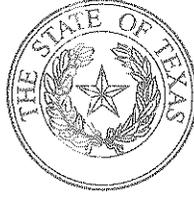


# State Office of Administrative Hearings



Cathleen Parsley  
Chief Administrative Law Judge

December 18, 2013

Anne Idsal  
General Counsel  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin Texas 78711-3087

**Re: SOAH Docket No. 582-13-4611; TCEQ Docket No. 2013-0657-AIR; In Re: Application of Air Quality Permit No. 102892 for the Construction of a New Ethylene Production Unit at Exxonmobil's Baytown Olefins Plant, located in Harris County, Texas**

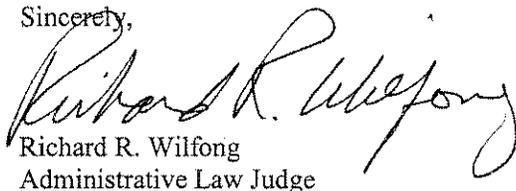
Dear Ms. Idsal:

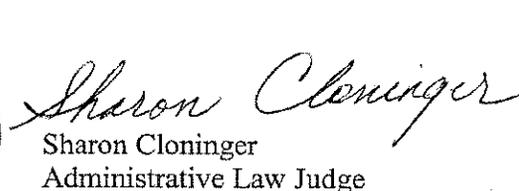
The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than January 7, 2014. Any replies to exceptions or briefs must be filed in the same manner no later than January 17, 2014.

This matter has been designated **TCEQ Docket No. 2013-0657-AIR; SOAH Docket No. 582-13-4611**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at <http://www10.tceq.state.tx.us/epic/efilings/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

  
Richard R. Wilfong  
Administrative Law Judge

  
Sharon Cloninger  
Administrative Law Judge

SC/lh  
Enclosures  
cc: Mailing List

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**STYLE/CASE:** EXXON MOBIL CORPORATION  
**SOAH DOCKET NUMBER:** 582-13-4611  
**REFERRING AGENCY CASE:** 2013-0657-AIR

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**STATE OFFICE OF ADMINISTRATIVE  
HEARINGS**

**ADMINISTRATIVE LAW JUDGE  
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

---

**SOAH DOCKET NO. 582-13-4611  
TCEQ DOCKET NO. 2013-0657-AIR**

<p><b>APPLICATION OF EXXONMOBIL FOR ISSUANCE OF AIR QUALITY PERMIT NO. 102892 FOR THE CONSTRUCTION OF A NEW ETHYLENE PRODUCTION UNIT AT EXXONMOBIL’S BAYTOWN OLEFINS PLANT, LOCATED IN HARRIS COUNTY, TEXAS</b></p>	<p>§ § § § § § §</p>	<p><b>BEFORE THE STATE OFFICE  OF  ADMINISTRATIVE HEARINGS</b></p>
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## LIST OF ACRONYMS

AEIU - Annual Emission Inventory Update  
ALJs - Administrative Law Judges  
BACT – Best Available Control Technology  
BOP – Baytown Olefins Plant  
CFR – Code of Federal Regulations  
CO - Carbon Monoxide  
DRE - Destruction and Removal Efficiency  
EPA – United States Environmental Protection Agency  
EPU – Ethylene Production Unit  
FCAA - Federal Clean Air Act  
GLCs - Ground-Level Concentrations  
HRVOCs - Highly Reactive Volatile Organic Compounds  
MAERT – Maximum Allowable Emission Rates Table  
MSS – Maintenance, Startup, and Shutdown  
NAAQS - National Ambient Air Quality Standards  
NOx – Nitrogen Oxides  
NSR – New Source Review  
PAL - Plant-wide Applicability Limit  
PAL6 - Plant-wide Applicability Permit 6  
PM – Particulate Matter  
PM<sub>2.5</sub> – Fine PM with a diameter less than 2.5 microns  
PM<sub>10</sub> - Coarse PM with a diameter less than 10 microns  
PSD - Prevention of Significant Deterioration  
SAR - Semi-Annual Report  
SCR - Selective Catalytic Reduction  
SER – Significant Emission Rate  
SILs - Significant Impact Levels  
SIP - State Implementation Plan  
SO<sub>2</sub> - Sulfur Dioxide  
SOAH – State Office of Administrative Hearings  
H<sub>2</sub>SO<sub>4</sub> - Sulfuric Acid  
TAC – Texas Administrative Code  
TCEQ – Texas Commission on Environmental Quality  
VOCs - Volatile Organic Compounds

**SOAH DOCKET NO. 582-13-4611  
TCEQ DOCKET NO. 2013-0657-AIR**

<b>APPLICATION OF EXXONMOBIL FOR</b>	§	
<b>ISSUANCE OF AIR QUALITY PERMIT</b>	§	<b>BEFORE THE STATE OFFICE</b>
<b>NO. 102892 FOR THE CONSTRUCTION</b>	§	
<b>OF A NEW ETHYLENE PRODUCTION</b>	§	<b>OF</b>
<b>UNIT AT EXXONMOBIL'S BAYTOWN</b>	§	
<b>OLEFINS PLANT, LOCATED IN</b>	§	<b>ADMINISTRATIVE HEARINGS</b>
<b>HARRIS COUNTY, TEXAS</b>	§	

**PROPOSAL FOR DECISION**

**I. INTRODUCTION**

On May 21, 2012, ExxonMobil (Applicant or EM) submitted an application (Application) to the Texas Commission on Environmental Quality (TCEQ or Commission) for an air quality permit for a new ethylene production unit (EPU) to be located at Applicant's existing Baytown Olefins Plant (BOP) in Baytown, Harris County, Texas.<sup>1</sup> Applicant contended the evidence supports a conclusion that all procedures and analysis required for an air permit review were followed in accordance with applicable rules and guidance established by TCEQ and the Final Draft Permit should be issued. Sierra Club and Air Alliance Houston (Protestants) argued that the Application is facially deficient, misapplies Commission and Environmental Protection Agency (EPA) guidance, and misreads applicable statutes and regulations.<sup>2</sup> The preliminary decision of TCEQ's Executive Director (ED) to issue the Final Draft Permit remained unchanged by information proffered during the contested case hearing process.<sup>3</sup> For reasons set out below, the Administrative Law Judges (ALJs) recommend that the Commission approve issuance of the Final Draft Permit.

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<sup>1</sup> EM Ex.102 (cover letter for the Application) at 1.

<sup>2</sup> Protestants' Response to Applicant's Closing Argument at 12.

<sup>3</sup> The ED's participation in any contested case hearing is limited by statute to two issues: (1) to provide information to complete the administrative record; and (2) to support the ED's position developed during the underlying proceeding. Tex. Water Code § 5.228(c). See ED's Closing Argument at 2.

## A. Background

Applicant proposes to construct an EPU that would include eight new steam cracking furnaces and recovery equipment, including a quench tower, caustic wash facilities, and a deethanizer and acetylene converter, a demethanizer system, and an ethylene recovery process.<sup>4</sup> Ancillary equipment proposed includes a decoking unit, a cooling tower, a flare system, a wastewater collection tank, small emergency diesel storage tanks, backup diesel engines, and a firewater booster pump.<sup>5</sup> The Application proposes equipment typical for chemical manufacturing plants similar to the proposed EPU.<sup>6</sup>

On May 30, 2012, after Applicant submitted revisions to the Application,<sup>7</sup> the ED declared the Application administratively complete.<sup>8</sup> Between August 28, 2012, and April 5, 2013, Applicant supplemented the Application with additional information as requested by TCEQ.<sup>9</sup> On November 19, 2012, Applicant submitted an Air Quality Modeling Analysis to TCEQ, followed by supplemental information in December 2012 and January 2013.<sup>10</sup> On April 9, 2013, the ED concluded that the Application was technically complete, issued a Draft Permit, and recommended that the Application be approved.<sup>11</sup> In May

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<sup>4</sup> EM Ex. 100 (Parmley Direct) at 16.

<sup>5</sup> EM Ex. 100 (Parmley Direct) at 16.

<sup>6</sup> EM Ex. 100 (Parmley Direct) at 16.

<sup>7</sup> EM Ex. 100 (Parmley Direct) at 22; EM Ex. 103.

<sup>8</sup> EM Ex. 100 (Parmley Direct) at 38; EM Ex. 117 (TCEQ's Declaration of Administrative Completeness Determination); *see also* ED Ex. A.

<sup>9</sup> EM Ex. 100 (Parmley Direct) at 22-23; EM Ex. 107; EM Ex. 111; EM Ex. 111A (Subject to Confidentiality and Protective Order); EM Ex. 114; EM Ex. 114A (Subject to Confidentiality and Protective Order); EM Ex. 115.

<sup>10</sup> EM Ex. 100 (Parmley Direct) at 22-23; EM Ex. 106 (includes electronic modeling files); EM Ex. 108; EM Ex. 109; EM Ex. 110 (includes electronic modeling files).

<sup>11</sup> EM Ex. 100 (Parmley Direct) 39-40; EM Ex. 120 (TCEQ Technical Completeness Determination, Preliminary Decision, Draft Special Conditions, Draft Maximum Allowable Emission Rates (MAERT)); EM Ex. 124 (TCEQ Final Draft Permit (General Conditions, Special Conditions, MAERT)); *see also* ED Ex. B.

2013, Applicant responded to TCEQ's requests for additional modeling information,<sup>12</sup> which included confidential material.<sup>13</sup> On June 28, 2013, the ED issued a Final Draft Permit.<sup>14</sup>

## **B. Procedural History**

Pursuant to Applicant's March 27, 2013 request, the case was directly referred by the Commission to the State Office of Administrative Hearings (SOAH) on April 22, 2013, for a contested case hearing.<sup>15</sup> The preliminary hearing was held July 8, 2013, in Baytown, Texas, before ALJs Sharon Cloninger and Richard R. Wilfong. Jurisdiction and notice were not contested. After the hearing on the merits, however, Protestants contested the adequacy of notice; the issue is addressed in section V of this Proposal for Decision (PFD).

The hearing on the merits was held October 1-2, 2013, before ALJs Cloninger and Wilfong at the William P. Clements State Office Building, 300 West 15th Street, Fourth Floor, Austin, Texas. Applicant was represented by Derek Seal, attorney. Protestants were represented by Gabriel Clark-Leach, attorney. The ED was represented by Alexis Lorick, Staff Attorney. The Office of Public Interest Counsel (OPIC) was represented by Eli Martinez, Assistant Public Interest Counsel. The record closed on October 25, 2013, after the parties filed written closing arguments and replies.

## **C. Issues and Applicable Law**

For the Commission to grant issuance of the Final Draft Permit, the Application must comply with all applicable statutory and regulatory requirements.<sup>16</sup> After the conclusion of the

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<sup>12</sup> EM Ex. 100 (Parmley Direct) at 23; EM Ex. 116 (includes electronic modeling files).

<sup>13</sup> EM Ex. 100 (Parmley Direct) at 23; EM Ex. 116A (Subject to Confidentiality and Protective Order).

<sup>14</sup> ED Ex. 30.

<sup>15</sup> ED Ex. 36 (ED's Response to Public Comment) Response 1 at 686; *TCEQ Interim Order Concerning the Application of ExxonMobil Chemical Corporation for a New Air Quality Permit No. 102892*; TCEQ Docket No. 2013-0657-AIR (April 22, 2013); Tex. Water Code § 5.557(b); 30 Tex. Admin. Code (TAC) § 55.210.

<sup>16</sup> 30 TAC § 55.210(b), Direct Referrals.

hearing on the merits, the parties agreed that all requirements for obtaining an air permit that are found in the Commission's rule at 30 Texas Administrative Code § 116.111 are undisputed except for those identified in the Post-Hearing Briefing Outline.<sup>17</sup> Therefore, the PFD addresses only the disputed issues, which relate to whether major or minor new source review (NSR) applies;<sup>18</sup> demonstration of best available control technology (BACT);<sup>19</sup> compliance with TCEQ rules regarding protection of health and property;<sup>20</sup> and notice requirements for requesting a contested case hearing.<sup>21</sup>

### *Application Requirements*

For an applicant to be granted a permit, 30 Texas Administrative Code § 116.111(a) states in relevant part that an application must include the following:

(1) a completed Form PI-1 General Application signed by an authorized representative of the applicant. All additional support information specified on the form must be provided before the application is complete;

(2) information which demonstrates that emissions from the facility, including any associated dockside vessel emissions, meet all of the following.

(A) Protection of public health and welfare.

(i) The emissions from the proposed facility will comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of the health and property of the public. . . .

(B) Measurement of emissions. The proposed facility will have provisions for measuring the emission of significant air contaminants as determined by the [ED]. . . .

(C) [BACT] must be evaluated for and applied to all facilities subject to the TCAA. Prior to evaluation of BACT under the TCAA, all facilities with pollutants subject to regulation under Title I Part C of the Federal Clean Air Act (FCAA) shall evaluate and apply BACT as defined in §116.160(c)(1)(A) of this title (relating to Prevention of Significant Deterioration Requirements).

(D) New Source Performance Standards (NSPS). The emissions from the proposed facility will meet the requirements of any applicable NSPS as listed under 40 Code of

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<sup>17</sup> See Rule 11 Agreement filed by the parties on October 4, 2013, pursuant to Tex. R. Civ. P. 11.

<sup>18</sup> 30 TAC § 116.111(a)(2)(H)(I).

<sup>19</sup> 30 TAC § 116.111(a)(2)(C).

<sup>20</sup> 30 TAC § 116.111(a)(2)(A)(i).

<sup>21</sup> 30 TAC §§ 55.156 and 55.210.

Federal Regulations (CFR) Part 60, promulgated by the [EPA] under FCAA, §111, as amended. . . .

(G) Performance demonstration. The proposed facility will achieve the performance specified in the permit application. The applicant may be required to submit additional engineering data after a permit has been issued in order to demonstrate further that the proposed facility will achieve the performance specified in the permit application. In addition, dispersion modeling, monitoring, or stack testing may be required.

(H) Nonattainment review. If the proposed facility is located in a nonattainment area, it shall comply with all applicable requirements in this chapter concerning nonattainment review.

(I) Prevention of Significant Deterioration (PSD) review. If the proposed facility is located in an attainment area, it shall comply with all applicable requirements in this chapter concerning PSD review.

(J) Air dispersion modeling. Computerized air dispersion modeling may be required by the [ED] to determine air quality impacts from a proposed new facility or source modification. . . . The commission shall determine compliance with non-criteria ambient air contaminant standards and guidelines at land-based off-property locations. . . .

(L) Mass cap and trade allowances. If subject to Chapter 101, Subchapter H, Division 3, of this title (relating to Mass Emissions Cap and Trade Program), the proposed facility, group of facilities, or account must obtain allowances to operate.

### *Notice Requirements*

The law related to notice that must be included in a Notice of Application and Preliminary Decision (NAPD) in a directly-referred case—as found at Texas Water Code § 5.557(c), 30 Texas Administrative Code ch. 39, §§ 39.411, 39.419(b), 116.111(b), 55.156, 55.210, and 116.111(b)—is addressed in section V of the PFD without further discussion here.

### *Burden of Proof*

Applicant bears the burden of proof by a preponderance of the evidence.<sup>22</sup> However, the preponderance of the evidence standard does not necessarily require that the party with the burden “explain or disprove the allegations of its opponent,”<sup>23</sup> such as the disputed issues

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<sup>22</sup> 30 TAC § 80.17(a), Burden of Proof.

<sup>23</sup> *Gooch v. Davidson*, 245 S.W.2d 989, 991 (Tex. Civ. App.—Amarillo 1952, no writ).

identified in the Post-Hearing Briefing Outline. Further, the burden of proof by a preponderance of the evidence:

. . . does not require the quality of absolute certainty nor does it require that [the Applicant] preclude every other possibility. . . . All that is required is that circumstances point to the ultimate fact sought to be established with that degree of certainty as to make the conclusion reasonably probable.<sup>24</sup>

#### D. Evidence Presented

Applicant pre-filed written testimony to support granting the Application, including the Application documents;<sup>25</sup> TCEQ's administrative and technical review documents;<sup>26</sup> testimony and exhibits from Randy E. Parmley, P.E., an expert with 31 years of experience in TCEQ air permitting;<sup>27</sup> testimony and exhibits from Lucy Frasier, Ph.D., DABT, an expert toxicologist;<sup>28</sup> and testimony and exhibits from Kevin Brewer, an expert in TCEQ's Plant-wide Applicability Limit (PAL) rules and in PAL permits.<sup>29</sup> Protestants offered pre-filed testimony and exhibits from their designated expert witness, William E. Powers, P.E.<sup>30</sup> The ED pre-filed the testimony of three expert witnesses—Justin Cherry, P.E.; Kyle M. Virr, P.E.; and toxicologist Ross E. Jones, MS, MPH, Ph.D.—and exhibits to demonstrate that the Application meets all of TCEQ's requirements.<sup>31</sup>

In general, the ALJs find the Applicant's and the ED's witnesses most qualified and their testimony most thorough, credible, and persuasive. Additionally, as more fully discussed below,

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<sup>24</sup> *State Farm Mut. Ins. Co. v. Davis*, 576 S.W.2d 920, 921 (Tex. Civ. App.—Amarillo 1979, writ ref'd n.r.e.)(internal citations omitted); *see also Bufkin v. Tx. Farm Bureau Mut. Ins. Co.*, 658 S.W.2d 317, 320 (Tex. App.—Tyler 1983, no writ).

<sup>25</sup> *See* EM Exs. 102 - 116, including confidential materials filed in EM Exs. 102A, 104A, 105A, 111A, 114A, and 116A.

<sup>26</sup> *See* EM Exs. 117 - 124.

<sup>27</sup> *See* EM Exs. 100 - 161 (Parmley Direct testimony and exhibits).

<sup>28</sup> *See* EM Exs. 200 - 223 (Frasier Direct testimony and exhibits).

<sup>29</sup> *See* EM Exs. 300 - 311A (Brewer Direct testimony and exhibits and exhibits entered into evidence relating to his testimony).

<sup>30</sup> Protestants Ex. 100 (Powers Direct testimony and exhibits).

<sup>31</sup> *See* ED Exs. 1 - 42 (Cherry, Virr, and Jones direct testimony and exhibits).

the ALJs find that, in major part, Protestants' challenges to the Application constitute an impermissible collateral attack on the Commission's 8-year-old order issuing Applicant's PAL6 Permit. The ALJs find, overall, that the evidence presented by Protestants does not support a finding against issuing the Final Draft Permit.

**II. MAJOR/MINOR NEW SOURCE REVIEW (NSR)  
– 30 TEXAS ADMINISTRATIVE CODE § 116.111(a)(2)(H)(I)**

The Application was filed as a minor New Source Review (NSR) permit application subject to TCEQ's rules in 30 Texas Administrative Code chapter 116, subchapter B, *New Source Review Permits*.<sup>32</sup> According to Applicant, the Application is a "minor" NSR application because the emissions from the proposed EPU and the emissions from the existing BOP will be managed such that they will stay below the limits in the PALs contained in Applicant's PAL6 permit.<sup>33</sup> Thus, "major" NSR review is not required.<sup>34</sup> Applicant's air permitting expert, Mr. Parmley, explained that:

[An] application for emissions that are subject to a PAL permit do not need to undergo [major NSR review] because the emission levels that would be subject to and fall under the PAL Cap have already undergone [major NSR review] when the PAL Cap was established. It is not logical to require emissions that will be managed under a PAL Cap to undergo [major NSR review] again when the PAL Cap is not changing or does not need to change to accommodate new or modified emission units.<sup>35</sup>

Protestants disagree, contending the EPU is a major modification requiring "major" NSR. Protestants assert three reasons in support of their position:

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<sup>32</sup> EM Ex. 100 (Parmley Direct) at 194; EM-102 at 41 (Section IX.D. of Applicant's TCEQ Form PI-1).

<sup>33</sup> EM Ex. 100 (Parmley Direct) at 196; See EM-141 (Applicant's Permit No. 3452 and PAL6 and PSD-TX-303M2 permit (ExxonMobil Permit 3452/PAL6), also entered into evidence as EM Ex. 302, and EM Ex. 303 with a recent update in TCEQ's file).

<sup>34</sup> EM Ex. 100 (Parmley Direct) at 193-196. As explained in Mr. Parmley's prefiled testimony, the terms "major new source review," "federal review," and "Prevention of Significant Deterioration review" are used synonymously.

<sup>35</sup> EM Ex. 100 (Parmley Direct) at 195.

- Emissions from BOP already exceed the PM PAL limit in PAL6;
- PAL6 does not establish a limit for PM<sub>10</sub> or PM<sub>2.5</sub>, which are separately regulated NSR pollutants that the EPU will emit in significant quantities; and
- Applicant does not actually have a PAL, as defined by the Commission's rules, for any pollutant.<sup>36</sup>

These disputed issues are discussed in detail below.

## A. PM PAL Compliance and Cooling Tower Emissions

### 1. Evidence and Argument

The parties agree that a PAL imposes a pollutant-specific annual emission limitation in tons per year that is enforceable for *all* emissions units at the major stationary source that emit the PAL pollutant.<sup>37</sup> Changes to emissions units at a major stationary source covered by a PAL do not trigger major NSR permitting requirements, so long as emissions from the source do not exceed the PAL.<sup>38</sup> Once a PAL has been exceeded, an applicant may no longer rely on it to avoid major NSR permitting requirements. This is embodied in Special Condition 6 of Applicant's PAL6 permit:

This permit establishes PALs for VOC, carbon monoxide (CO), nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), and particulate matter (PM).

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<sup>36</sup> See Rule 11 Agreement filed by the parties on October 4, 2013, pursuant to Tex. R. Civ. P. 11.

<sup>37</sup> 30 TAC § 116.186(a) ("The plant-wide applicability limit (PAL) will impose an annual emission limitation in tons per year, that is enforceable for all facilities, or emissions units at a major stationary source, that emit the PAL pollutant."); 40 CFR § 52.21(aa)(2)(i) ("Actuals PAL for a major stationary source means a PAL based on the baseline actual emissions . . . of all emissions units at the source, that emit or have the potential to emit the PAL pollutant.").

<sup>38</sup> 30 TAC § 116.190(a) ("An increase in emissions from operational or physical changes at a facility, or emissions unit at a major stationary source, covered by a plant-wide applicability limit (PAL) permit is insignificant, for the purposes of major new source review under this subchapter, if the increase does not exceed the PAL."); EM Ex. 141 at 4 ("Any project that requires that the PAL caps be increased will be subject to the appropriate federal NSR requirements."); see also 40 CFR § 52.21(aa)(2)(viii) ("PAL major modification means . . . any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL").

The PALs are effective for ten years after this permit is issued. Physical changes and changes in method of operation at this site are exempt from federal New Source Review (NSR) for VOC, CO, NO<sub>x</sub>, SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub> and PM as long as site emissions do not exceed the PAL caps.<sup>39</sup>

***Semiannual reports (SARs), not Annual Emission Inventory Updates (AEIUs), demonstrate PAL6 compliance***

According to Protestants, Applicant's Annual Emission Inventory Update (AEIU) reports show that PM emissions from the BOP have exceeded the PM PAL limit of 365.62 tons per year (tpy) each year since 2007.<sup>40</sup> Therefore, Protestants asserted that Applicant may not rely on its PM PAL to avoid major NSR permitting requirements. Protestants argued that Applicant's AEIU submissions are reliable indicators of PM emissions at the plant: The submissions are based on approved and reliable methods for determining actual emissions, certified as accurate by Applicant, are used to develop State Implementation Plans (SIP), and are the basis for calculating fees paid by Applicant for emissions from the BOP.<sup>41</sup>

Applicant responded that AEIU data is not relevant, because it is not taken from the semiannual reports (SARs) which Applicant submits to the TCEQ to demonstrate compliance with PAL6 requirements.<sup>42</sup> Protestants disagreed, urging that the relevant question is not how Applicant should demonstrate compliance with PAL6 requirements (that is an enforcement issue).<sup>43</sup> Rather, the relevant question is whether BOP PM emissions already exceed the PM PAL limit in PAL6. According to Protestants, Applicant's PAL6 SARs do not address this

<sup>39</sup> EM Ex. 302 (ExxonMobil Permit 3452/PAL6) at 4.

<sup>40</sup> Protestants Ex. 100 (Powers Direct) at 35-38; Protestants Ex. 106 at 35-36 ("Q: (Mr. Clark-Leach) So based on the best information you have available . . . is it your opinion that ExxonMobil has emitted—that combined PM emissions from. . . the Baytown Olefins Plant have exceeded 365.62 tons for any 12-month rolling period since the PAL was issued? . . . A: (Mr. Virr) Yes."); Protestants 103 at 2 ("[A]ccording to the available Emissions Inventory (EI) data, RN102212925 reported PM emissions greater than 365.62 tons in 2007, 2008, 2009, 2010, and 2011.").

<sup>41</sup> 30 TAC §§ 101.10(c) (Emissions must be calculated using direct continuous monitoring or other means approved by the Commission), (d) (Emissions Inventory submission must be certified as accurate), 101.27(f)(2)(A) (Emissions Fees must be based on allowable emission, unless owner or operator submits complete and verifiable emissions information to the Commission's Emissions Inventory); Protestants Ex. 106 at 37 (Emissions Inventory information used to develop SIPs).

<sup>42</sup> Applicant's Closing Argument at 8-9.

<sup>43</sup> Protestants Ex. 106 at 27 (Virr testifying that he is unaware how Applicant calculates PM emissions for its semiannual PAL reports, because those reports are submitted to TCEQ's Enforcement Division).

question, because they exclude PM emissions from the BOP cooling towers.<sup>44</sup> Thus, Protestants argued the only evidence in the record regarding total plant-wide PM emissions from the BOP demonstrates that emissions from the plant already exceed the PM limit in PAL6. Protestants conclude that Applicant may not rely on the PAL6 PM limit to avoid major NSR requirements for PM.

