is from PBR permit 52089 and this PBR has not been rolled into an NSR permit. Therefore the PBR is still active." *Id.* Finally, in responding to the PBR authorization for TOL912, the TCEQ stated:

> PBR authorization 106.472 (9/4/2000) is part of an unregistered PBR. Records have not been located showing that this PBR has been rolled into Permit. Thus, this authorization remains. The PBR did not authorize any increased emissions and is authorized for storage of wastewater in the tank.

Id. at 23.

The Petitioners demonstrated that the record was inadequate to explain why the six PBR authorizations listed in the Petition had not been incorporated into an NSR permit. The Petitioners identified six PBR authorizations that they claimed were not incorporated into case-by-case permit nos. 3179 and 3214 upon renewal, amendment, or alteration. The TCEQ response for PBR authorizations for the PAUFE, D398, and FUGFAU3 units only stated that the PBRs had not been rolled in and were still active. The TCEQ's response for these PBRs did not sufficiently explain why these PBRs were not rolled into the minor NSR permit as the Petitioners claimed they should be. In addition, the TCEQ

response for the PBR authorization for unit TOL912 that the "PBR did not authorize any increased emissions" did not explain how this fact affects the incorporation requirements of 30 TAC § 116.116(d)(2). *Id.* at 23. Further, the TCEQ's statement about 30 TAC § 116.116(d) does not clarify why these PBRs were not rolled into the minor NSR permits. Therefore, the Petitioners demonstrated that the permit record does not explain why these PBRs were not rolled into the NSR permits and how not rolling these PBRs into the NSR permit was consistent with 30 TAC § 116.116(d)(2).

In responding to this Order, the TCEQ is directed 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). For TOL912 PBR 106.472 (9/4/2000), the TCEQ should explain the significance of that PBR not authorizing emission increases. For the remaining PBRs, the TCEQ's response should explain whether the changes authorized by the PBR were to a permitted facility and, if so, whether the permit for that permitted facility has been amended or renewed since the PBR was authorized; the TCEQ should also verify that the PBR was incorporated into the permit at that time or revise the permits accordingly.

For the foregoing reasons, the EPA grants the Chemical Plant Petition as to this claim.

Claim 7. The TCEQ's Revision to Special Condition 28 of the Proposed Permits Is Improper.

Petitioners' Claim. The Petitioners claim that the TCEQ did not demonstrate that the revision to Special Condition 28 in the Proposed Permits was proper or explain why the revision was necessary. Chemical Plant Petition at 42; Refinery Petition at 38. The Petitioners assert that the Draft Permits originally contained a special condition relating to flexible permits that stated:

> "The Permit holder shall use a SIP approved permit amendment process to convert the Shell Oil Company flexible permit Nos. 21262 and 56496 into permits issued under 30 Tex. Admin. Code Chapter 116, Subchapter B. The permit holder shall submit to TCEQ NSR SIP permit amendment applications in accordance with 30 TAC Chapter 116 Subchapter B no later than January 20, 2012."

Chemical Plant Petition at 42 (quoting Chemical Plant Draft Permit at 21, Special Condition 28); *see also* Refinery Petition at 38 (quoting Refinery Draft Permit at 21, Special Condition 29). [13] The Petitioners then contend that Special Condition 28 was revised after the public comment period to include the following language:

> "If the Texas Flexible Permits Program becomes SIP-approved prior to the conversion to 30 TAC 116 Subchapter B permits, the permit holder may choose to continue the permit conversion or to continue to operate under the existing flexible permit, with or without revisions."

[13] Special Condition 29 in the Refinery Draft Permit was changed to Special Condition 28 in the Refinery Proposed Permit. Therefore, this Order only references Special Condition 28 for both the Chemical Plant and Refinery permits.

Chemical Plant Petition at 42 (quoting Chemical Plant Proposed Permit at 22, Special Condition 28); Refinery Petition at 38 (quoting Refinery Proposed Permit at 21, Special Condition 28). Specifically, the Petitioners claim that EPA's approval of Texas' Flexible Permit program "cannot provide federal authorization for projects carried out under flexible permits prior to the program's approval." Chemical Plant Petition at 43; Refinery Petition at 39. The Petitioners assert that the revised Special Condition 28 "does not address Shell's failure to comply with Texas SIP permitting requirements and it fails to assure compliance with the SIP." Chemical Plant Petition at 42; Refinery Petition at 38.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Proposed Permits on the bases described above.

The Petitioners correctly note that TCEQ revised Special Condition 28 after the public comment period to include the language quoted above. The TCEQ provided notification of this revision in the RTC documents. *See* Chemical Plant RTC at 7; Refinery RTC at 6. On June 10, 2015, Shell submitted applications for minor revisions to both the Chemical Plant and Refinery title V permits that altered the language of Special Condition 28. On August 4, 2015, the TCEQ approved these revisions as final and issued revised title V permits, which both contained a revised Special Condition 28:

> The permit holder shall use a SIP approved permit amendment process to convert the Shell Oil Company flexible Permit No. 21262 and Shell Chemical LP flexible Permit No. 56496 into permits issued under a SIP approved permit program under 30 Tex. Admin. Code Chapter 116. The permit holder shall submit to TCEQ NSR SIP permit amendment applications in accordance with 30 TAC Chapter 116 Subchapter B no later than January 20, 2012.