In response to Protestants' contentions, Applicant argued that PAL6 includes explicit monitoring, recordkeeping, and reporting provisions that specifically prescribe how PAL6 compliance must be demonstrated. EPA and TCEQ PAL rules require Applicant to submit a SAR every 6 months to demonstrate compliance with the PAL6 limits.<sup>45</sup> The SARs include the rolling 12-month sum of the emissions of each pollutant subject to a PAL limit for each month in the prior 6-month SAR reporting period.<sup>46</sup> The monitoring system authorized for use in a PAL permit must meet stringent requirements – it must be “based on sound science and must meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.”<sup>47</sup> The emissions data are then used to calculate mass emissions for each PAL pollutant on a tons-per-month basis, which are summed in a 12-month rolling total for each facility that has emissions subject to a PAL.<sup>48</sup> Monthly emissions are calculated for each PAL pollutant and emission source type (*e.g.*, fugitives, tanks, flares, cooling towers, combustion sources, engines, maintenance startup and shutdown (MSS) and vents).<sup>49</sup> The 12-month rolling sums are listed on SARs every 6 months and compared to the

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<sup>44</sup> Applicant's Closing Argument at 10.

<sup>45</sup> EM Ex. 300 (Brewer Direct) at 39-40 (citing 30 TAC § 116.186(b)(4)(C) and 40 CFR. § 52.21(aa)(14)(i)(2005)).

<sup>46</sup> EM Ex. 300 (Brewer Direct) at 40. *See also* EM Ex. 307, which is the SAR for the BOP covering the period of July 1, 2012, through December 31, 2012. Since there are 12 individual 12-month rolling sums per year, Applicant has submitted SARs to TCEQ demonstrating compliance with the PALs in PAL6 for at least 72 separate 12-month periods since PAL6 was issued in August 2005 (*i.e.*, at least 6 years – 2007 through 2012 – with 12 periods per year).

<sup>47</sup> 40 CFR § 52.21(a)(a)(12)(i)(a)(2005); 30 TAC §116.186(c)(2)(2012).

<sup>48</sup> 40 CFR § 52.21(a)(a)(12)(i)(a)(2005); 30 TAC §116.186(c)(2)(2012); EM-302 at 18-19 (Applicant Permit 3452/PAL6, Special Condition 23).

<sup>49</sup> EM Ex. 300 (Brewer Direct) at 42.

PALs for each pollutant to verify compliance with the PALs.<sup>50</sup> Mr. Brewer testified that in accordance with the prescribed PAL6 monitoring and reporting requirements, Applicant has shown that its emissions have at all times been below the PAL6 emission caps since TCEQ issued PAL6 in August 2005.<sup>51</sup> Applicant's PAL6 compliance history of having never exceeded the PAL6 limit for any pollutant was confirmed by the ED.<sup>52</sup>

By contrast, Mr. Brewer explained that the AEIU reports are geared towards collecting consistent statewide data and are not prepared to demonstrate compliance with individual permits.<sup>53</sup> The emissions reported in the AEIUs are based on different emissions sources, monitoring, and calculation methods than those required for PAL6.<sup>54</sup> For example, Mr. Brewer stated that for flares, the AEIUs combined waste gas speciation from two different sample events without normalizing the weight percent resulted in a speciation greater than 100% of the waste gas flow. If this had not been done, the reported AEIU total mass emissions for the 12-month period would not have been greater than the emissions reported in the SARs for the PAL. Thus, Mr. Brewer emphasized that the AEIUs are not representative for purposes of determining PAL compliance.<sup>55</sup>

Further, with respect to the AEIUs for 2010 and 2011, which appear to exceed the PM PAL limit of 365.62 tpy, Mr. Brewer testified that “[t]he primary difference is because the PM emissions from the two cooling towers at the existing BOP were not included in the PAL baseline actual emission calculations.” At the time of the PAL application, the cooling towers’ PM emissions were not included in the underlying NSR permit authorizing the cooling towers. Therefore, they were not included in the PAL PM calculation. Most significantly, Mr. Brewer testified that “if the PM emissions from the cooling towers were included in the PM PAL

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<sup>50</sup> EM Ex. 302 at 18-19 (Applicant Permit 3452/PAL6, Special Condition 23); *see* EM-300 (Brewer Direct) at 40.

<sup>51</sup> EM Ex. 300 (Brewer Direct) at 45; Tr. at 290.

<sup>52</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 700.

<sup>53</sup> EM Ex. 300 (Brewer Direct) at 45.

<sup>54</sup> EM Ex. 300 (Brewer Direct) at 45-46

<sup>55</sup> EM Ex. 300 (Brewer Direct) at 46.

calculation, then the AEIUs would have been below the PAL.”<sup>56</sup> Moreover, Protestants presented no evidence that inclusion of cooling tower PM emissions in the SARs, when using appropriate monitoring and calculation methods, would result in exceeding the PM PAL.

The ED’s permit engineer, Mr. Virr, testified AEIUs are not used to determine compliance with any PAL:

Q. Mr. Clark-Leach had asked you about some emissions inventory reports that ExxonMobil has submitted with regard to the PAL. Do you know if the emissions inventory is used to determine compliance with the PAL?

A. **I don’t believe it is.**

Q. You don’t believe it is?

A. **No.**

Q. So if you were comparing the emissions inventory that—or any of the emissions inventories that have been submitted by ExxonMobil with regard to the PAL, that wouldn’t be a fair assessment of whether or not ExxonMobil has been in compliance with the PAL. Is that a fair statement?

A. **From my knowledge, yes.**

Q. Okay. Do you know what is used to determine compliance with the PAL limits?

A. **The semi-annual reports [SARs].**

Q. The semi-annual reports?

A. **From my understanding.**

Q. But not the emissions limits—the emissions inventories?

A. **No, I don’t believe the emissions inventories.**<sup>57</sup>

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<sup>56</sup> EM Ex. 300 (Brewer Direct) at 47.

<sup>57</sup> Protestants Ex. 106 at 101.

The ED also noted that emissions reported through the AEIUs “are not verified for accuracy or veracity by the ED ....”<sup>58</sup> For these reasons, the ED denied Protestants’ assertion that the combined PM emissions from all facilities at BOP have exceeded 365.62 tons during at least one 12-month period since September 1, 2005.<sup>59</sup>

According to Applicant, based on the testimony of Mr. Virr and Mr. Brewer, and the applicable TCEQ rules, the record shows that the SARs, not the AEIU emission inventories, are the prescribed means to determine compliance with Applicant’s PAL6 permit.<sup>60</sup> Applicant further argued it is undisputed that the SARS confirm that Applicant has never exceeded the PM PAL limit in PAL6.

***Cooling tower PM emissions not included in PM PAL or PAL compliance demonstrations***

Applicant further argued that the PM emissions from the BOP cooling towers included in AEIUs do not alter Applicant’s compliance status with the PM PAL for PAL6. Applicant explained that based upon TCEQ policy and guidance in effect when PAL6 was issued in 2005, TCEQ did not include cooling tower PM emissions in the PM baseline actual emission calculation used to establish the PM PAL,<sup>61</sup> which means that cooling tower PM emissions were not included in the establishment of the PM PAL in the MAERT in PAL6.<sup>62</sup> Correspondingly, the emission monitoring, recordkeeping, and reporting requirements established by TCEQ for PAL compliance determinations in PAL6, and the compliance demonstrations for the PM PAL, do not include the cooling tower PM emissions.<sup>63</sup>

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<sup>58</sup> Protestants Ex. 103 (ED’s Responses to Protestants’ Discovery Requests, Response to Interrogatory No. 1).

<sup>59</sup> Protestants Ex. 103 (ED’s Responses to Protestants’ Discovery Requests, Response to Interrogatory No. 1).

<sup>60</sup> Protestants Ex. 106 at 7, 26, 101.

<sup>61</sup> EM Ex. 300 (Brewer Direct) at 27.

<sup>62</sup> ED Ex. 36 (Response to Public Comment) Response 2 at 695.

<sup>63</sup> See EM Ex. 300 (Brewer Direct) at 15 (describing the similarity between EPA’s PAL monitoring requirements and the current TCEQ SIP-approved PAL rules monitoring requirements.)

Applicant pointed out that Section IV of the TCEQ cooling tower guidance in effect when the PAL was issued states, “Normally particulate matter emissions [from a cooling tower] are not listed on the permit [MAERT] and are a concern only when the cooling tower is located within 200 feet of an off-plant receptor.”<sup>64</sup> In accordance with that guidance, the cooling tower PM emissions were also not enumerated on the underlying NSR permit MAERT authorizing the cooling towers.<sup>65</sup> The ED asserted that it was a common permitting practice at the time PAL6 was issued not to include cooling tower PM emissions in determining the PM PAL to include in the MAERT.<sup>66</sup> Applicant noted that although Protestants are now scrutinizing how cooling tower PM emissions were evaluated during the issuance of PAL6 in 2005, it is worth reiterating that the cooling tower PM emissions were included in the PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS) analysis for the Application in this case and determined to be in compliance with the PM<sub>2.5</sub> NAAQS.

Applicant further pointed out that PAL6 was issued by TCEQ before the adoption of TCEQ’s PAL-specific rules in 30 Texas Administrative Code chapter 116, subchapter C in 2006, and emphasized that this must be kept in mind when considering Protestants’ comparisons of PAL6 to the subsequently adopted requirements of 30 Texas Administrative Code §116.186(a) regarding inclusion of all emission units at the source in the PM PAL.<sup>67</sup> Applicant further pointed out that 30 Texas Administrative Code §116.186(a) includes an exception to the requirement that the PAL include the emissions of all facilities at a major stationary source that emit the PAL pollutant. That section provides that the “PAL must include all emissions, including fugitive emissions, to the extent quantifiable, from all facilities or emissions units at a major stationary source ...” (emphasis added).<sup>68</sup> According to Applicant, when TCEQ issued PAL6 in 2005, the agency may have determined that the PM emissions from the cooling towers were not quantifiable in a way that would satisfy the rigorous monitoring requirements of the

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<sup>64</sup> EM Ex. 300 (Brewer Direct) at 48 (citing EM Ex. 309, *Air Quality Permit Technical Guidance for Chemical Sources*, Draft RG-108 (February 2001)).

<sup>65</sup> EM Ex. 300 (Brewer Direct) at 47.

<sup>66</sup> ED Ex. 36 (Response to Public Comment) Response 2 at 695; *see also* ED Ex. 18 (Virr Direct) at 17.

<sup>67</sup> *See* Section II.A.3, *infra*.

<sup>68</sup> EM Ex. 306 at 3 (30 TAC § 116.186(a)).

existing 2002 Final PAL Rule located at 40 CFR § 52.21(aa)(12)(i)(a). Concerns about the reliability of cooling tower PM emissions data may well have been the basis for TCEQ's policy at the time of not including these emissions in the MAERT. Whatever TCEQ's basis was at the time, Applicant insisted the agency's determination is not subject to second guessing in the context of this proceeding.

According to Applicant, TCEQ issued PAL6 in accordance with its SIP-approved rules in 30 Texas Administrative Code chapter 116, subchapter B, using the EPA's 2002 Final PAL Rule as guidance.<sup>69</sup> When PAL6 was issued by TCEQ, the EPA did not comment on the PM PAL (or any of the other PALs established by PAL6),<sup>70</sup> nor has the EPA expressed any concern about the use of the PM PAL (or any of the other PALs in PAL6) to make the major NSR applicability determination in this proceeding.<sup>71</sup>

Additionally, Applicant contended that PAL6 implements a compliance method that complies with both the 2002 Final PAL Rule and the TCEQ PAL regulations that have been approved by the EPA as part of Texas' SIP.<sup>72</sup> The compliance demonstration established in PAL6 has been carried forward into the agency's PAL rules, which specifically provide as follows with respect to PAL compliance:

For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source owner or operator shall demonstrate that the sum of the monthly emissions from each *facility under the PAL* for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly).<sup>73</sup>

Thus, the TCEQ PAL rules are clear that the compliance demonstrations only include emissions from the facilities "under the PAL." Since the cooling towers were not included in the

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<sup>69</sup> Tr. at 124-125.

<sup>70</sup> Tr. at 122, 299.

<sup>71</sup> EM Ex. 504.

<sup>72</sup> EM Ex. 300 (Brewer Direct) at 43.

<sup>73</sup> 30 TAC § 116.186(a) (emphasis added).

PM PAL, they should also not be included in the compliance demonstrations. Accordingly, for determining compliance with the PM PAL, TCEQ compares the PM emission calculations submitted in the SARs to the PM PAL.<sup>74</sup> Neither the SARs nor the PM PAL include the cooling tower PM emissions.<sup>75</sup>

In response to Applicant's contention that in accordance with TCEQ policy and practice when PAL6 was issued in 2005, TCEQ did not include cooling tower PM emissions to establish the PM PAL, or include the cooling tower PM emissions for PAL compliance demonstrations, Protestants argued that the very name of the permit—a plant-wide applicability limit—makes clear that the limit applies to all BOP PM emissions, including PM emissions from the cooling tower. Protestants also asserted that Applicant's reliance on the Commission's cooling tower guidance document as justification for the exclusion of cooling tower PM emissions from PAL6 compliance demonstrations is problematic because, according to Protestants, it does not apply to PAL permits. Additionally, Protestants contended that although PAL6 does not specify the monitoring method Applicant must use to calculate and report PM emissions from its combustion sources to demonstrate compliance with the PM PAL, Applicant nonetheless calculates and reports those emissions because the monitoring provisions in 30 Texas Administrative Code § 116.186 require it.<sup>76</sup> Correspondingly, according to Protestants, Applicant must do the same for its cooling tower PM emissions. Protestants argued that the fact that Applicant's PAL6 does not specify a method for monitoring cooling tower PM emissions is not a reason to exclude those emissions from compliance demonstrations for PAL6. Protestants claimed this is so because the Commission's PAL rules provide that "[f]ailure to use a monitoring system that meets the requirements of this section renders the PAL permit invalid." According to Protestants, this rule makes it clear that the fact that a PAL permit does not require

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<sup>74</sup> EM Ex. 300 (Brewer Direct) at 40.

<sup>75</sup> EM Ex. 300 (Brewer Direct) at 40, 52-53; Applicant has submitted a permitting action to TCEQ to update the PAL to include cooling tower PM emissions that is being evaluated as a separate matter. ED Ex. 36 (Response to Public Comment) Response 2 at 695. Once complete, this action will include the cooling tower PM emissions into PAL6 and incorporate special conditions for emission monitoring and calculation requirements that will include the cooling tower emissions in the compliance demonstration, maintaining the apples-to-apples comparison that currently exists. The proposed EPU will have to be operated in conformance with the PM PAL limit resulting from this alteration of PAL6. See EM Ex. 300 (Brewer Direct) at 52-53.

<sup>76</sup> EM Ex. 300 (Brewer Direct) at 32-33.

monitoring of emissions of PAL pollutants from a certain source does not excuse an applicant from monitoring and reporting those emissions to demonstrate PAL compliance.

In rebuttal, Applicant argued that Protestants' comparison of the combustion source PM emissions monitoring requirement in Special Condition 23.E. to the cooling tower PM emissions issue is an erroneous comparison for several reasons.<sup>77</sup> Unlike cooling tower PM emissions, all combustion sources were included in the PAL6 PM baseline emissions, and thus, were included in the determination of the PM PAL emissions.<sup>78</sup> For PM PAL compliance calculations, the combustion sources are determined based upon vendor data, AP-42 factors and stack tests, as allowed by the EPA and TCEQ PAL rules.<sup>79</sup> Mr. Brewer cited to the TCEQ rules as support for the approved method utilized by Applicant for determining combustion source PM emissions for PM PAL compliance demonstration purposes<sup>80</sup> – not as the basis for including combustion source PM emissions in establishing the PM PAL.<sup>81</sup>

***PAL6 is not subject to collateral attack***

In addition, Applicant argued that Protestants' complaints about PAL compliance in this proceeding in effect challenge TCEQ's 2005 issuance of the PALs in PAL6.<sup>82</sup> Applicant contended that if Protestants believe TCEQ did not establish the PM PAL in a legally-supportable manner, or that PAL6 does not establish legally-supportable provisions relating to demonstrations of compliance with the PM PAL, they should pursue a challenge in the proper

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<sup>77</sup> Protestants' Closing Argument at 16, n. 47.

<sup>78</sup> See EM Ex. 300 (Brewer Direct) at 27 (defining combustion sources at BOP as "furnaces, boilers, and gas turbines"); see also EM Ex. 303 at 51-53 (listing Combustion Sources in the PM section of the MAERT).

<sup>79</sup> See EM Ex. 306 at 6 (TCEQ PAL Rules); 30 TAC § 116.186(c)(3)(2012)(TCEQ-approved PAL monitoring methods); EM Ex. 305 at 43 (40 CFR § 52.21(aa)(12)(2005))(EPA-approved PAL monitoring methods).

<sup>80</sup> See Protestant's Closing Argument at 16 quoting Mr. Brewer (stating that "AP-42 emission factors, vendor guarantees, and stack tests *are the monitoring requirements...*")(emphasis in original). As stated in Mr. Brewer's direct testimony, the TCEQ rules were cited for simplicity instead of citing both the EPA and TCEQ PAL rules. EM Ex. 300 (Brewer Direct) at 40.

<sup>81</sup> Again, the TCEQ PAL Rules could not establish the basis for the PAL6 conditions since PAL6 was issued by TCEQ before the adoption of the TCEQ PAL rules.

<sup>82</sup> Protestants' Closing Argument at 16.

forum – this proceeding is not the proper forum. In the meantime, the PM PAL (and the rest of the PALs in PAL6) is valid and in effect and must be followed by Applicant.<sup>83</sup>

Applicant argued that all of its demonstrations of PAL compliance for the past 8 years have shown compliance with the PM PAL, and TCEQ has not issued any notices of noncompliance or initiated any enforcement actions for exceeding the PM PAL (or any of the other PALs).<sup>84</sup> The ED agrees that Applicant is in compliance with the PM PAL (and the other PALs),<sup>85</sup> and neither Protestants nor the ED supplied any evidence that TCEQ has ever found Applicant to be noncompliant with the PM PAL because it does not include cooling tower PM emissions in demonstrations of compliance with the PM PAL (or for any other reason). As discussed above, the ED's approval of Applicant's demonstrations of compliance with the PM PAL is consistent with §116.186(a) of the TCEQ's PAL rules.

Applicant urged that permits issued by administrative agencies remain valid unless the agency revokes the permit or a court determines in an independent proceeding that the permit is invalid.<sup>86</sup> It is well established that agency final orders are immune from collateral attack.<sup>87</sup> Regardless of whether cooling tower PM emissions should have been included in the PM PAL in 2005 (a proposition that Applicant denies), the PM PAL, and the rest of PAL6, remains valid to determine whether major NSR review is required for this permitting action. Moreover, the

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<sup>83</sup> EM Ex. 304 at 39 (40 CFR § 52.21(aa)(4)(f)(2005)); EM Ex. 302 at 4 (PAL6 Special Condition 6) (“The PALs are effective for 10 years after this permit is issued”).

<sup>84</sup> EM Ex. 300 (Brewer Direct) at 45, 47; Tr. at 289-290.

<sup>85</sup> ED Ex. 36 (Response to Public Comment) Responses 2 and 3 at 695, 697.

<sup>86</sup> TCEQ permits are final agency actions under the Administrative Procedure Act. Tex. Gov't Code § 2001.144. Challenges to final orders of administrative agencies require exhaustion of administrative remedies. Tex. Gov't Code § 2001.171. Protestants did not participate in TCEQ's issuance of PAL6, and thereby opted not to exhaust any remedies they may have had to TCEQ's issuance of PAL6. *See also* Tex. Health & Safety Code § 382.032 (requiring that an appeal of an agency decision such as the issuance of PAL6 be filed within 30 days of that decision).

<sup>87</sup> *See Friends of Canyon Lake, Inc. v. Guadalupe Blanco River Authority*, 96 S.W.3d 519, 532 (Tex. App.—Austin 2002, pet. denied) (holding that the Texas Natural Resource Conservation Commission's issuance of an amendment to a certificate of adjudication could not be collaterally attacked on the basis of alleged violations “as a matter of law” of the Open Meetings Act because administrative remedies had not been exhausted); *Mulvey v. Mobil Pro. Tx.*, 147 SW 3d 594, 602 (Tex.App.—Corpus Christi 2004, pet. denied) (holding that Railroad Commission permits could not be collaterally attacked even on the basis that alleged fraudulent misrepresentations led to the issuance of the permits).

methodology established by PAL6 for demonstrating that the PM PAL has not been exceeded, as supplemented by the PAL rules, must be followed by Applicant.

Protestants argued as a “matter of law” that the PAL rules require all sources of PM to be included in the PM PAL.<sup>88</sup> However, in 2005, when TCEQ established the PM PAL, TCEQ did not include cooling tower PM emissions in the PM PAL based upon agency guidance in effect at the time.<sup>89</sup> According to Applicant, this decision has not been challenged in a proper forum. Further, even if Protestants accurately assert that the issue of whether the cooling tower PM emissions should have been included in establishing the PM PAL is purely a question of law, Protestants cannot use the “pure legal question” as a basis to collaterally attack a TCEQ permit when the permit was issued based on the agency's interpretations of its own statutes and rules.<sup>90</sup>

Applicant contended that Texas case law supports TCEQ's issuance of PAL6 and its interpretation of compliance demonstration requirements for the PM PAL. Administrative agencies, including TCEQ, created to centralize expertise in a certain regulatory area, are to be given a large degree of latitude in the methods they use to accomplish their regulatory functions.<sup>91</sup> The agency's construction of its rules is controlling unless it is plainly erroneous or inconsistent.<sup>92</sup> Deference is also given to TCEQ's policy determinations.<sup>93</sup> TCEQ's interpretation that the PM PAL compliance demonstration is not required to include cooling tower PM emissions is reasonable (particularly since the cooling tower PM emissions were not included in the PM PAL baseline and TCEQ PAL rules at 30 Texas Administrative Code § 116.186(a) provide for only the inclusion of emissions from facilities under the PAL in PAL compliance demonstrations); therefore, TCEQ's interpretation is permissible.<sup>94</sup>

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<sup>88</sup> Protestants Closing Argument at 13.

<sup>89</sup> See Tr. at 287.

<sup>90</sup> *Rawls v. Tex. Comm'n on Env'tl. Quality*, No. 11-05-00368-cv at 4-5, Lexis 5013, 2007 WL 1849096 (Tex.App.—Eastland 2007, no pet.), citing *Friends of Canyon Lake*, 96 S.W.3d at 528.

<sup>91</sup> *Phillips Pet. Co. v. Tex. Comm'n on Env'tl. Quality*, 121 S.W.3d 502, 507 (Tex.App.—Austin 2003, no pet.).

<sup>92</sup> *Phillips Pet. Co. v. Tex. Comm'n on Env'tl. Quality*, 121 S.W.3d 502, 507 (Tex.App.—Austin 2003, no pet.); *Blue Skies Alliance v. Tex. Comm'n on Env'tl. Quality*, 283 S.W.3d 525, 531 (Tex.App.—Amarillo 2009, no pet.).

<sup>93</sup> *Phillips*, 121 S.W.3d at 508.

<sup>94</sup> See *Phillips*, 121 S.W.3d at 508.

Moreover, Applicant argued that this contested case hearing before SOAH is not the proper forum for questioning TCEQ's issuance of the PM PAL or interpretations related to it (or other PALs in PAL6). The only relevant issue regarding PAL6 in this proceeding is whether Applicant has demonstrated in accordance with TCEQ requirements that it can operate the proposed EPU within the PAL caps. Applicant contended that it has shown that it can and will. Applicant has represented that it will operate the proposed EPU below the PALs even if it has to reduce emissions from other existing sources, including the cooling towers.<sup>95</sup> Thus, Protestants' argument is beyond the scope of this proceeding.

***Applicant's PAL compliance history is persuasive that Applicant will operate the EPU within the PAL limits***

Mr. Brewer testified that Applicant can and will operate the new facilities that comprise the proposed EPU under its PAL caps.<sup>96</sup> He noted that Applicant has successfully added emissions from new facilities or activities to the BOP in the past without exceeding the PALs, and used the addition of planned maintenance startup and shutdown emissions in 2011 as an example.<sup>97</sup> He also provided examples of emission reductions that could be implemented at BOP, if necessary, to create room under the PM PAL and VOC PAL for the PM and VOC emissions resulting from the new facilities at the proposed EPU.<sup>98</sup> Thus, the record demonstrates that Applicant will follow the permit requirements and take whatever action is necessary to comply with its PALs.<sup>99</sup>

According to the ED, as a holder of a PAL, Applicant is afforded by the federal PAL rules a degree of operational flexibility to manage emissions from sources located at its site.<sup>100</sup> PAL6 provides Applicant with operational flexibility to decide how best to manage emissions

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<sup>95</sup> EM Ex. 300 (Brewer Direct) at 51-53 (operational flexibility necessary to operate under a PAL cap exactly the approach envisioned by the PAL concept).

<sup>96</sup> EM Ex. 300 (Brewer Direct) at 52.

<sup>97</sup> EM Ex. 300 (Brewer Direct) at 50-51.

<sup>98</sup> EM Ex. 300 (Brewer Direct) at 50-51.

<sup>99</sup> EM Ex. 300 (Brewer Direct) at 51-53.

<sup>100</sup> ED's Closing Argument at 4.

from sources at the site so long as there are emission reductions elsewhere that result in the total emissions of a PAL pollutant not exceeding the site-wide limits in the PAL. Thus, the ED concluded that the Application, as submitted and supplemented by Applicant, complied with all applicable state and federal regulations, and the emissions from the proposed EPU are within the PAL6 PAL limits at the BOP.

## 2. ALJs' Analysis and Conclusion

The ALJs find the evidence and arguments presented by Applicant and the ED most persuasive. Based on the entirety of the record evidence, the ALJs conclude that Applicant has demonstrated that emissions from the BOP have not exceeded the PM PAL limit in PAL6. Accordingly, the ALJs also conclude that Applicant has demonstrated by a preponderance of the evidence, corroborated by the ED, that based upon compliance with PAL6, the ED properly evaluated and processed the Application as a minor NSR permit. The ALJs further conclude, based on the authorities cited by Applicant, that Protestants' challenges are, in major part, an impermissible collateral attack on the validity of the Commission's final order issuing the PAL6 permit 8 years ago.<sup>101</sup> In reaching these conclusions the ALJs have made the following specific findings:

- In accordance with the prescribed PAL6 monitoring and reporting requirements, Applicant has shown that its emissions have never exceeded the PAL6 emission limits for any pollutant.
- The emissions reported in the AEIUs are based on different emission sources, monitoring, and calculation methods than those required for PAL6 compliance demonstrations.
- The AEIU annual reports are not accurate or representative for purposes of determining PM PAL compliance.
- With regard to the AEIUs for 2010 and 2011, which appear to exceed the PM PAL limit for PAL6, if the PM emissions from the cooling towers were included in the PAL calculation, the AEIUs would be below the PM PAL limit.

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<sup>101</sup> Tr. at 122, 299.

- The SARs, rather than the AEIU emission inventories, are the prescribed means to determine compliance with Applicant's PAL6 in accordance with TCEQ rules and the terms of the permit.
- Based upon TCEQ policy and guidance in effect when PAL6 was issued, cooling tower PM emissions were not in the PM baseline emission calculation used to establish the PM PAL.
- In accordance with prescribed monitoring and reporting requirements for PAL6 compliance determinations, the compliance demonstrations for PM PAL do not include cooling tower PM emissions.
- There is no evidence demonstrating that the addition of cooling tower PM emissions to the SARs, based on monitoring and calculation methods used to determine PM emissions for SAR purposes, would result in exceeding the PM PAL limit in PAL6.
- All of Applicant's demonstrations of PAL6 compliance for the past 8 years have shown compliance with the PM PAL.
- Administrative agencies, including TCEQ, are to be given a large degree of latitude in the methods they use to accomplish their regulatory function.
- Protestants cannot collaterally attack a TCEQ permit when the permit was issued based on the agency's interpretations of its own statutes and rules.
- PAL6, including the PM PAL, is not subject to collateral attack in this administrative proceeding.
- Permits issued by TCEQ remain valid unless the agency revokes the permit or a court determines in an independent proceeding that the permit is invalid.
- TCEQ final orders are immune from collateral attack.

**B. Whether PAL6 Contains a PM<sub>10</sub> PAL and PM<sub>2.5</sub> PAL**

**1. Evidence and Argument**

Applicant and the ED argued that PAL6 includes PALs for PM, PM<sub>10</sub> and PM<sub>2.5</sub>. Protestants disagree.<sup>102</sup>

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<sup>102</sup> See ED Ex. 36 (Response to Public Comment) Response 5 at 699; EM Ex. 123 at 15 ("Applicant is required to operate within the existing PM PAL limit, which includes the subsets PM<sub>2.5</sub> and PM<sub>10</sub> as indicator pollutants for

According to Applicant, consistent with TCEQ practice at the time, the PM PAL limit included PM and PM<sub>10</sub> in the same permit limit line, but addressed PM and PM<sub>10</sub> as separate pollutants.<sup>103</sup> As noted on the face of the PAL6 MAERT, PM includes both PM and PM<sub>10</sub>.<sup>104</sup> Applicant explained that listing PM and PM<sub>10</sub> together served a practical purpose because PM<sub>10</sub> is included in total PM.<sup>105</sup> Applicant additionally contended the fact that TCEQ used the FCAA significant emission rate level of 15 tpy for PM<sub>10</sub> when setting the PM PAL limit instead of the PM significant emission rate (SER) of 25 tpy, confirms that PM<sub>10</sub> was intentionally included in the PM PAL.<sup>106</sup>

With respect to PM<sub>2.5</sub>, Applicant explained that TCEQ relied upon EPA's PM<sub>10</sub> Surrogate Policy (PM<sub>10</sub> Surrogate Policy).<sup>107</sup> TCEQ issued the PAL6 PM PAL in 2005 when the EPA 1997 PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub> was in effect.<sup>108</sup> The PM PAL calculation included both PM<sub>10</sub> and PM<sub>2.5</sub> emissions from then-existing facilities at BOP.<sup>109</sup> Once established under the PM<sub>10</sub> Surrogate Policy, the PM PAL limit serves as a PM<sub>10</sub> and PM<sub>2.5</sub> federal applicability limit for 10 years.<sup>110</sup> Applicant argued there is no dispute that the PM<sub>10</sub> Surrogate Policy is not

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PM"); Protestants Ex. 103 at 17 (ED's Responses to Protestants' Written Discovery Requests, Response to Interrogatory No. 22)(“PAL6 was issued in 2005 in accordance with reliance on EPA's PM<sub>10</sub> Surrogacy [sic] Policy, as was appropriate for PM<sub>10</sub> sources at that time); ED's Closing Argument at 4 (“When PAL6 was established, using available PM<sub>10</sub> data was an appropriate surrogate for PM<sub>2.5</sub>”).

<sup>103</sup> Tr. at 299-300.

<sup>104</sup> EM Ex. 302 at 53, 60 (ExxonMobil Permit 3452/PAL6, PM PAL).

<sup>105</sup> See *National Ambient Air Quality Standards for Particulate Matter*, 62 Fed. Reg. 38653 (July 18, 1997)(defining particulate matter as “the generic term for a broad class of chemically and physically diverse substances that exist in discrete particles (liquid droplets or solids) over a wide range of sizes”).

<sup>106</sup> Tr. at 304; See EM Ex. 305 at 9 (40 CFR § 52.21(b)(23)(i)(2005)) (defining “significant” in the 2005 federal regulations for SERs in PSD and NSR permitting).

<sup>107</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699.

<sup>108</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699; Protestants Ex. 103 at 17 (ED's Responses to Protestants' Written Discovery Requests (Response to Interrogatory No. 22)); Tr. at 310; see also Protestants Ex. 107 (EPA Memorandum from John S. Seitz, *Interim Implementation of New Source Review for PM<sub>2.5</sub>*, Oct. 23, 1997).

<sup>109</sup> See EM Ex. 107 at 3-4 (December 5, 2012 email response from Ben Hurst at ExxonMobil to Mr. Virr at TCEQ detailing the PM, PM<sub>10</sub>, and PM<sub>2.5</sub> calculations used to calculate the PAL baseline).

<sup>110</sup> EM Ex. 302 at 4 (ExxonMobil Permit 3452/PAL6, Special Condition 6); EM Ex. 304 at 25 (2002 Final PAL Rule, 67 Fed. Reg. at 80209); EM Ex. 305 at 38 (40 CFR § 52.21(aa)(1)(vii)(2005)); EM Ex. 306 at 15 (30 TAC § 116.198(a)(2013)).

available for new applications today,<sup>111</sup> or that the EPU Permit Application at issue in this case does not rely on the PM<sub>10</sub> Surrogate Policy to authorize PM<sub>2.5</sub> emissions for the new EPU facilities.<sup>112</sup> Applicant claimed it is also clear that permitting actions for existing permits already issued and effective, such as PAL6, were not impacted by the end of the PM<sub>10</sub> Surrogate Policy.<sup>113</sup>

The ED recognized that the PM<sub>10</sub> Surrogate Policy was required in 2005 to establish the PAL for PM<sub>2.5</sub>.<sup>114</sup> Reading from the 1997 EPA memo implementing the PM<sub>10</sub> Surrogate Policy, Mr. Virr quoted a passage in which EPA recognized it was “administratively impracticable at this time to require sources and state permitting authorities to attempt to implement PSD permitting for PM<sub>2.5</sub>.”<sup>115</sup> Accordingly, EPA directed the state permitting authorities, including TCEQ, to use the PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub> in all PSD permitting, which by definition also includes the PSD PAL regulations in 40 CFR § 52.21(aa).<sup>116</sup>

Applicant asserted that not only did EPA guidance instruct permitting authorities to use the PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub> emissions, but EPA also declined to promulgate any PM<sub>2.5</sub> regulations for NSR until 2008.<sup>117</sup> Therefore, until EPA finalized PM<sub>2.5</sub> regulations, applicants used the PM<sub>10</sub> significant emission rates as the surrogate for PM<sub>2.5</sub> in air permit applications.<sup>118</sup>

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<sup>111</sup> Tr. at 312, 314.

<sup>112</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699-700. (“Permit 102982 is a new permit to construct an ethylene plant and the TCEQ did not rely on the PM<sub>10</sub> Surrogacy [sic] Policy during its technical review to establish the PM<sub>2.5</sub> limits contained in the Final Draft Permit”).

<sup>113</sup> See 2011 PM<sub>2.5</sub> Rule, 76 Fed. Reg. at 28654/2-3 (end of the PM<sub>10</sub> Surrogate Policy did not create a new basis to argue previously issued permits not properly issued).

<sup>114</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699. (PM PAL includes subsets PM<sub>2.5</sub> and PM<sub>10</sub> as indicator pollutants for PM).

<sup>115</sup> Tr. at 271.

<sup>116</sup> See EM Ex. 305 (40 CFR § 52.21(aa)(2005))(federal PAL regulations included in Part 52 PSD rules).

<sup>117</sup> 2008 PM<sub>2.5</sub> Rule, 73 Fed. Reg. at 28321.

<sup>118</sup> Tr. at 304.

When PM<sub>2.5</sub> NSR permitting standards were established in 2008, EPA implemented a “grandfather policy” as a transition to end the PM<sub>10</sub> Surrogate Policy.<sup>119</sup> The grandfather policy allowed sources with *pending* permit applications to continue to use the PM<sub>10</sub> Surrogate Policy.<sup>120</sup> Significantly, EPA did not retroactively invalidate or in any way require a retroactive review of the PM<sub>10</sub> Surrogate Policy for permit actions already completed and issued prior to the 2008 PM<sub>2.5</sub> rules. When ending the PM<sub>10</sub> Surrogate Policy for pending applications, EPA explicitly stated that permits issued pursuant to the PM<sub>10</sub> Surrogate Policy would continue to remain valid:

Neither EPA’s repeal of the grandfather provision nor its ending of the 1997 PM<sub>10</sub> Surrogate Policy in SIP-approved states changes the defensibility of a source’s previous reliance on the 1997 PM<sub>10</sub> Surrogate Policy. Put another way, repeal of the grandfather provision and the ending of the 1997 PM<sub>10</sub> Surrogate Policy does not create a new basis for arguing that the permit was not properly issued.<sup>121</sup>

Thus, Applicant concluded that the end of the PM<sub>10</sub> Surrogate Policy for permit applications did not retroactively alter the validity of permits already issued.

According to Applicant, EPA contemplated that permitting authorities would be required to review and approve new facilities built or modified during the term of the PAL permit.<sup>122</sup> The preamble to the 2002 Final PAL Rule stated that changes under the PAL permit would be adequately reflected in the air quality analysis by the permitting authority when evaluating the new facilities during the term of the PAL permit.<sup>123</sup> Applicant contended that the ED did just that for the new EPU facilities considered under PAL6. For purposes of the Application, the ED evaluated PM<sub>2.5</sub> for BACT, for compliance with the PM<sub>2.5</sub> NAAQS and for all other TCEQ

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<sup>119</sup> 2008 PM<sub>2.5</sub> Rule, 73 Fed. Reg. at 28340-28342.

<sup>120</sup> 2008 PM<sub>2.5</sub> Rule, 73 Fed. Reg. at 28340-28342.

<sup>121</sup> See 2011 PM<sub>2.5</sub> Rule, 76 Fed. Reg. at 28654/2-3.

<sup>122</sup> See EM Ex. 302 at 4 (ExxonMobil Permit 3452/PAL6, Special Condition 6)(requiring state authorization prior to the operation of any new facilities at the site).

<sup>123</sup> EM Ex. 304 at 38 (2002 Final PAL Rule, 67 Fed. Reg. at 80222).

minor NSR permitting requirements, while utilizing the PM PAL for federal applicability purposes.<sup>124</sup>

Protestants challenged Applicants' and ED's position asserting that EPA's PM<sub>10</sub> Surrogate Policy cannot be used to avoid major NSR requirements for PM<sub>10</sub> or PM<sub>2.5</sub> because: (1) the PM<sub>10</sub> Surrogate Policy has been unequivocally rescinded and terminated; (2) Applicant does not have a PM<sub>10</sub> PAL; (3) the PM<sub>10</sub> Surrogate Policy was not applied to issue Applicant's PAL6 permit; and (4) the PM<sub>10</sub> Surrogate Policy, even when it was in effect, only applied to preconstruction permits, and never to PALs.<sup>125</sup> Applicant and the ED disagree.

Mr. Powers testified that the PM<sub>10</sub> Surrogate Policy was established by EPA before EPA promulgated its PAL rule and there is no evidence that EPA ever meant for the policy to apply to PALs.<sup>126</sup> According to Mr. Powers the PM<sub>10</sub> Surrogate Policy was not applied to issue Applicant's PAL, the policy never applied to PALs, thus the policy may not be applied in this case to determine whether PM<sub>10</sub> and PM<sub>2.5</sub> PSD apply to the EPU project.<sup>127</sup> Protestants contended that neither Applicant nor the ED presented any evidence contradicting Mr. Powers' testimony; therefore, they failed to prove that the PM Surrogate Policy applies to the facts of this case.

In rebuttal, Applicant presented five arguments that are discussed below.

***First, the PM<sub>10</sub> Surrogate Policy can be used for major NSR applicability determinations***

Applicant argued that in more than 100 pages of the 2002 Final PAL Rule *Federal Register* preamble, EPA never implied nor hinted that the PM<sub>10</sub> Surrogate Policy could not be

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<sup>124</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699-700; *see* EM Ex. 100 (Parmley Direct) at 127-136.

<sup>125</sup> Protestants Closing Argument at 18-24; Protestants Ex. 100 (Powers Direct) at 40-44, 50-55.

<sup>126</sup> Protestants Ex.100 (Powers Direct) at 54-55.

<sup>127</sup> Protestants Ex.100 (Powers Direct) at 43-55.

used for major source applicability determinations, including PALs.<sup>128</sup> In fact, EPA confirmed in the 2008 PM<sub>2.5</sub> Rule that using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> was appropriate for applicability determinations because an applicability determination for PM<sub>10</sub> would likely be the same applicability determination for PM<sub>2.5</sub>.<sup>129</sup> Further, the PM<sub>10</sub> Surrogate Policy memorandum states that “no new or modified major source may be constructed without a PSD permit. . . Hence, this memorandum addresses how to implement PSD for PM<sub>2.5</sub>...”<sup>130</sup> Moreover, Applicant argued that an exception to the PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub> applicability determinations would have required explanation and guidance by EPA to instruct the states on how to evaluate PM<sub>2.5</sub> applicability determinations – particularly without the PM<sub>2.5</sub>-specific NSR regulatory provisions such as the SER which was not promulgated by EPA when the PAL was issued in 2005 – and Protestants have not identified any EPA guidance that states that the Surrogate Policy did not apply to applicability determinations.

***Second, reliance upon EPA’s 1997 PM<sub>10</sub> Surrogate Policy memorandum was appropriate in 2005 when TCEQ issued PAL 6***

Applicant argued that EPA’s proposed repeal of the PM<sub>10</sub> Surrogate Policy grandfather provision in 2010 acknowledged that prior reliance on EPA’s 1997 PM<sub>10</sub> Surrogate Policy was allowed without further demonstration by an applicant that PM<sub>10</sub> was a reliable surrogate for

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<sup>128</sup> EM Ex. 304 (2002 Final PAL Rule), 67 Fed. Reg. 80186 (December 31, 2002).

<sup>129</sup> See Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>), 73 Fed. Reg. 28321, 28341/1 (May 16, 2008)(2008 PM<sub>2.5</sub> Rule)(listing reasons why SIP-approved states could continue to rely upon the PM<sub>10</sub> Surrogate Policy to demonstrate compliance with the PM<sub>2.5</sub> NAAQS); Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards, 70 Fed. Reg. 65984, 66044/3 (November 1, 2005)(2005 PM<sub>2.5</sub> Proposal)(explaining the EPA’s PM<sub>2.5</sub> regulatory proposal after PAL 6 was issued that would continue to implement the PM<sub>10</sub> Surrogate Policy. This proposal was confirmed in the 2008 PM<sub>2.5</sub> Rule).

<sup>130</sup> See Protestants Ex. 107 at 1 (1997 PM<sub>10</sub> Surrogate Policy Memorandum).

PM<sub>2.5</sub>.<sup>131</sup> Using PM<sub>10</sub> as a Surrogate for PM<sub>2.5</sub> was a recognized TCEQ policy for permits issued in 2005, prior to the end of the PM<sub>10</sub> Surrogate Policy.<sup>132</sup>

According to Applicant, the ED confirmed that, in 2005, TCEQ relied on EPA's 1997 PM<sub>10</sub> Surrogate Policy memorandum for permits with PM<sub>2.5</sub> emissions.<sup>133</sup> Therefore, when PAL6 was issued in 2005, TCEQ relied upon EPA guidance regarding the PM<sub>10</sub> Surrogate Policy.<sup>134</sup> Due to the absence of PM<sub>2.5</sub> major NSR regulations, in 2005 TCEQ could only evaluate PM<sub>2.5</sub> emissions under the PM<sub>10</sub> Surrogate Policy. TCEQ appropriately relied on the federal PM<sub>10</sub> Surrogate Policy memorandum in making federal applicability determinations, including issuance of PAL6.

In 2005, when PAL6 was issued, there were no federal PSD rules in place to evaluate PM<sub>2.5</sub> as a major modification. Specifically, 40 CFR § 52.21(b)(23), which defines "significant" for applicability determination purposes, did not even list PM<sub>2.5</sub> in 2005.<sup>135</sup> Applicant contended that if, as alleged by Protestants, the PM<sub>10</sub> Surrogate Policy were not allowed for PM<sub>2.5</sub> in

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<sup>131</sup> See 2010 PM<sub>2.5</sub> Proposal. When EPA initially issued the 1997 PM<sub>10</sub> Surrogate Policy, "[EPA] did not identify criteria to be applied before the policy could be used for satisfying PM<sub>2.5</sub> requirements." In other words, EPA recognized that reliance on the PM<sub>10</sub> Surrogate Policy memorandum alone was sufficient for applicants to demonstrate that PM<sub>10</sub> was a reliable surrogate for PM<sub>2.5</sub>. But, as discussed in this preamble, court decisions and advances in PM<sub>2.5</sub> analysis moved EPA to push for additional demonstrations when new applicants seek to rely on the PM<sub>10</sub> Surrogate Policy.

<sup>132</sup> See *In re White Stallion Energy Center, LLC* (SOAH Docket No. 582-09-3008; TCEQ Docket No. 2009-0283-AIR) Proposal for Decision at 26 (summarizing the evolution of the PM<sub>10</sub> Surrogate Policy requirements over time for air permit applications and recognizing that the Commission's actions at the time reflected that a demonstration of compliance with the PM<sub>10</sub> NAAQS demonstrated compliance with the PM<sub>2.5</sub> NAAQS).

<sup>133</sup> See EM Ex. 123 at 15 (ED's Response to Public Comment) Response 5 at 699-700. ("Applicant is required to operate within the existing PM PAL limit, which includes the subsets PM<sub>2.5</sub> and PM<sub>10</sub> as indicator pollutants for PM"); Protestants Ex. 103 at 17 (ED's Responses to Protestants' Written Discovery Requests, Response to Interrogatory No. 22)("PAL6 was issued in 2005 in accordance with reliance on EPA's PM<sub>10</sub> Surrogacy [sic] Policy, as was appropriate for PM<sub>10</sub> sources at that time"); ED's Closing Argument at 4 ("When PAL6 was established, using available PM<sub>10</sub> data was an appropriate surrogate for PM<sub>2.5</sub>").

<sup>134</sup> See EM Ex. 123 at 15 (ED's Response to Public Comment) Response 5 at 699-700. ("Applicant is required to operate within the existing PM PAL limit, which includes the subsets PM<sub>2.5</sub> and PM<sub>10</sub> as indicator pollutants for PM"); Protestants Ex. 103 at 17 (ED's Responses to Protestants' Written Discovery Requests, Response to Interrogatory No. 22)("PAL6 was issued in 2005 in accordance with reliance on EPA's PM<sub>10</sub> Surrogacy [sic] Policy, as was appropriate for PM<sub>10</sub> sources at that time"); ED's Closing Argument at 4 ("When PAL6 was established, using available PM<sub>10</sub> data was an appropriate surrogate for PM<sub>2.5</sub>").

<sup>135</sup> See EM Ex. 305 at 9 (40 CFR § 52.21(b)(23)(2005)).

applicability determinations, that would render the entire PM<sub>10</sub> Surrogate Policy useless as further explained in the following paragraph.

The federal PSD rules provide that a project at an existing source is only a “major modification”<sup>136</sup> if the project results in a “significant emissions increase.”<sup>137</sup> “Significant emissions increase” is defined by the regulatory levels listed in the defined term “significant.” In 2005, the term “significant” did not list PM<sub>2.5</sub>.<sup>138</sup> Therefore, if PM<sub>2.5</sub> does not have a SER in 40 CFR § 52.21(b)(23)(i) to define when an emission increase is “major” for purposes of federal NSR review, then PM<sub>2.5</sub> would have been subject to 40 CFR § 52.21(b)(23)(ii) in 2005 (or at any time during the PM<sub>10</sub> Surrogate Policy prior to the 2008 PM<sub>2.5</sub> Rule) which mandates that any increase of PM<sub>2.5</sub>, no matter how small, is subject to federal NSR review and associated BACT, modeling, and impacts assessment under major NSR permitting requirements.<sup>139</sup> In other words, if, as Mr. Powers contends, the PM<sub>10</sub> Surrogate Policy was not used in applicability determinations, then any net emission increase of PM<sub>2.5</sub> would have been a “major modification.” According to Applicant, this runs contrary to the plain language of the PM<sub>10</sub> Surrogate Policy memorandum which stated “EPA believes that it is administratively impracticable at this time to require sources and State permitting authorities to attempt to implement PSD permitting for PM<sub>2.5</sub>.”<sup>140</sup>

***Third, issuance of the 2005 PM, PM<sub>10</sub> and PM<sub>2.5</sub> PAL in PAL6 is not subject to review in this proceeding***

Applicant argued that in 2005, the ED issued valid PM, PM<sub>10</sub> and PM<sub>2.5</sub> PALs based upon the regulations in place at the time of issuance. Protestants point to no authority that

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<sup>136</sup> See EM Ex. 305 at 4 (40 CFR § 52.21(b)(2)(1)).

<sup>137</sup> See EM Ex. 305 at 12 (40 CFR § 52.21(b)(40)).

<sup>138</sup> See EM Ex. 305 at 9 (40 CFR § 52.21(b)(23)).

<sup>139</sup> See EM Ex. 305 at 9 (40 CFR § 52.21(b)(23)(ii)) (“*Significant* means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section, does not list, *any emissions rate.*”) (emphasis added).

<sup>140</sup> Protestants Ex. 107 at 2 (1997 PM<sub>10</sub> Surrogate Policy Memorandum).

requires prior permits or applicability determinations to be revisited or revised 8 years after issuance.<sup>141</sup>

The ED,<sup>142</sup> the PAL6 permit,<sup>143</sup> and Applicant's PAL expert, Mr. Brewer, all state that PAL6 includes a PM<sub>10</sub> PAL.<sup>144</sup> Thus, Applicant argued that PAL6 established a valid PM<sub>10</sub> PAL in 2005 which is not subject to collateral attack in this proceeding. Mr. Powers' sole basis for arguing that it is not a PM<sub>10</sub> PAL is that PM and PM<sub>10</sub> are separately regulated pollutants.<sup>145</sup> However, Mr. Powers provided no reason why PM and PM<sub>10</sub> cannot be included in the same permit line-item cap for PM. At the heart of Mr. Powers' assertion is a collateral attack on the calculation and issuance of PAL6. PAL6, in compliance with 2005 PSD regulations, used the PM<sub>10</sub> Significant Emission Rate (SER) of 15 tons per year instead of the PM SER of 25 tons per year<sup>146</sup> which demonstrates that PM<sub>10</sub> was intentionally included in the PM PAL. The use of the PM<sub>10</sub> SER of 15 tons per year also establishes a more restrictive and lower PAL limit than would be allowed with the use of the PM SER of 25 tons per year.<sup>147</sup>

EPA established the PM<sub>10</sub> Surrogate Policy to serve as an interim measure for PM<sub>2.5</sub> applicability determinations. The ED issued the PAL6 PM limit in 2005 in compliance with the PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub>. According to Applicant, the information provided to TCEQ in support of the PM PAL for the current Application supports that regulatory determination. As part of the Application, Applicant provided the ED with a breakdown of the PM subsets included

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<sup>141</sup> Neither the ED nor Applicant rely on the PM<sub>10</sub> Surrogate Policy for issuance of Permit No. 102982, but rather conducted a full PM<sub>2.5</sub> NAAQS analysis for the Application.

<sup>142</sup> ED Ex. 36 (Response to Public Comment) Response 5 at 699.

<sup>143</sup> EM Ex. 302 at 53, 60 (defining PM as "particulate matter, suspended in the atmosphere, including PM<sub>10</sub>").

<sup>144</sup> Tr. at 299-300.

<sup>145</sup> Protestants Ex. 100 (Powers Direct) at 43.

<sup>146</sup> Mr. Powers incorrectly refers to a PM SER of 20 instead of 25. See EM Ex. 305 at 9 (40 CFR § 52.21(b)(23)(i)(2005))(listing 25 as the PM SER in 2005); cf. Protestants Ex. 100 Powers Direct) at 44(listing 20 as the PM SER).

<sup>147</sup> See *In Re BP Cherry Point*, 12 E.A.D. 209, 223 (EAB 2005)(affirming as appropriate consideration of all PM as PM<sub>10</sub>, and all PM<sub>2.5</sub> as PM<sub>10</sub>, and that, "by assuming that all PM emissions would be PM<sub>10</sub> and that all PM<sub>10</sub> would be PM<sub>2.5</sub>, it performed a more conservative analysis, not a more lenient one").

in the PM PAL baseline calculation.<sup>148</sup> This calculation was based upon EPA's AP-42 factors and included total particulate matter emissions, PM<sub>10</sub>, and PM<sub>2.5</sub>. In short, the PM<sub>2.5</sub> emissions represented 99.54% of the PM PAL baseline calculations. Converted into tons per year, the PM<sub>2.5</sub> emissions in the PM PAL baseline totaled approximately 363.93 tons per year of the 365.62 tons per year PM PAL.<sup>149</sup>

Although the issuance of PAL6 in 2005 is not currently subject to challenge, Applicant argued that if a collateral review of the 2005 PM PAL is performed, the PAL6 PM calculations confirm EPA's basic regulatory premise that PM<sub>10</sub> served as an appropriate surrogate for PM<sub>2.5</sub>. This is demonstrated by the fact that if the PAL were calculated as a PM<sub>2.5</sub> PAL, the final PM<sub>2.5</sub> applicability limit (which is about 99% of the PM PAL) would have been essentially the same as the current 365.62 tons per year PAL6 PM limit. Therefore, the PM PAL numerical limit for the proposed EPU unit under the PM<sub>2.5</sub> PAL would be virtually unchanged from the current PM PAL cap.