Revised Chemical Plant Title V Permit (August 4, 2015) at 22; Revised Refinery Title V Permit (August 4, 2015) at 21.

These minor revisions resulted in removal of the language that was the subject of the Petitioners' claim. The title V permits no longer allow the sources to continue under the sources' previous flexible permits and now require Shell to obtain SIP-approved permits. Therefore, this claim is now moot and resolved since TCEQ already took the action that the Petitioners requested be taken in order to resolve this issue. As a result, there is no further basis identified in the Petition for EPA objection on this issue. *See, e.g.*, *In the Matter EME Homer City Generation – Homer City Coal Fired Electric Generating Facility* (July 30, 2014) at 33, 43, 46, 54; *Nucor Order II* at 13.

For the foregoing reasons, the EPA denies the Petitions as to this claim.

Claim 8. The Proposed Permits Must Clarify that Credible Evidence May be Used by Citizens to Enforce the Terms and Conditions of the Permits.

Petitioners' Claim. The Petitioners claim that the Proposed Permits must be revised to ensure that any credible evidence may be used to demonstrate noncompliance with applicable

requirements in the permits. Chemical Plant Petition at 43 and the Refinery Petition at 39. The Petitioners state that the *Federal Register* preamble for the Compliance Assurance Monitoring (CAM) rule outlines that permits cannot be written to limit the types of evidence used to prove violations of emission standards. Chemical Plant Petition at 44 and the Refinery Petition at 40. The Petitioners specifically state, "Texas permits do not contain any language indicating that credible evidence may not be used by citizens or the EPA to demonstrate violations…" Chemical Plant Petition at 44 and the Refinery Petition at 40. However, the Petitioners claim that in a recent case, the U.S. District Court for the Western District of Texas held that credible evidence could not be used in citizen suits to enforce the permit's emission limits. Chemical Plant Petition at 45; Refinery Petition at 41 (citing to Chemical Plant Petition Exhibit P and Refinery Petition Exhibit R, *Sierra Club v. Energy Future Holdings Corp.*, No. 6:12-CV-00108 (W.D. Tex. February 10, 2014)). Therefore, the Petitioners claim that the Administrator should require the TCEQ to revise the Proposed Permits to include a condition that states, "Nothing in this permit shall be interpreted to preclude the use of any credible evidence to demonstrate non-compliance with any term of this permit." Chemical Plant Petition at 45; Refinery Petition at 41.

EPA's Response. For the reasons described below, the EPA denies the Petitioners' claim that the EPA must object to the Proposed Permits on the bases described above.

The EPA's longstanding position on credible evidence is that the EPA, permitting agencies, and citizens can use any credible evidence to assess a source's compliance status and respond to noncompliance with CAA requirements. *See* Credible Evidence Revisions, 62 *Fed. Reg.* 8314, 8315, 8318 (February 24, 1997). A title V permit may not preclude any entity, including the EPA, citizens or the state, from using any credible evidence to enforce emissions standards, limitations, conditions, or any other provision of a title V permit. *See* Compliance Assurance Monitoring, 62 *Fed. Reg.* 54900, 54907-08 (October 22, 1997). As the EPA has previously stated, to demonstrate that a title V permit fails to provide for the use of credible evidence, petitioners must specifically identify permit terms excluding the use of credible evidence or otherwise identify that the permitting authority excluded the use of credible evidence. *See, e.g.*, *In the Matter of Luminant Generation Company, Big Brown, Monticello, and Martin Lake Steam Electric Station*, Order on Petition Nos. VI-2014-01, VI-2014-02, and VI-2014-03 (January 23, 2015) at 15–16; *In the Matter of Louisiana Pacific Corporation, Tomahawk, Wisconsin*, Order on Petition No. V-2006-3 (November 5, 2007) at 11–12. In this case, the Petitioners did not demonstrate that any permit terms in the Proposed Permits specifically excluded the use of credible evidence or that the TCEQ otherwise excluded the use of credible evidence for these Proposed Permits. Therefore, the Petitioners did not demonstrate that the TCEQ must revise the Proposed Permits to include a statement explicitly allowing the use of credible evidence.

For the foregoing reasons, the EPA denies the Petitions as to this claim.

V. CONCLUSION

For the reasons set forth above and pursuant to CAA § 505(b)(2), 30 TAC § 122.360, and 40 C.F.R. § 70.8(d), I hereby grant in part and deny in part the Petitions as to the claims described herein.

Dated: Sept 24, 2015

Gina McCarthy,
Administrator.