***Fourth, the end of the PM<sub>10</sub> Surrogate Policy did not invalidate previously issued permits<sup>150</sup>***

PAL6 includes an effective date of 10 years and the end of the 1997 PM<sub>10</sub> Surrogate Policy in SIP-approved states did not change the "defensibility of a source's previous reliance on the 1997 PM<sub>10</sub> Surrogate Policy,"<sup>151</sup> Applicant noted. Existing permits previously issued under the PM<sub>10</sub> Surrogate Policy were addressed in the final rule to repeal the PM<sub>2.5</sub> grandfather provision:

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<sup>148</sup> EM Ex. 107 at 3-4 (Applicant's Response to Requests for Information).

<sup>149</sup> EM Ex. 107 at 2-3 (multiplying the current PM<sub>2.5</sub> PAL of 365.62 tpy by the 99.54% estimated PM<sub>2.5</sub> emissions)(EM Ex. 107 at 2 includes 98.54% as the conservative assumption utilizing historic PM<sub>2.5</sub> data for decoking emissions which would equal an estimated 360.28 tpy for the PAL PM limit).

<sup>150</sup> Implementation of the New Source Review Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>); Final Rule to Repeal Grandfather Provision, (2011 PM<sub>2.5</sub> Rule), 76 Fed. Reg. 28646, 28654/2-3 (May 18, 2011).

<sup>151</sup> Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>); 2011 PM<sub>2.5</sub> Rule, 76 Fed. Reg. 28646, 28654/2-3 (May 18, 2011).

Neither EPA's repeal of the grandfather provision nor its ending of the 1997 PM<sub>10</sub> Surrogate Policy in SIP-approved states changes the defensibility of a source's previous reliance on the 1997 PM<sub>10</sub> Surrogate Policy. Put another way, repeal of the grandfather provision and the ending of the 1997 PM<sub>10</sub> Surrogate Policy does not create a new basis for arguing that the permit was not properly issued.<sup>152</sup>

EPA's statement confirms that the end of the PM<sub>10</sub> Surrogate Policy did not invalidate previously issued permits. Thus, Protestants' contention that EPA, or SIP-approved states, are required to reopen existing permits or modify pre-existing permit decisions based upon the PM<sub>10</sub> Surrogate Policy, is without merit.

***Fifth, upon renewal, Applicant is required to resubmit all PAL calculations to TCEQ***<sup>153</sup>

At renewal, the ED will require that Applicant evaluate any new regulatory requirements that were implemented during the term of the PAL.<sup>154</sup> The TCEQ PAL renewal regulations actually require a recalculation<sup>155</sup> of each PAL limit which upon renewal will include PM, PM<sub>10</sub>, and PM<sub>2.5</sub> without the use of the PM<sub>10</sub> Surrogate Policy. As discussed above, over 99% of PM in the PM PAL is PM<sub>2.5</sub>.<sup>156</sup> Thus, the PM emission limit for the proposed EPU unit under a PM<sub>2.5</sub> PAL, absent the PM<sub>10</sub> Surrogate Policy, would be virtually the same numerical limit as the current PM PAL limit in PAL6.

Mr. Powers' assertion that the PM PAL cannot be evaluated for PM<sub>10</sub> or PM<sub>2.5</sub> upon renewal amounts to another PAL regulatory interpretation is without basis. First, Protestants' argument is based on the faulty premise that PAL6 does not include a PM<sub>2.5</sub> PAL. As discussed

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<sup>152</sup> Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>); 2011 PM<sub>2.5</sub> Rule, 76 Fed. Reg. 28646, 28654/2-3 (May 18, 2011).

<sup>153</sup> See EM Ex. 306 at 13-14 (30 TAC § 116.196(e))(Renewal of a Plant-Wide Applicability Limit Permit) which requires a re-evaluation of each plant-wide applicability limit.

<sup>154</sup> See EM Ex. 306 at 13-14 (30 TAC § 116.196(e))(Renewal of a Plant-Wide Applicability Limit Permit) which requires a re-evaluation of each plant-wide applicability limit.

<sup>155</sup> See EM Ex. 306 at 13-14 (30 TAC § 116.196(e))(Renewal of a Plant-Wide Applicability Limit Permit) which requires a re-evaluation of each plant-wide applicability limit.

<sup>156</sup> See EM Ex. 107 at 3-4 (December 5, 2012 email response from Mr. Hurst at ExxonMobil to Mr. Virr at TCEQ detailing the PM, PM<sub>10</sub> and PM<sub>2.5</sub> calculations used to calculate the PAL baseline).

above, the ED issued the PAL6 PM limit in 2005 in compliance with the PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub>. Second, the assertion that TCEQ could not evaluate the PM PAL at renewal in a manner that evaluates PM<sub>2.5</sub> emissions without the use of the PM<sub>10</sub> Surrogate Policy runs counter to TCEQ's ability to exercise discretion to implement its regulatory authority.<sup>157</sup>

## 2. ALJs' Analysis and Conclusion

A preponderance of the evidence demonstrates that PAL6 includes PALs for PM, PM<sub>10</sub>, and, pursuant to the PM<sub>10</sub> Surrogate Policy, PM<sub>2.5</sub>.

The emission limits for PAL6 are contained in the special conditions and the MAERT for Applicant's Permit No. 3452. Permit No. 3452 was issued in 2001. When the Commission issued PAL6 in 2005, the PAL6 emission caps were based on the MAERT in Permit No. 3452. In both 2001 and 2005, it was appropriate for the Commission to use EPA's PM<sub>10</sub> Surrogate Policy for PM<sub>2.5</sub>. The MAERT refers to PM and PM<sub>10</sub> as a single line item. TCEQ's use of the 15 tpy SER level for PM<sub>10</sub>, rather than the 25 tpy SER level for PM, confirms that the MAERT includes PM and PM<sub>10</sub>. Hence, PAL6 includes a PM PAL and a PM<sub>10</sub> PAL. Further, it logically follows that TCEQ appropriately applied the PM<sub>10</sub> SER as a surrogate for PM<sub>2.5</sub> in the issuance of PAL6. Although the PM<sub>10</sub> Surrogate Policy has expired, Applicant's PM<sub>2.5</sub> PAL remains valid until the expiration of the 10-year term of PAL6 which will occur in 2015.

In addition to finding Protestants' arguments contrary to the preponderance of the evidence, the ALJs also find that the Commission's PAL6 issuance determinations 8 years ago are not now subject to challenge.

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<sup>157</sup> See Tex. Health & Safety Code § 382.023(a); *City of Houston v. BCCA Appeal Group, Inc.*, No. 01-11-00332-CV, 2013 Tex. App. LEXIS 11089 (Aug. 29, 2013, no pet.) ("TCAA authorizes TCEQ to issue orders and make determinations as necessary to carry out the TCAA purposes"); *Phillips Pet. Co.*, 121 S.W. 3d at 507 (agencies given a large degree of latitude in methods used to accomplish regulatory functions).

## C. NONATTAINMENT PSD REVIEWS AND PAL6

### 1. Evidence and Argument

Protestants argued the Commission's rules define a PAL as an "emission limitation expressed, in tons per year [tpy], for a pollutant at a major stationary source, that is enforceable and *established in a plant-wide applicability limit under § 116.186 of this title*["]<sup>158</sup> However, as acknowledged by Applicant's witness, Mr. Brewer, PAL6 was not issued under § 116.186, because § 116.186 had not been promulgated when PAL6 was issued. In fact, TCEQ did not have any rules authorizing it to issue PAL permits when PAL6 was issued. Because the Commission had not yet adopted its PAL rules when PAL6 was issued, Protestants asserted that issuance of PAL6 was beyond the Commission's authority. Thus, Protestants argued that just because the permit is labeled as PAL6 does not make it a PAL permit, as defined by the Commission's rules.

Protestants argued that any physical or operational change at an existing major stationary source, such as the proposed EPU at Applicant's BOP, must be authorized by a major preconstruction permit (a PSD permit or a Nonattainment NSR permit) if the project will result in significant net increases of any regulated NSR pollutant. The Commission's rules provide two methods for determining whether a project will result in significant net increases: netting demonstrations and PALs.<sup>159</sup> Because Applicant's PAL6 permit is not a PAL permit, as defined by the Commission's rules, it may not be used to determine major NSR applicability for this project. Therefore, Protestants argued Applicant was required to conduct a netting demonstration and has failed to do so.

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<sup>158</sup> 30 TAC § 116.12(22)(emphasis added).

<sup>159</sup> 30 TAC § 116.160(b) (Netting) and 30 TAC § 116.190 (Major NSR determinations for sources covered by a PAL permit); Executive Director's Supplemental Responses to Protestants' Written Discovery Requests for NSR Permit Registration No. 102982 (September 13, 2013) ("**Request for Admission No. 7:** Please admit that one purpose of PAL6 is to provide an alternative to netting, otherwise required under 116.160(b), as the test for determining whether proposed modifications or modifications to the Baytown Olefins Plant trigger major NSR permitting requirements. **Response:** Admit.").

In response to Protestants' contention that a netting demonstration is required to determine major NSR applicability, Applicant argued that as an alternative to project-by-project netting, establishing a source-wide PAL also accomplishes an NSR applicability determination as authorized by the FCAA. In *New York v. EPA*, the D. C. Circuit Court of Appeals compared the traditional project-by-project NSR netting and the source-wide PAL evaluation and determined that the "distinction [between the two] is artificial" because a PAL's "source-wide emissions are nothing but the net emissions from all of the individual units in the source." The Court continued, stating that EPA agrees that "one way of viewing a PAL is to focus on the increases and decreases at individual emissions units that, taken together, result in the net emissions from [the] source as a whole."<sup>160</sup>

According to Applicant, the 2002 Final PAL Rule incorporated already established principles in EPA major NSR netting regulations, including the discretion to evaluate different periods of past "actual emissions,"<sup>161</sup> and using the existing SER to establish the PAL cap.<sup>162</sup> Using these basic NSR building blocks, the 2002 Final PAL Rule created a consistent PAL cap process for national application.

Both Protestants and Applicant rely on the preamble to EPA's 2002 federal PAL rule to support their positions, but reach opposite conclusions. According to Protestants, the preamble provides that the federal PAL rule directly applied to states without SIP-approved PSD programs, but required states with SIP-approved PSD programs to submit proposals for implementing the PAL concept for EPA approval:

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<sup>160</sup> *New York v. EPA*, 413 F.3d at 36-37; see also Protestants Ex. 106 at 26-27 (Virr deposition)(agreeing with counsel for Protestants that a PAL "operates like a . . . preapproved netting demonstration").

<sup>161</sup> See EM Ex. 304 at 7-8 (2002 Final PAL Rule, 67 Fed. Reg. at 80191-80192)(describing how the proposed past actual emission calculation for the PAL (defined as "baseline actual emissions" in the 2002 PAL Final Rule) allows a permittee to look back 10 years to select the 24-month baseline actual emission period). A look back to 10 years was allowed under the pre-existing SIP-approved state rules defining "actual emissions" but it required the permittee to obtain specific agency approval to demonstrate that period was "more representative of normal source operations." In short, "baseline actual emissions" allowed the permittee to select any 24-month period without seeking specific approval of the agency as required by the pre-existing "actual emission" regulatory requirement in SIP-approved state rules.

<sup>162</sup> See EM Ex. 304 at 24 (2002 Final PAL Rule, 67 Fed. Reg. at 80208/3)(explaining how the SER is added to the baseline actual emissions total to establish the PAL limit); EM Ex. 305 at 23 (40 CFR § 52.21(b)(23)(2005)(defining significant emission rate [SER])).

All of these changes will take effect in the Federal PSD program . . . on March 3, 2003. This means that these rules will apply on March 3, 2003, in any area without an approved PSD program, for which we are the reviewing authority, or for which we have delegated our authority to issue permits to a State or local reviewing authority.

To be approvable under the SIP, State and local agency programs . . . must include today's changes as minimum program elements. State and local agencies should assure that any program changes under §§ 51.165 and 51.166 are consistently accounted for in other SIP planning measures. State and local agencies must adopt and submit revisions to their Part 51 permitting programs implementing these minimum elements no later than January 2, 2006.<sup>163</sup>

The preamble goes on to say:

Perhaps the biggest potential disadvantages to implementing the new applicability provisions as part of our base programs are the time and effort required to revise existing State programs and to have the revised programs as part of the SIP. For States that choose to adopt all of the new applicability provisions, we expect that the SIP approval process will be expeditious. Of course, the review and approval process will be more complicated for States that choose to adopt a program that differs from our base programs. . . . It would be impossible for us to plan ahead for all of the possible variations that States might ultimately elect to pursue. We will, however, reach out to relevant stakeholders immediately after publication of these rules and try to develop streamlined methods for addressing common questions that may arise during the SIP approval process.<sup>164</sup>

Thus, Protestants contended that the preamble for the federal PAL rulemaking does not indicate that states with SIP-approved PSD programs were allowed to implement the federal PAL rules without revising their SIPs to adopt PAL program requirements. In other words, when it comes to PALs, in states with approved SIPs—such as Texas—PAL permit implementation requires prior EPA review and approval.

On the other hand, Mr. Brewer testified that the preamble to EPA's 2002 PAL rule authorized states with SIP-approved permitting programs to issue PAL permits before revising

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<sup>163</sup> EM Ex. 304 at 56.

<sup>164</sup> EM Ex. 304 at 57.

their SIPs to include PAL permitting rules, so long as the PAL permits issued by the states were as stringent as required by the federal PAL rules.<sup>165</sup> Applicant argued that in making the erroneous point that EPA must approve revised state SIPs before issuing PALs, Protestants ignored the language in the middle of the passage which allows states to decide against implementing any of the new applicability provisions as long as the existing state program is at least as stringent as the 2002 Final PAL Rules.<sup>166</sup> Applicant urged that the provision omitted by Protestants provides states with the option of using existing regulations to establish PALs before adopting specific PAL provisions into the state SIP.<sup>167</sup> The SIP-approved regulations under 30 Texas Administrative Code chapter 116, subchapter B regarding “actual emissions” and “significant levels” provided the state with the discretion to establish a PAL limit consistent with the 2002 Final PAL Rule.<sup>168</sup> According to Mr. Brewer, in 2005 TCEQ appropriately relied on the discretion built into its existing SIP-approved federal permitting program to establish a state-wide cap for federal applicability purposes.<sup>169</sup> PAL6 explicitly states in Special Condition 6 that changes in operation are exempt from federal NSR as long as the site emissions do not exceed the PAL caps.<sup>170</sup>

Moreover, Applicant noted that EPA had an opportunity to review and comment on PAL6 when it was issued in 2005 and did not express any concerns about TCEQ’s authority to issue the permit or about PAL6’s compliance with EPA’s 2002 Final PAL Rule.<sup>171</sup> Applicant

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<sup>165</sup> Tr. at 118-119 (Q: (Mr. Axe) Mr. Clark-Leach asked you about the last paragraph in the final column of . . . [EM-304 at 56]. Were there any clarifications that you wanted to express before he cut you off in your testimony? A: (Mr. Brewer) Yeah, basically it was just to kind of refer back to what we actually just talked about, going through that EPA was not requiring that a state had a SIP-approved PAL program in effect to issue a PAL permit; that in the preamble they stated that you needed to have a SIP-approved federal permitting program, which was in place with the TCEQ, and that the permits—and that you had to have, you know, the permitting mechanisms within those regulations that could set up a PAL permit; and that if you had all that, you could issue a PAL permit as long as—and the PAL permit would be valid as long as it was at least as stringent as what was required by the PAL permit regulations that they were promulgating at that time.”).

<sup>166</sup> EM Ex. 304 at 57.

<sup>167</sup> Protestants’ Closing Argument at 31.

<sup>168</sup> Tr. at 115; *see also* 30 TAC ch. 116, subch. B (2005).

<sup>169</sup> Tr. at 115.

<sup>170</sup> EM Ex. 302 at 4 (PAL6, Special Condition 6).

<sup>171</sup> Tr. at 298-299.

further pointed out that EPA Region 6 also commented on PAL6 during the EPU public notice period at issue in this case. On May 13, 2013, EPA submitted a comment letter addressing PAL6 and acknowledged that, “the [ethylene] unit will also be covered under already established Plant-wide Applicability Limits covered in Flexible Permit No. 3452 and PAL6.”<sup>172</sup> EPA submitted the comment letter to “ensure that the project meets Clean Air Act requirements, that the permit will provide necessary information so that the basis for the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision.”<sup>173</sup> When addressing the PAL, EPA did not raise concerns regarding the validity of the PAL issued by TCEQ or the use of PAL6 for federal applicability purposes. Thus, Applicant argued the record is clear that EPA had multiple opportunities to disagree with the use of PAL6 for federal applicability purposes and has not raised any concerns. Applicant also noted that Mr. Powers did not give any consideration to the May 13, 2013 letter from EPA that expresses no reservation from EPA about the validity of PAL6.<sup>174</sup>

According to Protestants, the federal PAL rule required plant-wide caps to be based on baseline actual emissions from existing units at the major stationary source covered by the PAL.<sup>175</sup> But, contrary to the federal PAL rule, the limits established in PAL6 do not reflect baseline actual emissions and are less stringent than the federal PAL rule required because “actual emissions” used to establish the PAL6 PM limit were *higher* than the emissions reported by the plant.<sup>176</sup> In addition, the baseline actual emissions used to set the limits in PAL6 for other (non-PM) pollutants were not based on past actual emissions. Rather, these limits were based on each unit’s *potential to emit* (i.e., the amount of pollution it would emit if it operated at its full

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<sup>172</sup> Tr. at 219; EM Ex. 504 at 1 (EPA May 13, 2013 letter).

<sup>173</sup> EM Ex. 504 at 1.

<sup>174</sup> Tr. at 226-228.

<sup>175</sup> EM Ex. 304 at 24.

<sup>176</sup> Protestants Ex. 106 at 43-45 (“Q: (Mr. Clark-Leach) So does that mean that the actual emissions used in this application are actually higher than the amount the facility emitted during the baseline period? A: (Mr. Virr) Yes. It indicates that – like in Footnote 1, a two-month turnaround occurred at the base plant, and so it only operated for ten months for the emissions to be – they adjusted the emissions based on a full 12 months. . . . Q: So if you look at the 2003 adjusted tons per year column, you see at the very bottom, the total is 370? A: Yes. Q: And you look to the next column, 2003 actual— A: Uh-huh. Q: —and it’s 341? A: Yes. Q: So based on this table, would you say that actual emissions during 2003 were 341 rather than 370? A: Yes, since it says, ‘2003 actual’ up at the top.”).

physical capacity for 8,760 hours a year).<sup>177</sup> Protestants argued that while the ED contends that limits based upon the potential to emit established in PAL6 are lower than baseline actual emissions from the plant—because those emissions presumed BACT levels of control established in Applicant’s flexible permit that may not have applied during the baseline period—this argument is irrelevant (and incorrect). Protestants argued that the BACT limits used to calculate Applicant’s flexible permit limits were applicable requirements at the time Applicant submitted its PAL6 application. Therefore, actual emissions in excess of those limits would need to be adjusted downward.<sup>178</sup>

Protestants concluded that because Applicant’s PAL6 permit was not issued pursuant to the Commission’s PAL rules, and because the permit establishes conditions that are less stringent than the federal PAL rule required, Applicant may not rely on it to determine major NSR applicability for this project. Thus, according to Protestants, the Application fails to include a proper major NSR applicability demonstration and it is therefore deficient.

In opposition, Applicant argued that even prior to the 2002 Final PAL Rule, EPA recognized that states had the authority to implement PAL caps for federal applicability purposes under existing regulations.<sup>179</sup> EPA initially proposed the formal PAL rules in 1996 as a part of an NSR reform rulemaking effort.<sup>180</sup> The 1996 PAL preamble recognized that although PALs were authorized under the federal regulations in place at the time (and that several states were issuing PAL permits pursuant to existing federal regulations<sup>181</sup>), there was a need for additional

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<sup>177</sup> Protestants Ex. 103 at 12 (“**Interrogatory No. 14:** Please identify information submitted by ExxonMobil in support of its application . . . [for PAL6] demonstrating, for each PAL pollutant, that baseline actual emissions were adjusted downward to exclude any emissions that would have exceeded an emission limitation with which ExxonMobil was required to comply at the time the technical review for the application was completed . . . had ExxonMobil been required to comply with such limitations during the baseline period. **Response:** Based on a review of the records associated with project 112487, the PAL limits were established lower than baseline actual emissions *with no adjustment for exceedances of emissions limitations to reflect the potential to emit after BACT level controls were installed.*”).

<sup>178</sup> Protestants Ex. 3B at 12.

<sup>179</sup> *Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR); Notice of Proposed Rulemaking*, 61 Fed. Reg. 38250, 38264/2 (July 23, 1996)(1996 PAL Proposal).

<sup>180</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264/1.

clarity in the federal rules so PALs could be uniformly implemented. Specifically, the 1996 preamble stated:

Although a source-by-source PAL approach may be implemented in many situations under the current regulations, several PAL-related issues are not clearly addressed by the current regulations, policies, or practice. The EPA believes that regulatory changes would allow for more ease, clarity and certainty in the implementation of a PAL approach. Accordingly, the EPA proposes to define PAL and PAL major modification.<sup>182</sup>

As recognized in EPA's preamble to the 1996 proposed PAL rules, it was not uncommon for state PAL permits to be issued before the final PAL-specific rules. Applicant explained that some programs, such as Oregon's, included cap-specific regulations.<sup>183</sup> Other states, including Minnesota, issued "permits with emission caps under EPA's existing regulations."<sup>184</sup> When implementing the 2002 Final PAL Rule, EPA did not cut off the states' existing authority to establish PAL-like permits as long as their programs were as stringent as the federal 2002 Final PAL Rule:

[I]f a State decides it does not want to implement any of the new applicability provisions [contained in the 2002 PAL rules], that State will need to show that its existing program is at least as stringent as our revised base program.<sup>185</sup>

To accommodate PALs issued prior to PAL-specific rules, EPA established transition requirements. The PAL transition requirements recognized that PALs existed prior to the PAL-specific rules and provided that the permitting authority may at its discretion supersede pre-

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<sup>181</sup> See 1996 PAL Proposal, 61 Fed. Reg. at 38264/2 (EPA recognized that "other States (and sources) have experimented with the issuance of permits under EPA's existing regulations").

<sup>182</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264.

<sup>183</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264/2.

<sup>184</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264/2.

<sup>185</sup> EM Ex. 304 at 57 (2002 Final PAL Rule, 67 Fed. Reg. at 80241).

existing PAL permits once the final PAL-specific rules are implemented by the respective permitting authorities.<sup>186</sup>

Protestants disagreed, contending that the federal transition rules refer to plant-wide permits issued pursuant to a state's SIP-approved rules or authorized as part of EPA's flexible permit pilot study and do not indicate that states had discretion to implement PAL programs without first promulgating their own PAL rules and receiving EPA authorization to implement them.<sup>187</sup>

Applicant argued in rebuttal that Protestants' assertion that the Final 2002 PAL Rule did not authorize states to implement PAL programs without EPA approval fails to acknowledge the plain language in EPA's 1996 PAL Proposal<sup>188</sup> and 2002 Final PAL Rule<sup>189</sup> that describes how states were implementing PALs based upon the authority provided in the federal regulations that pre-existed the 2002 Final PAL Rules.

With regard to Protestants' contention that PAL6 was less stringent than the federal PAL rule required, Mr. Brewer testified that in the 2002 Final PAL Rule, EPA established flexibility and consistency by allowing all applicants to set 12-month pollutant caps based on past actual emissions in any 24-month period in the 10 years prior to the PAL request. This look-back ability is defined in the 2002 Final PAL Rule as "baseline actual emissions."<sup>190</sup> The 2002 Final PAL Rule then required the permitting agency to add the already defined regulatory "significant emission rate [SER]" to the "baseline actual emissions" to set the PAL limit.<sup>191</sup> Once the PAL limit is set at the "baseline actual emissions" plus the "significant emission rate [SER]," the PAL

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<sup>186</sup> See EM Ex. 304 at 75, 90, and 105 (67 Fed. Reg. at 80259, 80724, and 80289)(providing transition requirements for existing PALs under permitting programs implemented by states under state implementation plans for nonattainment and PSD permits); 40 CFR §§ 51.165(f)(15), 51.166(w)(15), 52.21(aa)(15)).

<sup>187</sup> Protestants' Closing Argument at 9.

<sup>188</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264/2.

<sup>189</sup> EM Ex. 304 at 57 (2002 Final PAL Rule 67 Fed. Reg. at 80241/2).

<sup>190</sup> EM Ex. 300 (Brewer Direct) at 11.

<sup>191</sup> EM Ex. 304 at 32 (2002 Final PAL Rule, 67 Fed. Reg. at 80216).

limit serves as the federal applicability limit that collectively evaluates the sum of all emission increases and decreases from individual units at the site over the 10-year period.

Applicant claimed, as discussed above, that Texas had the authority to issue PALs pursuant to its SIP-approved rules that were in effect in 2005. In support of this authority, the ED cited EPA's Technical Support Document for the 2002 Final PAL Rule which states:

Nothing in the final rules specifically precludes reviewing authorities from issuing PAL-like permits under the existing regulations during the period prior to the adoption of any new PAL provisions into the State major NSR program.<sup>192</sup>

Applicant concluded that Protestants have failed to establish any legitimate basis to question the appropriateness of using PAL6 to determine major NSR applicability. Since its inception, PAL6 has gone through at least two public comment periods with no objections from EPA regarding the validity of the permit for its intended purpose.<sup>193</sup> Additionally, the PAL concept itself had been implemented by a number of states with discretion provided in the federal regulations that pre-existed the 2002 Final PAL Rule as acknowledged in the 1996 PAL Preamble.<sup>194</sup>

The ED's permit engineer, Mr. Virr, testified that TCEQ reviews all permit applications for "compliance with the FCAA, the TCAA, and its rules implementing the TCAA."<sup>195</sup> He further testified that TCEQ has an "approved program to administer federal nonattainment and PSD permitting programs . . . and that [m]ajor NSR applicability is determined as part of the application review."<sup>196</sup> As the permit engineer assigned to conduct the technical review for the proposed EPU, Mr. Virr determined that minor NSR was appropriate. Mr. Virr explained that

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<sup>192</sup> Protestants Ex. 103 at 3 (ED's Responses to Protestants' Written Discovery Requests (Response to Interrogatory No. 3)), citing EPA *Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area for New Source Review Regulations* at I-7-33).

<sup>193</sup> Tr. at 298-299.

<sup>194</sup> 1996 PAL Proposal, 61 Fed. Reg. at 38264/2.

<sup>195</sup> ED Ex. 18 at 473.

<sup>196</sup> ED Ex. 18 at 473.

Applicant applied for a preconstruction authorization in accordance with 30 Texas Administrative Code chapter 116 and, additionally, that the proposed EPU would be a new facility located at an existing major source (BOP) which operated under PALs.<sup>197</sup> Based upon his review of applicable TCEQ rules, Federal Nonattainment and Prevention of Significant Deterioration Review (for PALs), and federal NSR guidance, he determined that minor NSR was appropriate to evaluate the emissions from the proposed EPU.<sup>198</sup>

## 2. ALJs' Analysis and Conclusion

Based on the preponderance of the evidence and the parties' arguments, the ALJs find that TCEQ had the authority to issue PAL6 as a federal PAL in 2005. Correspondingly, the ED properly determined that minor NSR was appropriate to evaluate the emissions from the proposed EPU.

Protestants' assertion that PAL6 is not a federal PAL is contradicted by EPA's implementation of the Final 2002 PAL Rule. As the ED noted, the 2002 Final PAL Rule regulatory support document expressly addressed how PAL permits would be addressed if issued before PAL-specific rules were SIP-approved:

Nothing in the final rules specifically precludes reviewing authorities from issuing PAL like permits under the existing regulations during the period prior to the adoption of any new PAL provisions into the State major NSR program.<sup>199</sup>

States' authority to issue PALs under existing regulations was not cut off when EPA promulgated the 2002 Final PAL Rules. Instead, EPA specifically stated that States had

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<sup>197</sup> ED Ex. 18 at 474.

<sup>198</sup> ED Ex. 18 at 475-76; ED Ex. 20 at 504-505; 30 TAC § 116.190(a) states: "an increase in emissions from operational or physical changes at the facility or emission unit at a major stationary source, covered by a [PAL] permit is insignificant, for purposes of major new source review under this subchapter, if the increase does not exceed the PAL."

<sup>199</sup> See Protestants Ex. 103 at 3 (ED's Responses to Protestants' Written Discovery Requests, Response to Interrogatory No. 3), citing EPA *Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area for New Source Review Regulations* at 1-7-33.

authority to implement PALs using their existing regulations so long as those regulations were as stringent as the federal 2002 Final PAL Rules:

[I]f a State decides it does not want to implement any of the new applicability provisions [contained in the 2002 PAL rules], that State will need to show that its existing program is at least as stringent as our revised base program.<sup>200</sup>

NSR Permitting regulations, in 40 CFR Parts 51 and 52, provide a transition period for pre-existing PALs and for PALs that could be issued by states before PAL-specific rules were SIP-approved.<sup>201</sup> Far from concluding that states may only implement PALs after EPA reviews and approves revised SIPs, the 2002 Final PAL Rules provide that the permitting authority “may” at its discretion supersede pre-existing PAL permits once the final PAL-specific rules are implemented by the respective permitting authorities.<sup>202</sup>

For pre-existing PALs, EPA provided in the preamble to the 2002 Final PAL Rule that prior applicability determinations “remain valid and enforceable.”<sup>203</sup> The transition requirements establish that EPA not only recognized that PALs would continue to be issued before states could implement state-specific PAL rules, but it also afforded states time and latitude to deal with pre-existing PALs.

The FCCA provides that “states have broad authority to determine the methods and particular control strategies they will use to achieve the [FCAA] statutory requirements.”<sup>204</sup> The

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<sup>200</sup> EM Ex. 304 at 57 (2002 Final PAL Rule, 67 Fed. Reg. at 80241/2).

<sup>201</sup> EM Ex. 304 at 75, 90, and 105 (2002 Final PAL Rule, 67 Fed. Reg. at 80259, 80274, and 80289)(providing transition requirements for existing PALs under permitting programs implemented by states under state implementation plans for nonattainment and PSD permits); 40 CFR §§ 51.165(f)(15), 51.166(w)(15), 52.21(aa)(15)).

<sup>202</sup> EM Ex. 304 at 75, 90, and 105 (2002 Final PAL Rule, 67 Fed. Reg. at 80259, 80274, and 80289)(providing transition requirements for existing PALs under permitting programs implemented by states under state implementation plans for nonattainment and PSD permits); 40 CFR §§ 51.165(f)(15), 51.166(w)(15), 52.21(aa)(15)).

<sup>203</sup> See EM Ex. 304 at 16 (2002 Final PAL Rule, 67 Fed. Reg. at 80200/1)(discussing how the new “baseline actual emission” provision (the emission calculation method used in PAL permits) does not apply retroactively to existing NSR permits or changes that sources have made in the past).

<sup>204</sup> *BCCA Appeal Group v. EPA*, 355 F.3d 817, 822 (5th Cir. 2004).

TCAA grants TCEQ the general authority to issue air permits as necessary to construct or modify an existing facility.<sup>205</sup> The TCCA also grants general powers and duties to TCEQ to implement its air permitting program “by all practical and economically feasible methods...” with the “powers necessary or convenient to carry out its responsibilities.”<sup>206</sup> Consistent with the statutory latitude granted TCEQ for the administration of its regulatory responsibilities, in the preamble to the Final 2002 PAL Rule the EPA stated:

State and local jurisdictions have significant freedom to customize their NSR programs. Ever since our current NSR regulations were adopted in 1980, we have taken the position that States may meet the requirements of Part 51 “with different but equivalent” regulations. Several States have, indeed, implemented programs that work every bit as well as our own base programs, yet depart substantially from the basic framework established in our rules. A good example is Oregon, where the SIP-approved program requires all major sources to obtain plant-wide permits not unlike the PALs that we are finalizing today. Oregon’s program plainly illustrates that we have not implemented our base programs with a one-size-fits-all mentality and certainly do not have the goal of “preempting” State creativity or innovation.

### III. BACT DEMONSTRATION – 30 TEXAS ADMINISTRATIVE CODE § 116.111(a)(2)(C)

An applicant for a TCEQ air quality permit must show that each of the facilities that would be authorized will meet BACT.<sup>207</sup> BACT is defined in TCEQ’s rules as:

An air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. The emissions reduction can be achieved through technology such as the use of add-on control equipment or by enforceable changes in production processes, systems, methods, or work practice.<sup>208</sup>

<sup>205</sup> Tex. Health and Safety Code §§ 382.051(a)(1), (b)(11).

<sup>206</sup> See Tex. Health and Safety Code § 382.011(b)-(c) [formerly Tex. Rev. Civ. Stat. Ann., art. 4477-5 § 3.01]; 37 Fed. Reg. 10895 (May 31, 1972) (EPA SIP approval).

<sup>207</sup> EM Ex. 100 (Parmley Direct) at 99; Tex. Health & Safety Code § 382.0518(b); 30 TAC § 116.111(a)(2)(C).

<sup>208</sup> 30 TAC § 116.10(1); EM Ex. 100 (Parmley Direct) at 156.

As Mr. Parmley explained in his pre-filed testimony:

Although BACT is generally expressed as an emission limit (*i.e.*, 0.01 lbs NO<sub>x</sub>/MMBtu), the definition of BACT is based on the application of the best available control technology that has been proven in practice and is economically reasonable, so the focus is on the control technology. Removal percentages and emission rates are used to rank the various control technologies, but the focus is more on available technologies.<sup>209</sup>

TCEQ uses a three-tiered approach to evaluate BACT.<sup>210</sup> In Tier I, BACT is determined based on the emission reduction performance levels established as BACT in recent NSR permit reviews for the same process and/or industry.<sup>211</sup> In Tier II, BACT is proposed as levels in recent permit reviews for similar air emission streams in a different process or industry.<sup>212</sup> Tier III BACT only applies if Tier I and Tier II do not apply, and is based on an analysis of economic and technical practicability.<sup>213</sup>

Applicant contended that the evidentiary record demonstrates why and how each proposed facility in the Application meets BACT for each air contaminant that is relevant to each proposed emission source.<sup>214</sup> However, Protestants raised two issues that the parties have agreed are the only ones disputed relating to BACT.<sup>215</sup> The issues, as set out in Mr. Powers' testimony, are: (i) whether the NO<sub>x</sub> emissions control required by the Final Draft Permit for the proposed

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<sup>209</sup> EM Ex. 100 (Parmley Direct) at 156.

<sup>210</sup> EM Ex. 100 (Parmley Direct) at 158; EM Ex. 152 (TCEQ BACT guidance Air Permit Reference Guide APDG 6110) at 14-21; *see also* ED Ex. 21 (Air Permit Reviewer Reference Guide APDG 6110).

<sup>211</sup> EM Ex. 100 (Parmley Direct) at 158; EM Ex. 152 (TCEQ BACT guidance Air Permit Reference Guide APDG 6110) at 14-21; *see also* ED Ex. 21 (Air Permit Reviewer Reference Guide APDG 6110).

<sup>212</sup> EM Ex. 100 (Parmley Direct) at 158; EM Ex. 152 (TCEQ BACT guidance Air Permit Reference Guide APDG 6110) at 14-21; *see also* ED Ex. 21 (Air Permit Reviewer Reference Guide APDG 6110).

<sup>213</sup> EM Ex. 100 (Parmley Direct) at 158-159; EM Ex. 152 (TCEQ BACT guidance Air Permit Reference Guide APDG 6110) at 14-21; *see also* ED Ex. 21 (Air Permit Reviewer Reference Guide APDG 6110).

<sup>214</sup> *See* EM Ex. 100 (Parmley Direct) at 155-187; EM Exs. 152 - 160 (Parmley exhibits relating to BACT); ED Ex. 18 (Virr Direct) at 476-485; ED Exs. 21 - 29 (Virr exhibits relating to BACT).

<sup>215</sup> *See* Rule 11 Agreement filed by the parties on October 4, 2013, pursuant to Tex. R. Civ. P. 11.

furnaces constitutes BACT; and (ii) whether 98% Destruction and Removal Efficiency (DRE) for the proposed elevated flare meets BACT for volatile organic compounds (VOC).<sup>216</sup>

Protestants posited that Applicant's EPU may not be authorized as a minor modification and Applicant must submit a new application that includes a BACT review and a lowest achievable emissions rate (LAER) review consistent with the Commission's SIP-approved rules for major modifications because major NSR BACT (and LAER) requirements are more stringent than the technology-based emission control requirements for minor projects.<sup>217</sup> Applicant pointed out that Protestants' witness Mr. Powers readily admitted that his BACT analysis presumes that major NSR applies to the Application and that, if major NSR does not apply, then his BACT analysis would be different.<sup>218</sup> As discussed in detail in Section II of the PFD, the evidentiary record demonstrates that major NSR does not apply to the Application; thus, Mr. Powers' testimony on that point as related to BACT has no probative evidentiary value. In the alternative, Protestants argued that Applicant's minor NSR BACT analysis was deficient.<sup>219</sup>

Applicant and the ED provided evidence that the same BACT proposed in the Application has been approved recently as BACT in other permit applications and the BACT determination follows TCEQ's BACT guidance for Tier I.<sup>220</sup> Further, the ED properly determined that the NOx limit for the furnaces and the 98% DRE for compounds containing four carbon atoms or more for the elevated flare both meet BACT.<sup>221</sup> Thus, the evidentiary record

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<sup>216</sup> Protestants Ex. 100 (Powers Direct) at 57-66. The only reference Protestants make to BACT other than Mr. Powers' Direct testimony is counsel for Protestants' question of TCEQ's engineer as to whether the PAL rules expressly require a BACT analysis. Tr. at 252, 254.

<sup>217</sup> Protestants' Response to Applicant's Closing Argument at 22.

<sup>218</sup> Tr. at 228-229.

<sup>219</sup> Protestants Ex. 3A at 8-9; Protestants Ex. 3B at 13-27. While Protestants agreed to brief two limited BACT issues (furnace and flare limits), and Protestants do not ask the ALJs to consider additional BACT issues, Protestants do not stipulate that the defects in Applicant's BACT addressed in Protestants Exs. 3A and 3B were unfounded. Protestants' Response to Applicant's Closing Argument at 23, n. 91.

<sup>220</sup> Applicant's Closing Argument at 21-29.

<sup>221</sup> ED's Closing Argument at 6-7.

shows that the BACT determinations relating to the furnaces and the elevated flare were proper, Applicant and the ED argued.

**A. Furnaces: NOx Limits**

**1. Evidence and Argument**

The evidentiary record demonstrates that Applicant and the ED conducted a proper BACT analysis for NOx for the proposed furnaces. Mr. Virr testified that he conducted a Tier I BACT review for the emission sources associated with the proposed EPU, both for normal operating scenarios and planned MSS operations, including decoking of the furnaces.<sup>222</sup> He testified that the Tier I BACT review for Applicant's proposed EPU involved his evaluation of the definition of BACT, applicable guidance materials for the relevant equipment, and a comparison of the controls and limits proposed by Applicant to those controls and limits of recent permits previously issued, under review by TCEQ, or the emission performance of similar facilities in operation.<sup>223</sup>

Mr. Virr also testified about the BACT emission controls that Applicant had selected for its furnaces, specifically, that Applicant will use low NOx burners and selective catalytic reduction (SCR) system to reduce NOx emissions.<sup>224</sup> The control technology that Applicant proposes to use—the SCR—is the exact same control that will be used in two other applications Mr. Virr testified he reviewed, one for Dow Freeport (Dow) and another for ChevronPhillips Chemical Company (ChevronPhillips).<sup>225</sup> On August 6, 2013, ChevronPhillips' permit was

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<sup>222</sup> ED Ex. 18 (Virr Direct) at 479.

<sup>223</sup> ED Ex. 18 (Virr Direct) at 477; *see generally*, ED Exs. 21 and 23.

<sup>224</sup> ED Ex. 18 (Virr Direct) at 480; *see also* EM Ex. 102 (Section 4.1.1, Nitrogen Oxide, Furnace Section) at 23; EM Ex. 122 (TCEQ Construction Source Analysis and Technical Review) at 7; EM-124 at 5 (Special Condition 7.C.(1) and (2) of the Final Draft Permit).

<sup>225</sup> ED Ex. 18 (Virr Direct) at 480; ED Ex. 36 (ED's Response to Public Comment) Response 16 at 707-708.

issued with the same furnace emission control limits as those proposed by Applicant.<sup>226</sup> To the best of Mr. Virr's knowledge, Dow's permit has not yet been issued.<sup>227</sup> Mr. Virr also testified that Applicant's annual limit (rolling 12-month average) of NOx emissions of 0.01lb/MMBtu is the same as proposed by Dow and approved for ChevronPhillips.<sup>228</sup> Therefore, the ED contended, the control technology and annual limit proposed in the Final Draft Permit to control NOx emissions from the proposed EPU meet the requirements for BACT as specified in TCEQ's BACT requirements for process furnaces and heaters.<sup>229</sup>

Protestants' witness Mr. Powers provided a table (Table 1) relative to his position regarding what constitutes BACT for NOx for the proposed furnaces.<sup>230</sup> He stated that he based his conclusions on three recent permit applications that he claims are for "similar [furnaces] in Texas" and whose NOx emissions "have been demonstrated-in-practice through stack testing."<sup>231</sup> Applicant pointed out that Mr. Powers did not identify the permit application/permit numbers or other relevant information to allow a determination of whether the information in Table 1, which purportedly summarizes NOx BACT for those furnaces, is correct, or whether those furnaces are of the same type as Applicant's proposed furnaces, which are pyrolysis furnaces.<sup>232</sup> Further, Applicant stated, based on language in Table 1, Mr. Powers' testimony that the furnaces are located in Texas appears to be wrong for two of the furnaces. Those furnaces appear to be located in California (ChevronPhillips)—based on the references to "CA", which is the standard abbreviation for California, and "CARB"—which is the acronym for the California Air

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<sup>226</sup> The ChevronPhillips Application was subject to LAER requirements for NOx for the furnaces, which is a more stringent technology requirement than BACT. Thus, the Application goes beyond BACT in its proposed control of NOx from the proposed furnaces. See EM Ex. 100 (Parmley Direct) at 168.

<sup>227</sup> ED Ex. 18 (Virr Direct) at 480; see ED Ex. 22 (*TCEQ Chemical Sources BACT Requirements for Process Furnaces and Heaters (2011)*) at 587, and EM Ex. 129.

<sup>228</sup> ED Ex. 18 (Virr Direct) at 480; ED Ex. 22 (*TCEQ Chemical Sources BACT Requirements for Process Furnaces and Heaters (2011)*) at 587; ED Ex. 36 (ED's Response to Public Comment) Response 16 at 706.

<sup>229</sup> ED Ex. 18 (Virr Direct) at 480; EM Ex. 100 (Parmley Direct) at 167; ED Ex. 36 at 705 (ED's Response to Public Comment) Response 14 at 705; EM Ex. 129 (*TCEQ Chemical Sources BACT Requirements for Process Furnaces and Heaters (2011)*) at 1; EM Ex. 153 (*TCEQ Permit Amendment Source Analysis and Technical Review, ChevronPhillips Chemical Company, Permit No. 1504A, PSDTX748*) at 5.

<sup>230</sup> Protestants Ex. 100 (Powers Direct) at 57-58.

<sup>231</sup> Protestants Ex. 100 (Powers Direct) at 57.

<sup>232</sup> Protestants Ex. 100 (Powers Direct) at 57.

Resources Board—and Louisiana (Formosa), based on the reference to “LA”, which is the standard abbreviation for Louisiana.<sup>233</sup>

Protestants responded that Applicant misread Mr. Powers’ testimony related to Table 1. Mr. Powers did not claim that the furnaces at issue are located in Texas. Rather, he testified that the furnace limits identified in his pre-filed testimony were “*referenced* in other recent Texas ethylene plant applications.”<sup>234</sup>

Applicant also argues that the only other entry in Table 1, which purportedly relates to a Dow ethylene plant, does not specify a NOx emissions limit to which the proposed NOx emissions limit for Applicant’s proposed furnaces can be compared. Moreover, Applicant stated, Mr. Powers provided no basis for his statement that the NOx emissions limits identified for those furnaces “have been demonstrated-in-practice through stack testing.”<sup>235</sup> Therefore, even if the NOx emissions limits in Table 1 are accurate, Mr. Powers did not provide any basis to conclude that such limits have been proven in practice to be technically achievable. Without that, such limits cannot be BACT for NOx for the proposed furnaces, Applicant contended.

## 2. ALJs’ Analysis and Conclusion

The evidence shows that TCEQ recently issued a permit to ChevronPhillips to authorize new furnaces at its proposed EPU. In that permitting process, TCEQ determined that BACT for NOx for those furnaces is 0.01 lb/MMBtu on an annual basis and 0.015 lb/MMBtu on a 24-hour basis, to be achieved using ultra low-NOx burners and SCR. Those are the same NOx emissions limits that Applicant has proposed as BACT for NOx for the EPU furnaces, and Applicant will achieve those limits by using ultra low-NOx burners and SCR. Mr. Powers did not raise anything that reasonably supports a contrary conclusion. Therefore, the NOx emissions controls

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<sup>233</sup> Applicant’s Closing Argument at 24-25, citing Protestants Ex. 100 (Powers Direct) at 57-58.

<sup>234</sup> Protestants’ Response to Applicant’s Closing Argument at 11, citing Protestants Ex. 100 at 58, Table 1 (emphasis added in original); *see also* EM Ex. 400 at 39-40 (Powers testifying that furnaces identified in ChevronPhillips’ application are located in California).

<sup>235</sup> Protestants Ex. 100 (Powers Direct) at 57.

and limits that Applicant has proposed for the proposed furnaces constitute BACT for NOx under a Tier I BACT analysis. Applicant prevails on this issue.

**B. Elevated Flare: 98% DRE**

**1. Evidence and Argument**

Applicant's flare system will consist of a steam-assisted elevated flare and a multi-point ground flare (MPGF) system.<sup>236</sup> Mr. Virr testified that the flare will be used in conjunction with the proposed EPU because Applicant identified activities that may result in planned MSS, including emissions from the furnaces and decoking.<sup>237</sup> In that regard, Applicant submitted Application information which provided annual flare limit calculations based on "empirical waste stream speciation and design data from similar facilities."<sup>238</sup> Mr. Virr also testified that "[t]he waste stream routed to the flare will be monitored for Btu content in order to ensure adequate combustion. This is consistent with TCEQ flare guidance and current permitting practices for established BACT for flares."<sup>239</sup> Special Condition 19 of the Final Draft Permit limits the use of flaring associated with the EPU to those emissions during planned MSS.<sup>240</sup>

The evidentiary record reflects that Applicant and the ED conducted a proper BACT analysis for VOCs for the elevated flare and determined that, under a Tier I analysis, 98% DRE is BACT for compounds containing four carbon atoms or more and 99% DRE is BACT for compounds of up to three carbon atoms.<sup>241</sup> The determination is based on a TCEQ guidance

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<sup>236</sup> EM Ex. 105 at 2.

<sup>237</sup> ED Ex. 36 (ED's Response to Public Comment), Response 22 at 713.

<sup>238</sup> ED Ex. 36 (ED's Response to Public Comment) Response 22 at 713.

<sup>239</sup> ED Ex. 18 (Virr Direct) at 481; ED Ex. 24 (*TCEQ Chemical Sources BACT Requirements for Flares and Vapor Combustors (2011)*) at 591, and EM Ex. 156; ED Ex. 36 (ED's Response to Public Comment) Response 18 at 709.

<sup>240</sup> ED Ex. 30 (Final Draft Permit) at 619; ED Ex. 36 (ED's Response to Public Comment) Response 22 at 713.

<sup>241</sup> EM Ex. 102 (Section 4.5, Flare System) at 25; EM Ex. 105 (*Response to TCEQ Request for Additional Information*, November 16, 2012 Application submittal) at 2-6; EM Ex. 100 (Parmley Direct) at 175-177; EM Ex. 122 (TCEQ Construction Source Analysis and Technical Review) at 8; EM Ex. 124 (Special Condition 10 of the Final Draft Permit) at 6.

document specific to flares at chemical units, such as Applicant's proposed elevated flare. The guidance states that an elevated flare must comply with the flare-related requirements in 40 CFR § 60.18, and, if the flare complies with those requirements, the flare's DRE should be considered to be "99% for certain compounds up to three carbons, 98% otherwise."<sup>242</sup> Emissions calculations for the MPGF system were estimated based on a DRE of 99% for hydrocarbons with three or less carbon atoms and 98% for hydrocarbons with more than three carbon atoms, but the MPGF system is expected to achieve greater than the 99% and 98% DRE, and is, therefore, expected to exceed BACT for VOCs from flares,<sup>243</sup> according to Mr. Parmley and Mr. Virr. Further, TCEQ's determination in the ChevronPhillips' application—BACT for VOC control with a flare achieving 98% DRE based on 40 CFR § 60.18—is the same as 98% DRE for the elevated flare in the Application in this case.<sup>244</sup> Therefore, Applicant has proposed BACT for VOC controlled by a flare under a Tier I BACT analysis.

In addition, Applicant designed the elevated flare for smokeless operation pursuant to TCEQ guidance; therefore, the elevated flare will not generate PM emissions.<sup>245</sup> Applicant will control SO<sub>2</sub> emissions from the elevated flare by the use of low sulfur natural gas as the pilot, comply with 40 CFR § 60.18, and continuously monitor for presence of flame, which is BACT for SO<sub>2</sub> for flares.<sup>246</sup>

Mr. Powers did not dispute, and indeed, concurred, with the ED's conclusion. Mr. Powers' testimony regarding BACT for VOCs for the proposed elevated flare consists of one table (Table 2) which provides a comparison of the DREs for that flare with the DREs determined to be BACT for other companies' elevated flares in Texas. Based on Table 2, the

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<sup>242</sup> EM Ex. 100 (Parmley Direct) at 175-176; EM Ex. 156 (*TCEQ Chemical Sources BACT Requirements for Flares and Vapor Combustors (2011)*) at 1.

<sup>243</sup> EM Ex. 100 (Parmley Direct) at 177; ED Ex. 18 (Virr Direct) at 481; EM Ex. 105 at 2-6; EM Ex. 122 (TCEQ Construction Permit Source Analysis and Technical Review) at 8.

<sup>244</sup> EM Ex. 153 (TCEQ Permit Amendment Source Analysis and Technical Review, ChevronPhillips Chemical Company, Permit No. 1504A, PSDTX748) at 5.

<sup>245</sup> EM Ex. 102 at 19; EM Ex. 105 at 2.

<sup>246</sup> EM Ex. 100 (Parmley Direct) at 176; ED Ex. 18 (Virr Direct) at 481; EM Ex. 156 (*TCEQ Chemical Sources Current Best Available Control Technology (BACT) Requirements fo Flares and Vapor Combustors (2011)*); EM Ex. 105 at 4.

DRE for Applicant's proposed elevated flare is the same as the DREs for the other companies' elevated flares.<sup>247</sup>

But Mr. Powers questioned whether the proposed elevated flare will be able to achieve BACT for VOC (*i.e.*, at least 98% DRE).<sup>248</sup> His testimony is premised on his supposition that 98% DRE cannot be met under all operating conditions for any elevated flare, notwithstanding that the Application establishes that the proposed elevated flare will be able to achieve at least 98% DRE.<sup>249</sup> He mentioned two flare operating conditions as support for his concern as to whether the proposed elevated flare will be able to achieve at least 98% DRE: (i) crosswinds of greater than 5 mph at the flare tip; and (ii) "over-steaming."<sup>250</sup> However, contended Applicant, nothing Mr. Powers raised provides any legitimate question as to whether the proposed elevated flare will be able to achieve at least 98% DRE, and, in fact, the EPA's July 1983 Flare Efficiency Study,<sup>251</sup> which Mr. Powers used as support for his position regarding crosswinds, actually supports Applicant's position that the proposed elevated flare will be able to meet at least 98% DRE.

Mr. Powers asserted that "98% minimum DRE . . . is not applicable to periods when crosswinds exceed 5 mph at the flare tip," basing that assertion on language in the EPA's July 1983 Flare Efficiency Study.<sup>252</sup> Mr. Powers, however, did not note other language in that study which actually supports Applicant's position that the proposed elevated flare will be able to meet at least 98% DRE. First, the second-to-last bullet under "Conclusions and Observations" of that study states: "The meandering of the flame's position relative to the sampling probe with varying wind conditions . . . had no apparent effect on the combustion efficiency [*i.e.*, DRE] values."<sup>253</sup> In addition, the first bullet under "Conclusions and Observations" reads: "When flares are

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<sup>247</sup> Protestants Ex. 100 (Powers Direct, Table 2) at 59.

<sup>248</sup> Protestants Ex. 100 (Powers Direct) at 61-66.

<sup>249</sup> Protestants Ex. 100 (Powers Direct) at 59.

<sup>250</sup> Protestants Ex. 100 (Powers Direct) at 59-66.

<sup>251</sup> Protestants Ex. 109.

<sup>252</sup> Protestants Ex. 100 (Powers Direct) at 60.

<sup>253</sup> Protestants Ex. 109 at 5.

operated under conditions which are representative of industrial practices, the combustion efficiencies [*i.e.*, DREs] in the flare plume are greater than 98%.<sup>254</sup>

Moreover, with respect to “over-steaming,” Mr. Powers merely claimed that “numerous studies have found that . . . over-steaming can lead to a much lower DRE.”<sup>255</sup> But he did not provide any definition of “over-steaming,” or describe what he meant by that term. Further, he did not state that he believes the proposed elevated flare will be “over-steamed” and he provided no testimony that might support such a contention.<sup>256</sup>

The ALJs note that Mr. Virr’s review of the MPGF proposed to be constructed with the EPU revealed that it could not meet federal velocity requirements in 40 CFR § 60.18. As a result, Applicant proposed an Alternate Method of Control (AMOC) which Mr. Virr wrote into the Final Draft Permit in Special Condition 27.<sup>257</sup> Special Condition 27 provides that the requirements of Special Condition 11, related to the flare, will be superseded only if Applicant’s AMOC request is granted by TCEQ or EPA. Upon approval, the AMOC conditions will be incorporated into the Final Draft Permit through an alteration.<sup>258</sup> If the AMOC is not approved by TCEQ or EPA, then federal velocity requirements will continue to apply to the MPGF. Either way, the level of emissions control proposed in the Final Draft Permit meets the requirements for BACT as specified in TCEQ’s BACT requirements for flares.<sup>259</sup>

## 2. ALJs’ Analysis and Conclusion

The evidentiary record demonstrates that what Applicant has proposed as BACT for VOCs for the MPGF constitutes BACT under a Tier I analysis. The DREs for the MPGF are the same as the DREs for other companies’ elevated flares. Pursuant to TCEQ’s guidance, 98%

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<sup>254</sup> Protestants Ex. 109 at 5.

<sup>255</sup> Protestants Ex. 100 (Powers Direct) at 66.

<sup>256</sup> Protestants Ex. 100 (Powers Direct) at 66.

<sup>257</sup> ED Ex. 18 (Virr Direct) at 481; ED Ex. 30 (Final Draft Permit) at 626.

<sup>258</sup> ED Ex. 18 at 481.

<sup>259</sup> ED Ex. 24 (*TCEQ Chemical Sources BACT Requirements for Flares and Vapor Combustors (2011)*) at 591.

DRE is BACT for compounds containing four or more carbon atoms and 99% DRE is BACT for compounds containing up to three carbon atoms. Applicant has demonstrated that the MPGF is expected to achieve greater than 99% and 98% DRE, and is, therefore, expected to exceed BACT for VOCs from flares.

#### **IV. COMPLIANCE WITH TCEQ RULES AND PROTECTION OF HEALTH AND PROPERTY - 30 TEXAS ADMINISTRATIVE CODE § 116.111(a)(2)(A)(i)**

TCEQ determines whether public health and property will be protected by reviewing air dispersion modeling submitted by applicants for protectiveness of NAAQS and Effects Screening Levels (ESLs) for non-criteria pollutants.<sup>260</sup> Protestants raised six concerns regarding the Application's compliance with TCEQ's rules and protection of health and property.<sup>261</sup> Protestants' concerns, discussed in detail below, relate to: (i) the annual PM<sub>2.5</sub> NAAQS demonstration;<sup>262</sup> (ii) ozone; (iii) the depropanizer at the existing BOP; (iv) duct burners at the existing BOP; (v) the wastewater treatment plant; and (vi) planned MSS activities.

##### **A. Annual PM<sub>2.5</sub> NAAQS Demonstration**

###### **1. Evidence and Argument**

Protestants contended that Applicant failed to carry its burden of proof with respect to compliance with the annual PM<sub>2.5</sub> NAAQS and that there is a real possibility that emissions from the EPU will cause a violation of the annual PM<sub>2.5</sub> NAAQS. Protestants argued that the ED's documentary evidence and the testimony of Applicant's witnesses and the ED's witnesses

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<sup>260</sup> 30 TAC § 116.111(a)(2)(A)(i), General Application, provides that an air authorization must ". . . comply with all rules and regulations of the commission and with the intent of the [TCAA], including protection of the health and property of the public."

<sup>261</sup> See Rule 11 Agreement filed by the parties on October 4, 2013, pursuant to Tex. R. Civ. P. 11.

<sup>262</sup> The NAAQS, which are set by the EPA for six "criteria pollutants" (NO<sub>2</sub>, CO, PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, ozone, and lead), are designed to be protective of the health and the property of the public. Air dispersion modeling is used to determine whether ground level concentrations of five of the six criteria pollutants from the proposed new facilities will cause and/or contribute to exceeding the NAAQS in areas that are currently meeting the NAAQS. See EM Ex. 100 (Parmley Direct) at 124, 127. The ALJs note that Mr. Parmley did not initially list ozone as one of the six criteria pollutants but referred to ozone at EM Ex. 100 (Parmley Direct) at 127.

showed that (1) Applicant failed to evaluate secondarily-formed PM<sub>2.5</sub> impacts resulting from the emissions of PM<sub>2.5</sub> precursors; (2) emissions of PM<sub>2.5</sub> precursors contribute to the formation of PM<sub>2.5</sub>; and (3) EPA guidance that Applicant and the ED rely upon requires applicants to evaluate secondarily-formed PM<sub>2.5</sub> impacts for projects that will emit more than 40 tons of NO<sub>x</sub> a year,<sup>263</sup> such as the proposed EPU.

### *Air dispersion modeling*

Applicant submitted air dispersion modeling of emission sources to TCEQ in order to predict maximum concentrations of pollutants at locations off plant property.<sup>264</sup> Mr. Parmley explained in detail how the NAAQS demonstration was conducted, including air dispersion modeling for the annual PM<sub>2.5</sub> NAAQS.<sup>265</sup> Mr. Parmley, who has conducted more than 200 air dispersion models related to air permit applications, testified that the air dispersion modeling was typical of the type of modeling he would have expected to conduct, that it followed all of TCEQ's guidance, and that it was approved by TCEQ in modeling protocols.<sup>266</sup>

As with any other air dispersion models used to evaluate compliance with the NAAQS, Applicant conducted a Preliminary Impact Analysis to compare the modeled maximum predicted ground-level concentrations (GLCs) of the NAAQS criteria pollutants, including PM<sub>2.5</sub>, to their respective significant impact levels (SILs).<sup>267</sup> As Mr. Parmley explained:

The SIL is a very conservative screening level set by EPA for each NAAQS criteria pollutant. If a Preliminary Impact Analysis indicates that an air contaminant subject to the NAAQS is above the SIL at any off-site locations, then additional review in the form of a Refined Screening Analysis is required for the off-site locations where the model shows that the SIL will be exceeded. The SIL is set at a small percentage of the NAAQS (typically 4% of the NAAQS for short-term averaging periods) for each criteria pollutant. For purposes of a State

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<sup>263</sup> Protestants' Closing Argument at 36-38; ED Ex. 14 at 391; ED Ex. 35 at 675.

<sup>264</sup> ED Ex. 18 (Virr Direct) at 486.

<sup>265</sup> EM Ex. 100 (Parmley Direct) at 126-136.

<sup>266</sup> Tr. at 69-70.

<sup>267</sup> EM Ex. 100 (Parmley Direct) at 128.

NAAQS analysis, a TCEQ *de minimis* level is set that is equivalent to the EPA SILs. . . . If the modeled Preliminary Impact Analysis concentrations are below the *de minimis* level (*i.e.*, the SIL), then no further analysis is required and compliance with the NAAQS has been demonstrated. . . . If the modeled impacts are above the *de minimis* level (*i.e.*, the SIL), then additional analysis is required to demonstrate compliance with the NAAQS. Additional modeling must be conducted to include other air emissions sources, including ambient background concentrations of the air contaminant.<sup>268</sup>

Applicant's air dispersion modeling results demonstrate that the maximum predicted GLC for annual PM<sub>2.5</sub> was 0.2 µg/m<sup>3</sup>, which is only 65.1% of the SIL for annual PM<sub>2.5</sub>, set at 0.3 µg/m<sup>3</sup>.<sup>269</sup> Thus, no additional modeling to demonstrate compliance with the annual PM<sub>2.5</sub> NAAQS was required, Applicant asserted.

Mr. Cherry testified that the TCEQ Air Dispersion Modeling Team (ADMT), responsible for reviewing submissions of air dispersion modeling from applicants, reviewed four submissions of modeling information from Applicant, and that he conducted two modeling audits for the proposed EPU.<sup>270</sup> Based on his audits of Applicant's submission, Mr. Cherry found the results for the project to be acceptable.<sup>271</sup> He said Applicant's preliminary air dispersion modeling analysis was used and compared to the applicable SILs for each pollutant to determine whether a cumulative impact analysis was necessary.<sup>272</sup> All criteria pollutants modeled were below their applicable SILs except for the 24-hour standard for PM<sub>2.5</sub>. Applicant then conducted a cumulative air impacts analysis for the 24-hour standard for PM<sub>2.5</sub>, which TCEQ reviewed and found acceptable.<sup>273</sup> Mr. Cherry testified that Applicant's modeled

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<sup>268</sup> EM Ex. 100 (Parmley Direct) at 128-129.

<sup>269</sup> EM Ex. 100 (Parmley Direct) at 130, Table 2-2.

<sup>270</sup> ED Ex. 1 (Cherry Direct) at 12 and 20; ED Exs. 16 and 17.

<sup>271</sup> ED Ex. 1 (Cherry Direct) at 19.

<sup>272</sup> ED Ex. 36 (ED's Response to Public Comment) Response 1 at 690.

<sup>273</sup> The result of the cumulative impacts analysis for the 24-hour PM<sub>2.5</sub> NAAQS using applicable draft EPA guidance showed that modeled emissions of PM<sub>2.5</sub> emissions from the proposed EPU would not exceed the NAAQS. See EM Ex. 100 (Parmley Direct) at 132.

emissions from the proposed EPU were below the applicable SILs for the criteria pollutants, including the annual PM<sub>2.5</sub> standard.<sup>274</sup>

Applicant refuted Protestants' suggestion that the annual PM<sub>2.5</sub> NAAQS demonstration should have been different.<sup>275</sup> First, Applicant stated that Mr. Powers incorrectly presumed that Applicant may not rely on its PAL6 permit to determine whether the Application triggers major NSR requirements relating to a NAAQS demonstration for PM<sub>2.5</sub>.<sup>276</sup> This is based on Mr. Powers' opinion that PAL6 does not establish a PAL for PM<sub>2.5</sub>.<sup>277</sup> As discussed in section II of the PFD, major NSR does not apply to the Application relative to any pollutant, which Applicant contended rendered moot Protestants' argument that major NSR should govern the NAAQS demonstration for PM<sub>2.5</sub>. Regardless, Mr. Parmley explained that even though the Application does not trigger major NSR, TCEQ's air permitting program requires a similar air quality impacts analysis (*i.e.*, a state-required NAAQS analysis) as would be required if major NSR applied.<sup>278</sup> The state-required NAAQS analysis in this case<sup>279</sup> demonstrates that the proposed EPU will not cause or contribute to a violation of the annual PM<sub>2.5</sub> NAAQS.

### *Recent EPA guidance*

The Commission's general NAAQS modeling guidance does not include specific instructions for modeling compliance with the annual PM<sub>2.5</sub> NAAQS and the Commission has not issued any specific guidance for modeling compliance with that standard.<sup>280</sup> Accordingly, in

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<sup>274</sup> Tr. at 148-154, 171; ED Ex. 1 (Cherry Direct) at 18-19; *see also* ED Ex. 14 (EPA Draft Guidance for PM<sub>2.5</sub> Permit Modeling, March 4, 2013); ED Ex. 15 (EPA guidance regarding PM<sub>2.5</sub> SILs, March 4, 2013); ED Ex. 36 (ED's Response to Public Comment) Response 1 at 687-695.

<sup>275</sup> *See* Protestants' Closing Argument at 34-38. Based on cross-examination of Mr. Parmley and Mr. Cherry, Protestants appear to believe that the demonstration for the annual PM<sub>2.5</sub> NAAQS that was conducted in connection with the Application was not appropriate. Tr. at 48-49, 147-156.

<sup>276</sup> Protestants Ex. 100 (Powers Direct) at 12-13, 55-56.

<sup>277</sup> Protestants Ex. 100 (Powers Direct) at 12-13, 55-56.

<sup>278</sup> EM Ex. 100 (Parmley Direct) at 126.

<sup>279</sup> EM Ex. 100 (Parmley Direct) at 126.

<sup>280</sup> Tr. at 151-154; ED Ex. 4 at 102 ("Compliance with the 1997 form of the PM<sub>10</sub> NAAQS will be the surrogate for compliance with the 1997 form of the PM<sub>10</sub> NAAQS, and the new PM<sub>2.5</sub> NAAQS, until EPA publishes new

the absence of applicable Commission guidance, Applicant and the ED relied on recent EPA guidance for Applicant's annual PM<sub>2.5</sub> NAAQS demonstration.<sup>281</sup>

During the ED's technical review for the proposed EPU, the EPA issued draft guidance to permitting authorities regarding the use of SILs for modeling the PM<sub>2.5</sub> NAAQS.<sup>282</sup> Mr. Parmley explained that based on recent EPA guidance<sup>283</sup> adopted in response to a United States Court of Appeals decision that vacated the PM<sub>2.5</sub> SIL, Applicant's NAAQS demonstration relating to PM<sub>2.5</sub> in this case was not affected since the guidance states that EPA:

. . . does not interpret the Court's decision to preclude the use of SILs for PM<sub>2.5</sub> entirely but additional care should be taken by permitting authorities in how they apply those SILs so that the permitting record supports a conclusion that the source will not cause or contribute to a violation of the PM<sub>2.5</sub> NAAQS. . . . If the preconstruction monitoring data shows that the difference between the PM<sub>2.5</sub> NAAQS and the monitored PM<sub>2.5</sub> background concentrations in the area is greater than the EPA's PM<sub>2.5</sub> SIL value, then the EPA believes it would be sufficient in most cases for permitting authorities to conclude that a proposed source with a PM<sub>2.5</sub> impact below the PM<sub>2.5</sub> SIL value will not cause or contribute to a violation of the PM<sub>2.5</sub> NAAQS and to forego a more comprehensive cumulative modeling analysis for PM<sub>2.5</sub> (emphasis in original).<sup>284</sup>

Mr. Parmley further explained that:

In this case, the difference between [the] new PM<sub>2.5</sub> [a]nnual NAAQS (12 µg/m<sup>3</sup>) and the representative monitored value (11.2 µg/m<sup>3</sup>) is 0.8 µg/m<sup>3</sup>. Since the value is greater than the SIL value (0.3 µg/m<sup>3</sup>), the use of the SIL in this situation is validated. Since the annual modeled concentration (0.2 µg/m<sup>3</sup>) is less than the SIL, the demonstration of compliance with the new more stringent NAAQS is satisfied.<sup>285</sup>

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technical review procedures. The ADMT will post the new procedures on the ADMT Internet page when they are effective.").

<sup>281</sup> ED Ex. 4 at 103-104; Protestants Ex. 104 at 8.

<sup>282</sup> ED Ex. 1 (Cherry Direct) at 18-19; *see generally* ED Exs. 14 and 15; ED Ex. 36 (ED's Response to Public Comment) Response 1 at 690; 42 CFR § 7475(a)(3).

<sup>283</sup> *See* EM Ex. 151 (EPA guidance regarding PM<sub>2.5</sub> SILs, March 4, 2013).

<sup>284</sup> EM Ex. 100 (Parmley Direct) at 134-135; EM Ex. 15 (EPA guidance regarding PM<sub>2.5</sub> SILs, March 13, 2013) at 449.

<sup>285</sup> EM Ex. 100 (Parmley Direct) at 135.

Protestants argued that TCEQ may not rely on any EPA guidance issued prior to vacating its SIL because the guidance does not instruct permitting authorities on how to construe guidance documents together.<sup>286</sup> But, the ED responded, the EPA-issued draft guidance allows permitting authorities to continue to use the SILs for modeling the PM<sub>2.5</sub> NAAQS, as long as authorities can ensure the SILs are not used in a manner inconsistent with FCAA § 165(a)(3), Preconstruction Requirements.<sup>287</sup> That is, permitting authorities may use the SIL as long as they consider background monitoring concentrations prior to using the SILs.<sup>288</sup> Mr. Cherry testified that he was both aware of the EPA's new guidance regarding the use of SILs for determining compliance with the PM<sub>2.5</sub> NAAQS and further, that Applicant included in its modeling demonstration supplemental information consistent with EPA guidance.<sup>289</sup>

### *Secondarily-formed emissions of PM<sub>2.5</sub>*

Protestants disputed that Applicant demonstrated that the PM<sub>2.5</sub> emissions will comply with annual NAAQS in part because Applicant did not evaluate secondarily-formed PM<sub>2.5</sub> impacts resulting from the emissions of PM<sub>2.5</sub> precursors. But the evidence shows that secondarily-formed emissions, or precursors of PM<sub>2.5</sub>, were considered to the extent it was appropriate during the minor NSR review for the proposed EPU.

Protestants, Applicant, and the ED all agreed that Applicant's annual PM<sub>2.5</sub> NAAQS demonstration can properly rely upon EPA guidance regarding the vacated SIL for PM<sub>2.5</sub>.<sup>290</sup> However, although both Applicant and the ED unequivocally agreed that Applicant's PM<sub>2.5</sub> NAAQS demonstration properly relied upon the EPA guidance relating to the vacated SIL,<sup>291</sup> Protestants claimed that EPA guidance requires consideration of the impacts of secondary

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<sup>286</sup> Protestants' Closing Argument at 38.

<sup>287</sup> ED's Closing Argument at 9.

<sup>288</sup> ED Ex. 1 (Cherry Direct) at 19; *see generally*, ED Exs. 14 and 15; ED Ex. 36 (ED's Response to Public Comment) Response 1 at 690; 42 CFR § 7475(a)(3).

<sup>289</sup> Tr. at 148; ED Ex. 36 (ED's Response to Public Comment) Response 1 at 690; ED's Closing Argument at 9.

<sup>290</sup> Applicant's Closing Argument at 30-31; ED's Closing Argument at 9; Protestants' Closing Argument at 36; ED Ex. 14 (EPA Draft Guidance for PM<sub>2.5</sub> Permit Modeling, March 4, 2013).

<sup>291</sup> Applicant's Closing Argument at 30-31; ED's Closing Argument at 9.

PM<sub>2.5</sub>,<sup>292</sup> which was not explicitly considered by Applicant and the ED. But EPA guidance only requires consideration of secondary PM<sub>2.5</sub> if an application is subject to major NSR:

The EPA promulgated SERs for PM<sub>2.5</sub> and for PM<sub>2.5</sub> precursors, nitrogen oxide (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) . . . as part of the PSD amendments to address PM<sub>2.5</sub>. . . . [T]he PM<sub>2.5</sub> precursor SERs . . . are used to determine whether any proposed *new major stationary source* or major modification will emit sufficient amounts of direct PM<sub>2.5</sub> and/or PM<sub>2.5</sub> precursors, *i.e.* equal to or above the respective SER to require review under the PSD program.<sup>293</sup> (emphasis added)

Thus, the EPA guidance only requires consideration of secondary PM<sub>2.5</sub> for applications that are subject to the PSD program (*i.e.*, major NSR).<sup>294</sup> Because the Application is not subject to major NSR, the EPA guidance document does not require consideration of secondary PM<sub>2.5</sub>. Therefore, it would not have been appropriate for Applicant's annual PM<sub>2.5</sub> NAAQS demonstration to consider secondary PM<sub>2.5</sub>.<sup>295</sup>

Nevertheless, according to Mr. Cherry, although Applicant's modeling analysis consisted of modeling direct emissions of PM<sub>2.5</sub><sup>296</sup> while secondarily-formed emissions of PM<sub>2.5</sub> were not "explicitly" modeled, such proposed emissions were "implicitly" modeled for the 24-hour PM<sub>2.5</sub> standard because Applicant performed a cumulative air impact analysis for the 24-hour PM<sub>2.5</sub> NAAQS.<sup>297</sup> Mr. Cherry testified that Applicant's model included secondarily-formed PM<sub>2.5</sub>

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<sup>292</sup> Protestants' Closing Argument at 36-38.

<sup>293</sup> ED Ex. 14 (EPA Draft Guidance for PM<sub>2.5</sub> Permit Modeling, II.1 *Significant Emissions Rate [SER]*, March 4, 2013) at 365.

<sup>294</sup> EM Ex. 100 (Parmley Direct) at 193-196. As explained in Mr. Parmley's direct testimony, the terms "major new source review," "federal review," and "Prevention of Significant Deterioration [PSD] review" are used synonymously.

<sup>295</sup> Protestants take the testimony of Applicant's air dispersion modeling expert, Mr. Parmley, completely out of context in suggesting that Mr. Parmley testified that the NAAQS demonstration required by TCEQ for a minor NSR application is the same as the NAAQS demonstration for a major NSR application. *See* Protestants' Closing Argument at 37, n. 121, citing EM Ex. 100 (Parmley Direct) at 126. In the proper context, Mr. Parmley's testimony was explaining why the NAAQS analysis for the Application was a state-required NAAQS analysis and not a federally required NAAQS analysis. His testimony did not say that a NAAQS demonstration for a minor NSR Application is the same as a NAAQS demonstration for a major NSR Application.

<sup>296</sup> Tr. at 154.

<sup>297</sup> Tr. at 154.

emission data from the monitored background concentration to show compliance with the 24-hour PM<sub>2.5</sub> NAAQS.<sup>298</sup> The ED reviewed the submission and found it acceptable.<sup>299</sup>

## 2. ALJs' Analysis and Conclusion

The evidence shows that Applicant and the ED evaluated PM<sub>2.5</sub> NAAQS compliance based on the new annual PM<sub>2.5</sub> NAAQS (12 µg/m<sup>3</sup>) and the most recent EPA guidance regarding PM<sub>2.5</sub> SILs. Protestants offered no evidence to refute this finding. The preponderance of the evidentiary record reflects that the evaluation of the annual PM<sub>2.5</sub> NAAQS was proper and that emissions from the proposed EPU will not cause or contribute to a violation of the annual PM<sub>2.5</sub> NAAQS. Applicant prevails on this issue.

## B. Ozone

### 1. Evidence and Argument

In a nonattainment area for ozone, such as in Harris County, where the proposed EPU would be located, TCEQ has instituted a cap and trade program, rather than modeling, to address ozone issues.<sup>300</sup> Mr. Parmley explains that modeling cannot demonstrate compliance with a standard that is already out of compliance.<sup>301</sup> Instead, he said, TCEQ regulates the precursors to ozone—NOx and VOC—through through a cap and trade program instituted years ago, capping the amount of NOx and the amount of highly reactive VOC (HRVOC) that tend to influence the formation of photochemical smog. According to Mr. Parmley, Applicant went through a complicated process to obtain allowances for both NOx and HRVOC emissions in Harris County

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<sup>298</sup> Tr. at 154.

<sup>299</sup> The result of the cumulative impacts analysis for the 24-hour PM<sub>2.5</sub> NAAQS using applicable draft EPA guidance showed that modeled emissions of PM<sub>2.5</sub> emissions from the proposed EPU would not exceed the NAAQS. The background monitoring information used by Applicant came from a monitor 2 kilometers away from the site. Tr. at 154.

<sup>300</sup> Tr. at 71-72, 79, 83; EM Ex. 100 (Parmley Direct) at 127; *see also* EM Ex. 102 (Section 5.1, *Requirements for Permit Application*, May 21, 2013 Application materials) at 30; EM Ex. 111 (Section 5.1, *Requirements for Permit Application*, January 18, 2013 Application materials) at 23.

<sup>301</sup> Tr. at 71.

and has been required to work under that cap ever since. Mr. Parmley concluded that the cap and trade program has been effective in preventing the introduction of new ozone precursors into the airshed.<sup>302</sup> He further explained that the emissions that would be authorized under the Final Draft Permit will be subject to the cap and trade program requirements relating to NOx and HRVOC.<sup>303</sup>

Mr. Virr, the ED's permit engineer, reviewed the emissions inventory (EI) and PAL caps for all the criteria pollutants. During his review of the Application, he asked Applicant for further information related to emissions of VOC from the proposed EPU<sup>304</sup> because, for the year 2007, EI data showed that emissions of VOC from the BOP were greater than the VOC PAL cap.<sup>305</sup> Applicant responded to Mr. Virr's request by submitting information that it would operationally manage emissions of VOC elsewhere at the BOP to comply with the PAL limits.<sup>306</sup> Applicant is bound by its response because General Condition 1 of the Final Draft Permit requires that representations made in the Application become binding conditions upon issuance of the permit.<sup>307</sup>

Mr. Virr testified that proposed emissions of VOC for the EPU will come from flaring and storage tanks.<sup>308</sup> Applicant proposes to build a 13,900 gallon, fixed-roof tank that will be painted white with submerged filling, and store "low vapor pressure material of <0.5 psia," he said.<sup>309</sup> He also testified that Applicant proposes to construct a 782,465 gallon, internal floating roof tank with a liquid mounted primary seal and a secondary mounted steel rim. Additionally,

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<sup>302</sup> Tr. at 71-72.

<sup>303</sup> EM Ex. 100 (Parmley Direct) at 127, 198-199, 204; 30 TAC ch. 101, subch. H, Division 3 (Mass Emissions Cap and Trade Program for NOx) and Division 6 (Highly-Reactive Volatile Organic Compound Emissions Cap and Trade Program).

<sup>304</sup> ED Ex. 18 (Virr Direct) at 475.

<sup>305</sup> ED Ex. 18 (Virr Direct) at 475.

<sup>306</sup> ED Ex. 18 (Virr Direct) at 475.

<sup>307</sup> ED Ex. 30 (Final Draft Permit) at 603.

<sup>308</sup> See section III.B. of the PFD for further discussion about BACT and the destruction of VOC through (elevated) flaring.

<sup>309</sup> ED Ex. 18 (Virr Direct) at 482.

Applicant proposes to build five 500-gallon tanks to be used as fuel storage for the associated diesel engines. He testified that all the proposed tanks meet current BACT.<sup>310</sup>

Mr. Virr said the proposed emissions of NO<sub>x</sub> from the EPU will come from several sources, including engines, flares, and operation of the furnaces.<sup>311</sup> He testified that diesel engines associated with generators and firewater booster pumps, both of which are permitted for “testing only,” will be operated during “emergency or upset” situations.<sup>312</sup> Testing situations are limited to 1 hour per week, according to special conditions of the Final Draft Permit.<sup>313</sup> He noted that the level of emissions control for the internal combustion engines proposed in the Final Draft Permit meets the requirements for BACT.<sup>314</sup>

Protestants averred that Applicant was required to conduct a netting and offsets analysis for its proposed EPU because Harris County is in severe nonattainment of the 1997 ozone standard.<sup>315</sup> This argument is predicated on the premise that minor NSR was not the appropriate review for the proposed EPU. But Mr. Virr determined that minor NSR review was appropriate for the proposed EPU. He testified that he reviewed the EI and PAL caps for all the criteria pollutants and his review indicated that “there was sufficient room under the cap for NO<sub>x</sub> [and] VOC . . .”<sup>316</sup>

***Single source ozone modeling not required***

Protestants disagreed with Mr. Parmley’s testimony that single source ozone modeling is never required and that TCEQ’s cap and trade program is sufficient to ensure that emissions

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<sup>310</sup> ED Ex. 18 (Virr Direct) at 482.

<sup>311</sup> ED Ex. 18 (Virr Direct) at 479.

<sup>312</sup> ED Ex. 18 (Virr Direct) at 483; ED Ex. 26 (*TCEQ Chemical Sources BACT Requirements for Internal Combustion Engines (2010)*) at 595.

<sup>313</sup> ED Ex. 18 (Virr Direct) at 483.

<sup>314</sup> ED Ex. 26 (*TCEQ Chemical Sources BACT Requirements for Internal Combustion Engines (2010)*) at 595.

<sup>315</sup> Protestants’ Closing Argument at 40-41.

<sup>316</sup> ED Ex. 18 (Virr Direct) at 475.

from the EPU will not contribute to existing violations of the ozone standard.<sup>317</sup> But TCEQ's air dispersion modeling guidance provides that ozone is a NAAQS criteria pollutant that is not required to be modeled in the air permitting context.<sup>318</sup> The evidence shows that TCEQ's ADMT audited Applicant's air dispersion modeling and determined that the modeling was appropriate in all respects.<sup>319</sup>

Applicant pointed out that although Protestants asserted that the ED takes the position that an ozone modeling demonstration should have been required, Protestants' assertion is wholly based on taking the deposition testimony of the ED's permit engineer, Mr. Virr, out of context.<sup>320</sup> When placed in proper context, Mr. Virr stated that he is not a modeling expert.<sup>321</sup> Thus, Protestants offered Mr. Virr's testimony regarding ozone modeling as expert-type testimony from a witness who has not held himself out as an expert in ozone modeling.<sup>322</sup> Mr. Virr's response during his deposition to questions about ozone modeling was not a response regarding a topic that he has held himself out to have "scientific, technical, or other specialized knowledge" that is within his area of "knowledge, skill, experience, training, or education."<sup>323</sup> Protestants could have asked the ED's air dispersion modeling expert, Mr. Cherry, if ozone modeling is required, but they did not.

Second, Applicant averred, Protestants completely misinterpreted EPA guidance regarding ozone to incorrectly argue that air dispersion modeling for ozone is required in the

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<sup>317</sup> Protestants' Closing Argument at 38-42; *see also* 76 Fed. Reg. 81371, 81385-81387.

<sup>318</sup> ED Ex. 4 (TCEQ Air Quality Modeling Guidelines, RG-25 (Revised)) at 102, 108 (For purposes of a state NAAQS analysis and a federal NAAQS analysis, only the following criteria pollutants are subject to air dispersion modeling: carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>) [surrogate is NO<sub>x</sub>], lead (Pb), and PM<sub>10</sub>).

<sup>319</sup> ED Ex. 18 (Virr Direct) at 486-488; ED Ex. 16 (ED's Air Quality Analysis Audit, January 29, 2013); ED Ex. 17 (ED's Second Air Quality Analysis Audit, May 29, 2013).

<sup>320</sup> Protestants' Closing Argument at 39-40.

<sup>321</sup> Protestants Ex. 106 (Virr deposition) at 105-106.

<sup>322</sup> Tex. R. Evid. 701, 602.

<sup>323</sup> Tex. R. Evid. 702.

permitting process.<sup>324</sup> Although EPA guidance offered in Protestants' Closing Argument says that "the appropriate time to evaluate ozone impacts from major sources of ozone precursors on attainment and nearby nonattainment areas is in the permitting process,"<sup>325</sup> the EPA guidance: (i) applies only to major sources, and (ii) says nothing about air dispersion modeling for ozone. Major NSR does not apply to the Application,<sup>326</sup> so neither could EPA guidance offered by Protestants for purposes of air dispersion modeling. In addition, EPA guidance offered by Protestants states that ozone precursors should be considered in the permitting process, and the Application and TCEQ's cap and trade programs are designed to take into account consideration of ozone precursors (NOx and HRVOC).<sup>327</sup> Thus, ozone precursors are considered but through the use of the cap and trade program rather than through air dispersion modeling for ozone, Applicant concluded.<sup>328</sup>

Third, Applicant pointed out, Protestants' incorrect assertion in their Closing Argument that offsets should have been required for ozone precursors<sup>329</sup> fails because TCEQ's rules relating to offsets for ozone precursors in ozone nonattainment areas<sup>330</sup> only apply to an "owner or operator of a proposed new major stationary source . . . or . . . an existing stationary source of VOC or NOx emissions that will undergo a major modification."<sup>331</sup> The Application in this case is not subject to major NSR.<sup>332</sup> Applicant's air permitting expert, Mr. Parmley, testified that

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<sup>324</sup> Protestants' Closing Argument at 40, citing 76 Fed.Reg. 81371, 81385, *Infrastructure and Interstate Transport Requirements for the 1997 Ozone and the 1997 and 2006 PM<sub>2.5</sub> NAAQS* (December 28, 2011).

<sup>325</sup> Protestants' Closing Argument at 40, citing 76 Fed.Reg. 81371, 81385, *Infrastructure and Interstate Transport Requirements for the 1997 Ozone and the 1997 and 2006 PM<sub>2.5</sub> NAAQS* (December 28, 2011).

<sup>326</sup> Applicant's Closing Argument at 5-21.

<sup>327</sup> Applicant's Closing Argument at 32-33.

<sup>328</sup> Applicant's Closing Argument at 32-33.

<sup>329</sup> Protestants' Closing Argument at 40-41.

<sup>330</sup> 30 TAC ch. 116, subch. B, Division 5, (Nonattainment Review Permits).

<sup>331</sup> 30 TAC § 116.150(New Major Source or Major Modification in Ozone Nonattainment Areas).

<sup>332</sup> Applicant's Closing Argument at 5-21; Protestants Ex. 100 (Powers Direct) at 13-14 (Mr. Powers refers to TCEQ's rules establishing major NSR thresholds for emissions of ozone and ozone precursors, but offers no additional theories regarding ozone); *see also* section II of PFD.

NOx and VOC offsets would only be required if the Application triggered major NSR, which it does not.<sup>333</sup>

## 2. ALJs' Analysis and Conclusion

Nothing in the record supports Protestants' assertions that ozone modeling or ozone offsets should have been required as a condition of approval for the Application. However, there is evidence in the record from Mr. Parmley that: (i) ozone modeling is never done in the context of air permitting in a nonattainment area, and (ii) NOx and VOC offsets would only be required if the Application triggered major NSR. The evidence shows that TCEQ's ADMT audited Applicant's air dispersion modeling and determined that the air dispersion modeling was appropriate in all respects. Thus, the evidentiary record reflects that the Application properly takes ozone impacts into account. Applicant prevails on this issue.

## C. Depropanizer

### 1. Evidence and Argument

Certain bottom products from the proposed EPU deethanizer will be utilized in the depropanizer at Applicant's existing BOP.<sup>334</sup> With regard to evaluating potential upstream and downstream emissions in general, such as the utilization of deethanizer bottoms in the depropanizer, Mr. Parmley testified that Applicant evaluated whether there would be an increase in allowable emissions at the downstream facilities based on the facilities' maximum allowable emissions rates contained in the MAERT included in Permit No. 3452.<sup>335</sup> Mr. Parmley testified that the depropanizer is not a downstream "affected source."<sup>336</sup> He also testified that because the

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<sup>333</sup> Tr. at 49-50, 71; EM Ex. 100 (Parmley Direct) at 126.

<sup>334</sup> EM Ex. 102 (Section 2.2.2.2, *Deethanizer and Acetylene Converter*, May 21, 2012 Application submittal) at 12; EM Ex. 111 (clarification of Section 2.2.2.2 to represent that there will be no increase in allowable emissions from the existing plant facilities due to the operation of the proposed EPU, January 18, 2013 Application submittal) at 1.

<sup>335</sup> Tr. at 25-30; EM Ex. 100 (Parmley Direct) at 55-56; EM Ex. 141 (ExxonMobil Permit 3452/PAL6, MAERT) at 43-61.

<sup>336</sup> Tr. at 27.

depropanizer is a closed-loop system and the emissions are not dependent on flow rate, no emissions increases will be associated with it.<sup>337</sup> In all cases, Applicant's permit team determined that Applicant could operate within the allowable emission limits that have been established in Permit No. 3452.<sup>338</sup>

Mr. Parmley testified that the use of the bottoms in the depropanizer was considered by Applicant's permit team, that such use is not something that would be unusual at a chemical plant, and that if there would have been an issue with emissions from the use of the bottoms at the depropanizer, the permit team would have identified it.<sup>339</sup> Mr. Parmley testified that:

We determined that the proposed EPU will not result in any new emissions source or increase in the allowable emissions from any existing emissions source at [Applicant's] existing BOP based on the existing permit for [Applicant's] BOP. . . TCEQ's rules in 30 TAC § 116.10(9)(D) provide that a modification that triggers an air permitting requirement does not include "a physical change in, or change in the method of operation of, a facility that does not result in a net increase in allowable emissions . . . ."<sup>340</sup>

In response to Protestants' cross-examination, Mr. Virr, TCEQ's permit engineer, clarified that the use of the depropanizer is related to Applicant's Permit No. 3452 for the existing BOP rather than being related to the Application in this case.<sup>341</sup> Mr. Virr's response is entirely consistent with the ED's Response to Public Comment, which states that "Emissions from the depropanizer are authorized under [P]ermit [No.]3452 and will not be authorized by [the Final Draft Permit], and comments relating to the depropanizer should be made in relation to [P]ermit [No.] 3452."<sup>342</sup> There is no evidence in the record to indicate that the depropanizer is part of the Application.<sup>343</sup>

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<sup>337</sup> Tr. at 27, 53.

<sup>338</sup> Tr. at 25-26; EM Ex. 100 (Parmley Direct) at 55-56.

<sup>339</sup> Tr. at 54-55.

<sup>340</sup> EM Ex. 100 (Parmley Direct) at 56.

<sup>341</sup> Tr. at 272, 279.

<sup>342</sup> ED Ex. 36 (ED's Response to Public Comment) Response 8 at 701.

<sup>343</sup> Protestants entered the deposition of Mr. Virr, the ED's permit engineer, into evidence. The deposition includes testimony regarding the depropanizer, duct burner, and wastewater treatment plant that is consistent with

In addition, the evidentiary record is clear that the ED considered whether there would be emissions from the depropanizer that would need to be addressed in the Application, and determined that Applicant represented in a January 18, 2013 supplement to the Application that “there will be no increase in allowable emissions from the existing plant facilities due to the operation of this proposed expansion.”<sup>344</sup> Applicant is bound by its representation because General Condition 1 of the Draft Permit requires that representations made by Applicant in its Application become binding conditions upon issuance of the permit.<sup>345</sup>

## **2. ALJs’ Analysis and Conclusion**

Protestants offered no evidence that the proposed EPU will impermissibly affect emissions at the existing depropanizer at the BOP or that the depropanizer should be included in the Application. Instead, the evidence shows that depropanizer emissions are properly considered under Permit No. 3452. Applicant prevails on this issue.

### **D. Duct Burners**

#### **1. Evidence and Argument**

Applicant proposes to add duct burners to the heat recovery steam generator section of the gas turbine generator train 5 (Train 5) at Applicant’s existing BOP, which will provide supplemental heat and incremental steam.<sup>346</sup> Train 5 makes electricity and steam at the BOP which helps to power the facilities at the site. Mr. Virr testified that the proposed duct burners may need to be added in order to generate sufficient steam (*e.g.*, power) for the proposed EPU and that this addition will be accomplished with an amendment to Permit No. 3452 rather than

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Applicant’s Closing Argument at 33-37 and the ED’s Closing Argument at 12, unless the deposition testimony is taken out of context. *See* Protestants Ex. 106.

<sup>344</sup> EM Ex. 122 (ED’s Construction Source Analysis and Technical Review) at 6.

<sup>345</sup> ED Ex. 30 (Final Draft Permit) at 603.

<sup>346</sup> EM Ex. 105 (*Additional Technical Update No. 4*, November 16, 2012 Application submittal) at 6-7.

through the Application.<sup>347</sup> Mr. Virr testified that authorization for the duct burners would not be possible under the Application because Train 5, to which the duct burners would be added, is authorized by Permit No. 3452, and the Final Draft Permit cannot authorize emissions from a unit that is already authorized by another permit.<sup>348</sup>

The ED considered whether emissions associated with the duct burners needed to be addressed in the Application, and determined that:

Because the proposed duct burners will be authorized under Permit No. 3452, information relating to size and design is more appropriately found in subsequent applications for that air quality permit. However, for purposes of demonstrating acceptable impacts for the new [EPU], including proposed changes to other facilities affected by the project but authorized by other permits . . . [Applicant] provided preliminary design information including emissions calculations and operating parameters for the duct burners, which are enforceable representations. These were evaluated in conjunction with emissions from [the Application], and determined to be acceptable.<sup>349</sup>

Further evidence that the ED considered the duct burners is included in the ED's Permit Source Analysis and Technical Review, which reiterates that the duct burners are an upstream source that is properly considered in the authorization for Permit No. 3452.<sup>350</sup>

As represented in the Application,<sup>351</sup> and as Mr. Parmley testified, there will be no increase in allowable emissions resulting from the addition of the duct burners.<sup>352</sup> The duct burners were included in Applicant's air dispersion modeling analysis but differences in the modeling results with or without the duct burners were determined to be insignificant.<sup>353</sup> The air

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<sup>347</sup> ED Ex. 18 (Virr Direct) at 491-92; Tr. at 260-261, 269.

<sup>348</sup> Tr. at 264, 273.

<sup>349</sup> ED Ex. 36 (ED's Response to Public Comment) Response 17 at 708.

<sup>350</sup> EM Ex. 122 (ED's Construction Source Analysis and Technical Review) at 6.

<sup>351</sup> EM Ex. 105 (*Additional Technical Update No. 4*, November 16, 2012 Application submittal) at 6-7.

<sup>352</sup> Tr. at 29-30.

<sup>353</sup> EM Ex. 100 (Parmley Direct) at 148; EM Ex. 116 (duct burners modeling evaluation, May 24, 2013 Application submittal) at 3-8; EM Ex. 121 (TCEQ Air Quality Analysis Audit, May 29, 2013); ED Ex. 36 (ED's Response to Public Comment) Response 1 at 687-695.

dispersion modeling results demonstrate that the incremental, actual emissions from the duct burners combined with emissions from the proposed EPU would not cause or contribute to a violation of the NAAQS, would not exceed the state property line standards, and would be protective of public health and welfare based on the state effects review.<sup>354</sup>

Applicant pointed out that Protestants did not offer any direct evidence relating to the duct burners. Thus, Applicant contended, the evidentiary record reflects that the duct burners are not properly part of the Application in this case, and Protestants' theory that they should be part of the Application has no merit.

## **2. ALJs' Analysis and Conclusion**

The evidence supports a finding that emissions from the proposed duct burners should be addressed pursuant to an amendment to Permit No. 3452 and not as part of the Application. In addition, the evidence shows there will be no increase in allowable emissions resulting from the addition of the duct burners. Therefore, Applicant prevails on this issue.

## **E. Wastewater Treatment Plant**

### **1. Evidence and Argument**

Mr. Parmley testified that the wastewater collection and treatment system for the proposed EPU would be served by an existing wastewater treatment facility<sup>355</sup> that is not part of the Application in this case.<sup>356</sup> Mr. Parmley explained that: (i) emissions associated with the wastewater generated from the proposed EPU will be limited to storage of the wastewater in Tank No. XXZTK05 prior to off-site treatment;<sup>357</sup> and (ii) wastewater emissions associated with

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<sup>354</sup> EM Ex. 116 (duct burners modeling evaluation, May 24, 2013 Application submittal) at 3-8; *see also* ED Ex. 18 (Virr Direct) at 492; ED Ex. 17 (TCEQ's Second Air Quality Analysis Audit, May 29, 2013) at 461.

<sup>355</sup> Tr. at 44; *see also* ED Ex. 18 (Virr Direct) at 492.

<sup>356</sup> Tr. at 68, 78.

<sup>357</sup> EM Ex. 100 (Parmley Direct) at 80.

the wastewater storage tank will be less than 5 tpy and will meet BACT since the wastewater collection system for the EPU would include the installation and use of piping and a covered conveyance of the wastewater to storage and off-site biological treatment.<sup>358</sup>

Wastewater storage tank emissions were addressed in Applicant's air dispersion modeling analysis.<sup>359</sup> The ED properly considered emissions from wastewater associated with the proposed EPU, noting that the existing BOP wastewater treatment plan is authorized by Permit No. 3452.<sup>360</sup> Mr. Virr testified that "[Applicant] represented that any additional wastewater treated by the existing plant could be accommodated under the existing allowable emission rates" of the existing wastewater treatment facility.<sup>361</sup> PAL rules afford Applicant the flexibility to operationally manage emissions not to exceed PAL site-wide at BOP, he said.<sup>362</sup>

## 2. ALJs' Analysis and Conclusion

Protestants did not offer any evidence that the proposed EPU will impermissibly affect emissions at the existing wastewater treatment plant at the BOP. Instead, the evidentiary record reflects that emissions from the wastewater storage associated with the proposed EPU have been properly addressed and any emissions from the treatment of the wastewater are not part of the Application in this case. The ALJs conclude that Applicant has met its burden on this issue.

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<sup>358</sup> EM Ex. 100 (Parmley Direct) at 177-178; EM Ex. 157 (*TCEQ Chemical Sources Current BACT for Wastewater Facilities (2011)*).

<sup>359</sup> EM Ex. 106 (Air Quality Modeling Analysis Report, Section 3.7.9, *Floating Roof Storage Tank*) at 29; EM Ex. 106 (inclusion of emission rates from Equalization Tank XXZTK05 in the modeling) at 51-80.

<sup>360</sup> EM Ex. 122 (ED's Construction Source Analysis and Technical Review) at 6.

<sup>361</sup> ED Ex. 18 (Virr Direct) at 492; ED Ex. 36 (ED's Response to Public Comment) Response 5 at 699-700.

<sup>362</sup> ED Ex. 18 (Virr Direct) at 492; ED Ex. 36 (ED's Response to Public Comment) Response 5 at 699-700.

## F. Planned MSS Activities

### 1. Evidence and Argument

Applicant and the ED claimed that the planned MSS activities associated with the proposed EPU and their emissions are either already authorized by Permit No. 3452 or will be authorized once the Final Draft Permit is issued.<sup>363</sup> Protestants argued that Permit No. 3452 “on its face” does not authorize emissions from the EPU<sup>364</sup> and planned MSS activities associated with the EPU and their emissions were not properly evaluated and will not be properly authorized if the Final Draft Permit is issued.<sup>365</sup>

“Planned MSS” are the periodic activities relating to maintenance, startup, or shutdown that are intermittent in nature, but are an important part of plant operation.<sup>366</sup> The planned MSS activities for which Applicant is requesting authorization through the Application include furnace SCR warm-up, intermittent flaring, backup/emergency generators, and fire water booster pump engines (Flare and Furnace Planned MSS). According to Mr. Parmley, Applicant has committed to ensure that the annual furnace SCR warm-up emissions do not exceed the annual routine furnace block emissions limits in the Final Draft Permit MAERT and that the hourly NOx and PM/PM<sub>10</sub>/PM<sub>2.5</sub> furnace SCR warm-up emissions do not exceed the hourly emissions limits as indicated in the Final Draft Permit MAERT.<sup>367</sup>

The ED evaluated planned MSS activities for the process units in the proposed EPU as part of his technical review.<sup>368</sup> Mr. Virr testified that some of the planned MSS activities for the

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<sup>363</sup> EM Ex. 100 (Parmley Direct) at 85-97; ED Ex. 18 (Virr Direct) at 485; ED Ex. 36 (ED’s Response to Public Comment) Responses 20-22 at 710-713.

<sup>364</sup> Protestants’ Closing Argument at 44.

<sup>365</sup> Protestants’ Closing Argument at 44- 45.

<sup>366</sup> EM Ex. 100 (Parmley Direct) at 86.

<sup>367</sup> EM Ex. 100 (Parmley Direct) at 87-88; EM Ex. 111 (Section 5.1, *Requirements for Permit Application*, January 18, 2013 Application supplement) at 20-21. Mr. Parmley also explains how planned MSS meets BACT: *see* EM Ex. 100 (Parmley Direct) at 182-186.

<sup>368</sup> ED Ex. 18 (Virr Direct) at 485.

proposed EPU are contained in Permit No. 3452, the site-wide permit for the BOP.<sup>369</sup> Provisions of Permit No. 3452 that govern planned MSS activities include emission rates in the MAERT; Special Conditions 24 - 42 that identify controls required during planned MSS activities; and the identification in Attachment C of allowable activities and associated restrictions and emissions controls.<sup>370</sup> A May 2011 amendment to Permit No. 3452 affords flexibility to accommodate planned MSS from future projects at the BOP,<sup>371</sup> such as the EPU. The ED also clarified that:

As part of the technical review of the MSS amendment for Permit No. 3452, worst case emissions were modeled to determine if predicted off site [sic] impacts from MSS activities would be acceptable. If the Applicant operates [the EPU] according to its representations made in the [Application], TCEQ has determined that the planned MSS emissions are adequately protective of human health and welfare.<sup>372</sup>

Mr. Parmley explained that planned MSS activities that are already included in Permit No. 3452 relate to small equipment maintenance and the use of vacuum trucks, frac tanks, and consumables.<sup>373</sup> He said the emission rates for those activities are sufficient for current activities at the BOP as well as for those that would occur at the EPU.<sup>374</sup> Therefore, new allowable emissions are not being requested in the Application for these activities, he said.<sup>375</sup>

Further, both Mr. Parmley and Mr. Virr explained that planned MSS activities associated with the proposed EPU, other than the Flare and Furnace Planned MSS, are already authorized in

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<sup>369</sup> ED Ex. 18 (Virr Direct) at 485; Applicant conducted air dispersion modeling for its planned MSS amendment for on-site sources authorized by Permit No. 3452 during that permit's technical review. ED Ex. 36 (ED's Response to Public Comment) Response 1 at 693-694 and Response 20 at 710-711.

<sup>370</sup> ED Ex. 36 (ED's Response to Public Comment) Responses 20 and 21 at 710-711.

<sup>371</sup> ED Ex. 36 (ED's Response to Public Comment) Responses 21 and 22 at 711, 713.

<sup>372</sup> ED Ex. 36 (ED's Response to Public Comment) Response 21 at 711.

<sup>373</sup> EM Ex. 100 (Parmley Direct) at 92; EM Ex. 141 (ExxonMobil Permit 3452/PAL6) Special Condition 25 at 20.

<sup>374</sup> EM Ex. 100 (Parmley Direct) at 96; *see also* EM Ex. 142 (*State Health Effects Evaluation Modeling Report in Support of MSS Activities, Amendment Application (January 2009)*), BOP TCEQ Permit No. 3452 and PAL6 and PSD-TX-303M2).

<sup>375</sup> EM Ex. 100 (Parmley Direct) at 86-87; *see* EM Ex. 111 (Section 5.1, *Requirements for Permit Application*, January 18, 2013 Application submittal) at 21.

Special Condition 20 of the Final Draft Permit.<sup>376</sup> Special Condition 20 provides that “allowable emissions for planned MSS activities associated with the facilities authorized by this permit are contained in Permit No. 3452, unless specified otherwise in this permit.”<sup>377</sup> Managing the Flare and Furnace Planned MSS under the Final Draft Permit and other planned MSS emissions that are in line with the activities identified in Permit No. 3452 “is consistent with current TCEQ practices for authorizing emissions from planned MSS activities at new and existing facilities.”<sup>378</sup>

Mr. Parmley further explained that Special Conditions 19 - 22 of the Final Draft Permit address requirements for the planned MSS activities associated with the Flare and Furnace Planned MSS.<sup>379</sup> For example, Special Condition 21 addresses planned MSS from the furnaces and Special Condition 22 limits the hours of operation for the ground flare to 160 hours in a 12-month rolling period.<sup>380</sup> In addition, Special Condition 12 provides that the diesel engines (*i.e.*, the backup/emergency generators and fire water booster pump engines) are limited to 52 hours of engine testing annually and must fire diesel fuel containing not more than 0.3 weight percent sulfur.<sup>381</sup>

Mr. Virr described the steps that must be taken to minimize emissions during planned MSS for the furnaces, and stated that BACT limits were established for all applicable emissions.<sup>382</sup> Mr. Virr testified that part of his technical review included evaluating MSS for process units in the proposed EPU but that MSS activities currently authorized by Permit No. 3452 were not evaluated as these are site MSS activities conducted at the BOP.<sup>383</sup>

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<sup>376</sup> EM Ex. 100 (Parmley Direct) at 91; ED Ex. 18 (Virr Direct) at 485.

<sup>377</sup> EM Ex. 124 (Final Draft Permit, Special Condition 20) at 17.

<sup>378</sup> ED Ex. 36 (ED’s Response to Public Comment) Response 22 at 713.

<sup>379</sup> EM Ex. 100 (Parmley Direct) at 90-91; EM Ex. 124 (Final Draft Permit) Special Conditions 19-22 at 17-18; *see also* ED Ex. 30 (Final Draft Permit, Special Conditions 19-22) at 619-620.

<sup>380</sup> EM Ex. 124 (Final Draft Permit) Special Conditions 21 and 22 at 17-18.

<sup>381</sup> EM Ex. 124 (Final Draft Permit) Special Condition 12 at 9.

<sup>382</sup> ED Ex. 18 (Virr Direct) at 485; ED Ex. 36 (ED’s Response to Public Comment) Response 21 at 711.

<sup>383</sup> ED Ex. 18 (Virr Direct) at 485.

Protestants contended that Permit No. 3452 does not authorize any MSS emissions for the EPU, because (1) that permit only authorizes emissions represented in Applicant's 2008 MSS application from emissions points listed in the Permit No. 3452 MAERT and (2) representations regarding MSS activities at the EPU were not included in the 2008 application.<sup>384</sup>

Applicant disagreed with Protestants. First, Applicant argued, Protestants' supposition that preconstruction authorization is required for emissions from planned MSS activities is wrong.<sup>385</sup> Authorization for planned MSS is for emissions associated with an activity, which is very different than preconstruction authorization for a facility that must be physically built.<sup>386</sup>

Second, Applicant stated, the evidence in the record demonstrates that Protestants are simply incorrect to assert that Applicant's modeling analysis did not: (i) include all of the emissions from planned MSS activities, or (ii) demonstrate that there will not be negative health or welfare impacts. Contrary to Protestants' assertions, the Air Quality Modeling Analysis submitted as part of the Application describes the emissions from the planned MSS activities that were modeled in this case, and includes emissions from the furnaces, the backup diesel engines, and the Flare and Furnace Planned MSS.<sup>387</sup>

Dr. Jones, the ED's expert toxicologist, reviewed the Air Quality Modeling Analysis submitted with the Application and concluded that the emissions from the proposed EPU:

[W]ill not be detrimental to public health or welfare, animal life, or vegetation, or cause any nuisance conditions that would affect the normal use and enjoyment of property. . . . [T]he modeled emissions . . . will comply with the [TCAA] and the rules of the TCEQ.<sup>388</sup>

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<sup>384</sup> Protestants' Closing Argument at 44; EM Ex. 143 at 5.

<sup>385</sup> Protestants' Closing Argument at 43.

<sup>386</sup> 30 TAC § 116.110(a).

<sup>387</sup> EM Ex. 106 (Applicant's *Air Quality Modeling Analysis*, submitted November 19, 2012) at 29; ED Ex. 36 (ED's Response to Public Comment) Response 1 at 693-694.

<sup>388</sup> ED Ex. 39 (Jones Direct) at 742.

Dr. Fraiser, Applicant's expert toxicologist, also concluded that the proposed EPU will be protective of health and welfare in the vicinity of the plant, and will not cause adverse health or welfare effects among the general public.<sup>389</sup>

In addition, emissions from planned MSS activities were modeled in 2009 when Applicant incorporated authorization for planned MSS emissions at the existing BOP into Permit No. 3452.<sup>390</sup> Mr. Parmley explained that emissions from planned MSS activities modeled in 2009 are exactly the same planned MSS activities as the non-Flare and Furnace Planned MSS described in the Application for the EPU that is the subject of this case:

The maximum emissions rates from the use of vacuum trucks, use of frac tanks, use of consumables, and small equipment maintenance as represented in the 2009 planned MSS permit application and as used in the 2009 modeling are high enough that none of those rates will be exceeded by the combined emissions from the use of vacuum trucks, use of frac tanks, use of consumables, and small equipment maintenance that will be associated with the proposed EPU, and the emissions from each of those types of activities that currently occur at [Applicant's] BOP.<sup>391</sup>

Protestants suggested that TCEQ was unable to assess the impact of planned MSS based on the modeling conducted in 2009.<sup>392</sup> However, in the proper context, based on the modeling of emissions from planned MSS in 2009, TCEQ's Toxicology Division concluded that "considering the benzene emission reductions that are expected [and] improvement in air quality in the surrounding community, we support this permit amendment."<sup>393</sup>

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<sup>389</sup> EM Ex. 200 (Frasier Direct) at 75-76.

<sup>390</sup> EM Ex. 100 (Parmley Direct) at 91-97; EM Ex. 142 (*State Health Effects Evaluation Modeling Report in Support of MSS Activities, Amendment Application (January 2009)*, BOP TCEQ Permit No. 3452 and PAL6 and PSD-TX-303M2).

<sup>391</sup> EM Ex. 100 (Parmley Direct) at 96.

<sup>392</sup> Protestants' Closing Argument at 44; EM Ex. 143 (*TCEQ Health Effects Review of Emissions*, TCEQ Toxicology Division (May 5, 2010)) at 13.

<sup>393</sup> EM Ex. 143 (*TCEQ Health Effects Review of Emissions*, TCEQ Toxicology Division (May 5, 2010)) at 13.

## 2. ALJs' Analysis and Conclusion

The evidence in the record corroborates Mr. Parmley's testimony, indicates the ED adequately considered all planned MSS, and demonstrates that planned MSS activities are appropriately addressed in the Application. The evidence shows that planned MSS emissions were properly modeled, meet BACT, and, where appropriate, planned MSS activities are included in Permit No. 3452. Therefore, the ALJs find that the evidentiary record reflects that the planned MSS activities associated with the proposed EPU and their emissions either are already authorized under Permit No. 3452 or will be properly authorized once the Final Draft Permit is issued. Applicant prevails on this issue.

### V. NOTICE REQUIREMENTS FOR REQUESTING A CONTESTED CASE HEARING AFTER ISSUANCE OF THE RESPONSE TO COMMENTS - 30 TEXAS ADMINISTRATIVE CODE §§ 55.156 AND 55.210

#### A. Issue

After the hearing on the merits, in their Closing Argument, Protestants objected for the first time that members of the public were not given an adequate opportunity to request a contested case hearing. Specifically, Protestants complained that the ED did not follow Commission rules requiring the ED's Notice of Application and Preliminary Decision (NAPD) to notify members of the public that they could request a contested case hearing for up to 30 days after the ED's Response to Public Comment was issued. Protestants contended that the NAPD did not include this instruction and, over their objections,<sup>394</sup> the preliminary hearing, in which party status for the contested case hearing could be requested, was held less than 30 days after the ED's Response to Public Comment was issued. Protestants argued that, because members of the public were not given an adequate opportunity to request a hearing in this matter consistent

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<sup>394</sup> Protestants lodged no objection to the notice contained in the NAPD at the preliminary hearing or the hearing on the merits or to the hearing notice. *See* Preliminary Hearing Tr. at 9.

with Commission rules, notice in this case was deficient and public participation in this permitting matter was inappropriately curtailed.<sup>395</sup>

The ED asserted that all applicable notice requirements were followed in the Application process.<sup>396</sup> Applicant agreed with the ED.<sup>397</sup>

The ALJs find that notice contained in the NAPD was proper. The NAPD was not required to contain the language at issue; instead, the NAPD was required to notify the public that a contested case hearing could be requested within 30 days after the NAPD was published. The evidence shows that the April 16, 2013 publication of the NAPD in both English-language and Spanish-language newspapers contained the required language, giving the public an opportunity to request a hearing within 30 days of publication—or by May 16, 2013—consistent with Commission rules, as discussed below. The ED's Response to Public Comment was issued on June 28, 2013, and the preliminary hearing was held 10 days later, on July 8, 2013.

## **B. Background**

On July 22, 2012, Applicant published a Notice of Receipt of Application and Intent to Obtain Air Permit (NORI) in *The Baytown Sun* and *El Perico* newspapers, generally circulated in Baytown, Texas.<sup>398</sup> The NORI notified the public that a contested case hearing could be requested within 30 days of publication of the NORI or “if a hearing request is timely filed in response to this [NORI], the time period for requesting a contested case hearing will be extended to thirty days after the mailing of the [ED's] response to comments.”<sup>399</sup> On July 3, 2012, TCEQ received timely requests for a contested case hearing from, among others, Air Alliance Houston,

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<sup>395</sup> Protestants' Closing Argument at 45-46. Protestants do not cite to any rule in support of their contention.

<sup>396</sup> ED's Closing Argument at 14-16.

<sup>397</sup> Applicant's Reply to Closing Argument at 42.

<sup>398</sup> 30 TAC ch. 39; Ex. 100 (Parmley Direct) at 46; EM Ex. 125 (Published Notice of Receipt of Application and Intent to Obtain Air Permit, newspaper clippings, publisher's affidavits, Public Notice Verification form, TCEQ Chief Clerk's Mailing List); *see also* ED Ex. A.

<sup>399</sup> ED Ex. B; 30 TAC § 39.411(e) (Text of Public Notice).

one of the Protestants in this proceeding,<sup>400</sup> which extended the time to request a contested case hearing to 30 days after the ED's Response to Public Comment was mailed.

However, on March 27, 2013, before the ED's Response to Public Comment was issued, Applicant filed a request to directly refer its Application to SOAH for a contested case hearing, requiring TCEQ's chief clerk to immediately refer the case<sup>401</sup> and for the ED to compile an administrative record for SOAH.<sup>402</sup>

On April 16, 2013, Applicant published the NAPD in *The Baytown Sun* and *El Perico*.<sup>403</sup> The NAPD notified the public that a timely hearing request had already been received by TCEQ and the deadline for requesting a contested case hearing was 30 days from the NAPD publication date.<sup>404</sup> The following is from the text of the NAPD, offset and bolded in accordance with 30 Texas Administrative Code § 39.411, Text of Public Notice, published for this permit application:

**OPPORTUNITY FOR A CONTESTED CASE HEARING. A contested case hearing is a legal proceeding similar to a civil trial in a state district court. A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. . . .Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**<sup>405</sup>

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<sup>400</sup> ED Ex. 36 (ED's Response to Public Comment) at 685.

<sup>401</sup> Immediately after the ED issues a preliminary decision on an application, the Commission, on the request of the applicant or the ED shall refer the application directly to the SOAH for a contested case hearing on whether the application complies with all applicable statutory and regulatory requirements. Tex. Water Code § 5.557(a); 30 TAC § 55.210(a)(b).

<sup>402</sup> When a case is directly referred to SOAH, the Commission by rule shall provide for public comment and the ED's response to public comment to be entered into the administrative record of decision on an application. Tex. Water Code § 5.557(c) and 30 TAC § 55.210(c); ED Ex. 36 (ED's Response to Public Comment) at 685-686.

<sup>403</sup> 30 TAC § 39.419(b); ED Ex. B (Published Notice of Application and Preliminary Decision, newspaper clippings, publisher's affidavits, Public Notice Verification form, TCEQ Chief Clerk's Mailing List); *see also* EM Ex. 100 (Parmley Direct) at 47-48; EM Ex. 126.

<sup>404</sup> If the case had not already been directly referred to SOAH, the NAPD would have been required to notify the public that a contested case hearing could be contested either within 30 days of publication of the NAPD or within 30 days of issuance of the ED's Response to Public Comment. 30 TAC § 39.411(e) and (f).

<sup>405</sup> The ALJs note that the language in the NAPD comports with the instructions issued to Applicant by the ED on April 9, 2013. ED Ex. B.

On April 22, 2013, the Commission issued an order directly referring the case to SOAH.<sup>406</sup> When TCEQ's chief clerk referred the Application to SOAH on May 29, 2013, SOAH took jurisdiction<sup>407</sup> and the authority to name parties to the contested case hearing resided with the ALJs.<sup>408</sup> On June 28, 2013, the ED issued his Response to Public Comment<sup>409</sup> and issued a Final Draft Permit.<sup>410</sup> On July 2, 2013, the ED filed the NORI, NAPD, and hearing notices with SOAH, as part of the administrative record, with no objections to notice.<sup>411</sup> The preliminary hearing, at which parties were named, was held on July 8, 2013, less than 30 days after the ED's Response to Public Comment was issued, in Baytown, Harris County, Texas.

### C. Applicable Law and Discussion

The law regarding notice requirements for requesting a contested case hearing in air quality permit cases, as found at 30 Texas Administrative Code § 116.111, is

(b) In order to be granted a permit, amendment, or special permit amendment, the owner or operator must comply with the following notice requirements. . . .

(2) Applications declared administratively complete on or after September 1, 1999, are subject to the requirements of Chapter 39 of this title (relating to Public Notice) and Chapter 55 of this title (relating to Request for Reconsideration and Contested Case Hearings; Public Comment). . . .

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<sup>406</sup> *TCEQ Interim Order Concerning the Application of ExxonMobil Chemical Corporation for a new Air Quality Permit No. 102892*; TCEQ Docket No. 2013-0657-AIR (April 22, 2013).

<sup>407</sup> 1 TAC § 155.51, Jurisdiction states: "Acquisition of jurisdiction. SOAH acquires jurisdiction over a case when a referring agency completes and files a Request to Docket Case form and any documents described in § 155.53 of this title (relating to Request to Docket Case). A separate Request to Docket Case form shall be completed and filed for each case referred to SOAH."

<sup>408</sup> 30 TAC § 80.105(b) states, in part: "If jurisdiction is established, the judge shall: (1) name the parties. . ."; 30 TAC § 80.109(a), Designation of Parties, states, in part: "Determination by judge. All parties to a proceeding *shall* be determined at the preliminary hearing or when the judge otherwise designates. . . ."

<sup>409</sup> EM Ex. 100 (Parmley Direct) at 36-37; EM Ex. 123 (ED's Response to Public Comment); *see also* ED Ex. 36 (ED's Response to Public Comment).

<sup>410</sup> ED Ex. 30 (Final Draft Permit).

<sup>411</sup> ED Exs. A, B, and C.

*Publication of the NAPD*

For cases that are directly referred to SOAH, 30 Texas Administrative Code § 55.210(e) sets out the language that must be included if the NAPD is provided at or after direct referral. Under the rule, the NAPD must notify members of the public that

a person who may be affected by emissions of air contaminants from the facility or proposed facility is entitled to request a contested case hearing from the [C]ommission . . . [that] must be received by the end of the comment period *or* within 30 days after the mailing of the [ED's] response to comments (emphasis added).<sup>412</sup>

But when cases are directly referred to SOAH, TCEQ's chief clerk is not required to mail (or otherwise transmit) the ED's Response to Public Comment,<sup>413</sup> so including language in the NAPD regarding a deadline related to mailing of the ED's Response to Public Comment would be irrelevant. The sections of 30 Texas Administrative Code § 55.156 that apply to directly referred cases do not require TCEQ's chief clerk to transmit the ED's Response to Public Comment and instructions for requesting a contested case hearing to "any person who submitted comments during the public comment period, any person who requested to be on the mailing list for the permit action, any person who timely filed a request for a contested case hearing in response to the [NORI], [OPIC], and the Office of Public Assistance."<sup>414</sup>

Specifically, 30 Texas Administrative Code § 55.156(f) provides that, for direct referrals to SOAH, "sections (c) and (d) of [30 Texas Administrative Code § 55.156] do not apply." Section (c) relates to the responsibility of TCEQ's chief clerk—*after the ED files his Response to*

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<sup>412</sup> ED Ex. B; 30 TAC § 39.411(11)(A)(i). The ALJs note that the required language applies to air permit applications subject to the requirements for Prevention of Significant Deterioration and Nonattainment (*i.e.*, major NSR) permits in 30 Texas Administrative Code ch. 116. As discussed in section II of the PFD, the Application is not subject to major NSR; 30 TAC § 55.152(a); *see also* 30 TAC §§ 39.605(b) and 39.411(f)(5).

<sup>413</sup> See 30 TAC § 55.210(d), stating which requirements of 30 TAC § 55.156 (related to Public Comment Processing) apply to directly referred cases, and 30 TAC § 55.156(f) stating that 30 TAC § 55.156(c), requiring TCEQ's chief clerk to mail the ED's Response to Public Comment, does not apply in directly referred cases.

<sup>414</sup> 30 TAC § 55.156(c)(2). But 30 TAC § 55.156(f)(1) states that 30 TAC § 55.156(c)(2) does not apply to directly referred cases.

*Public Comment*—to mail (or otherwise transmit) the ED’s Response to Public Comment to certain persons, along with instructions for requesting a contested case hearing (emphasis added). TCEQ’s chief clerk is not required to transmit such instructions for directly referred cases. Section (d) sets out the information that must be included in the TCEQ chief clerk’s instructions regarding how to request a contested case hearing. Again, section (d) does not apply to directly referred cases. Therefore, members of the public need only be notified that a request for a contested case hearing must be received by the Commission by the end of the comment period. There is no evidence that any hearing requests were filed, in the instant case, within the 30-day comment period.

***Public meeting for directly referred cases***

The NAPD also notified members of the public of an opportunity to request a public meeting within 30 days of publication. There is no evidence that a public meeting—which is intended for the taking of public comment and is not a contested case proceeding—was held following publication of the NAPD.<sup>415</sup> The direct referral rule requires that, to the extent practicable, a public meeting for any directly referred case shall be held prior to or on the same date as the preliminary hearing<sup>416</sup> and the public comment period shall be extended to the close of any public meeting.<sup>417</sup> Had a public meeting been held the same date as the preliminary hearing—July 8, 2013 in the instant case—the ED could not have issued his Response to Public Comment until after the preliminary hearing, during which parties would have been named and a procedural schedule, including a date for the hearing on the merits, could have been established. In addition, parties could have discussed and reached a settlement at the preliminary hearing. Further, the rule allows for the public meeting to be held *after* the preliminary hearing (emphasis added), in which case the ED’s Response to Public Comment would not be issued until the contested case hearing process was already underway. The rule does not require the NAPD to inform members of the public of a right to request a contested case hearing for up to 30 days

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<sup>415</sup> 30 TAC § 55.210(c).

<sup>416</sup> 30 TAC § 55.210(c)(2).

<sup>417</sup> 30 TAC § 55.210(c)(4).

after the ED's Response to Public Comment is mailed, when a contested case hearing already could be in progress.

Instead, the rule requires the NAPD to notify members of the public of their right to request a contested case hearing either within 30 days of publication *or* within 30 days after the ED's Response to Public Comment is mailed (emphasis added). The rule does not require the NAPD to notify members of the public of both options. The ED chose to notify the public of the right to request a contested case hearing within 30 days of publication of the NAPD, in accordance with all relevant rules. The Texas standard for judicial deference towards an agency's interpretation of its own rules is well-recognized as deference towards the agency unless the agency's interpretation is, "plainly erroneous or inconsistent with the regulation."<sup>418</sup>

### ***Processing Public Comments***

For directly referred air quality permit cases, the law regarding processing public comments is set out at 30 Texas Administrative Code § 55.210, which states that "[a] case that has been directly referred to SOAH shall be subject to the public comment processing requirements of 30 Texas Administrative Code § 55.156(a) and (b)(1) and (3)."

In relevant part, 30 Texas Administrative Code § 55.156 states:

(a) The chief clerk shall deliver or mail to the [ED], [OPIC], the Office of Public Assistance, the director of the Alternative Dispute Resolution Office, and the applicant copies of all documents filed with the chief clerk in response to public notice of an application.

(b) If comments are received, the following procedures apply to the [ED].

(1) Before an application is approved, the [ED] shall prepare a response to all timely, relevant and material, or significant public comment, whether or not withdrawn, and specify if a comment has been withdrawn. Before any air quality permit application for a

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<sup>418</sup> See *Pub. Util Comm'n v. Gulf States Utils. Co.*, 809 S.W. 2d 201, 207 (Tex 1991); see also *Mont Belvieu Caverns, LLC v. Texas Comm'n on Environmental Quality*, 382 S.W.3d 472, 487 (Tex. App.-Austin, 2012)("To the extent our analysis turns on TCEQ's construction of the rules themselves, we defer to the agency's interpretation of its own rules unless that interpretation is plainly erroneous or inconsistent with the text of the rule or underlying statute.")

[PSD] or Nonattainment permit subject to Chapter 116, Subchapter B of this title (relating to [NSR] Permits) . . . is approved, the [ED] shall prepare a response to all comments received. The response shall specify the provisions of the draft permit that have been changed in response to public comment and the reasons for the changes. . . .

(3) The [ED] shall file the response to comments with the chief clerk within the shortest practical time after the comment period ends, not to exceed 60 days.

When cases are directly referred to SOAH, and public comments are received, the ED is required to prepare a response to public comments and file the response with TCEQ's chief clerk within 60 days after the comment period ends. 30 Texas Administrative Code § 55.156(b)(1) and (3). In the instant case, the public comment period ended May 16, 2013, and the ED's Response to Public Comment was filed within 60 days, on June 28, 2013. There is no express requirement that the TCEQ chief clerk issue instructions notifying persons they have 30 days from the time the ED's Response to Public Comment is filed to request a contested case hearing. And, because such instructions are required to be sent pursuant to 30 Texas Administrative Code § 55.156(c) *after* the ED files his Response to Public Comment, and 30 Texas Administrative Code § 55.156(c) does not apply to cases that are directly referred to SOAH, affected persons do not have 30 days after the ED's Response to Public Comment is filed to request a contested case hearing.

### *Commission's Order*

Applicant noted that the April 22, 2013 TCEQ Commission Interim Order directly referring this matter to SOAH for a contested case hearing requires that “[t]he preliminary hearing in this matter shall not convene until after the [ED] has issued his Response to Comments.”<sup>419</sup> The Commission could have ordered other special conditions relating to the Response to Comments—such as a 30-day waiting period during which persons could request a contested case hearing—but did not.

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<sup>419</sup> See TCEQ Interim Order Concerning the Application of ExxonMobil Chemical Corporation for a New Air Quality Permit No. 102892, Ordering Provision No. 2, TCEQ Docket No. 2013-0657-AIR (April 22, 2013).

#### **D. ALJs' Conclusion**

Applicant's direct referral of its own Application, in accordance with 30 Texas Administrative Code § 55.210, provided the only applicable procedures by which interested persons could request a contested case hearing. The NAPD contained all required language properly notifying members of the public how to request a contested case hearing. The ED correctly instructed Applicant to notify members of the public that they had until the end of the comment period, which was 30 days after the April 16, 2013 publication of the NAPD, to request a contested case hearing. There was no duty to notify members of the public that they had until 30 days after issuance of the ED's Response to Public Comment to request a contested case hearing. The ALJs, therefore, find notice regarding requesting a contested case hearing, as contained in the NAPD, was not deficient. Specifically, notice properly gave members of the public an adequate opportunity to request a contested case hearing in this matter consistent with Commission rules. The ALJ's overrule Protestants' objection to notice.

#### **VI. TRANSCRIPT COSTS**

A certified court reporter must make a verbatim record and transcript of a contested case hearing.<sup>420</sup> The Commission may assess reporting and transcription costs to one or more of the parties participating in the proceeding.<sup>421</sup> Applicant paid or will pay \$4,002.50 to the reporting service for transcripts of the preliminary hearing and the hearing on the merits.<sup>422</sup> Applicant requested that at least 25% of the transcript costs be assigned to Protestants, and that the remaining percentage be assigned to Applicant. Protestants asked that transcript costs be assessed only against Applicant.

In arguing that Applicant should be required to pay all transcript costs, Protestants suggested that "this proceeding resulted from Applicant's choice of a direct referral . . . [and as

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<sup>420</sup> 30 TAC § 80.23(a), Transcriptions of Hearings.

<sup>421</sup> See 30 TAC § 80.23(d)(1)(reasonable allocation of transcription costs).

<sup>422</sup> See invoice at Applicant's Closing Argument, Attachment 9.

such] the scope of the contested case hearing was not limited to issues raised in Protestants' hearing requests."<sup>423</sup> To the contrary, Applicant responded, Protestants' hearing requests and comments submitted to TCEQ were extensive enough<sup>424</sup> to have required Applicant to essentially carry the burden of proof on the entire Application whether or not a direct referral had been requested. Only after the hearing on the merits concluded were the issues narrowed, when the parties arrived at a post-hearing briefing schedule that identified the six disputed issues addressed in this PFD.

#### **A. Applicable Law, Evidence, and Argument**

The Commission shall consider the following factors in assessing reporting and transcription costs:

- (A) the party who requested the transcript;
- (B) the financial ability of the party to pay the costs;
- (C) the extent to which the party participated in the hearing;
- (D) the relative benefits to the various parties of having a transcript;
- (E) the budgetary constraints of a state or federal administrative agency participating in the proceeding; . . . and
- (G) any other factor which is relevant to a just and reasonable assessment of costs.<sup>425</sup>

##### **1. The party who requested the transcript**

The ALJs ordered Applicant to arrange for and pay a court reporter to record and transcribe the hearing on the merits, and to deliver the original transcript to the ALJs and two copies to TCEQ's chief clerk.<sup>426</sup> Applicant's request for the transcript was made "subject to reimbursement from other parties upon assessment of costs."<sup>427</sup> Thus, Applicant's request for

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<sup>423</sup> Protestants' Closing Argument at 45-46.

<sup>424</sup> Protestants Exs. 3A and 3B (Comments/hearing requests submitted to TCEQ, July 3, 2012 and May 16, 2013).

<sup>425</sup> 30 TAC § 80.23(d)(1), Transcriptions of Hearings.

<sup>426</sup> See SOAH Order No. 2 at 7; see also 30 TAC § 80.23(b)(5)(granting authority to the ALJs to order a transcript).

<sup>427</sup> 30 TAC § 80.23(b)(5)(granting authority to ALJs to order a transcript); 30 TAC § 80.23(d)(1)(A)(consideration of the party who requested the transcript).

the transcript does not automatically require Applicant to pay the entire invoice. Protestants complained that Applicant did not furnish them with a copy of the transcript,<sup>428</sup> but Applicant was under no obligation to deliver Protestants a copy of the transcript at Applicant's expense.<sup>429</sup> To the contrary, TCEQ's rules allow for parties other than the ED and OPIC to pay for their own copy of the transcript.<sup>430</sup>

**2. The financial ability of the party to pay costs**

Although Applicant has the financial ability to pay for the transcript,<sup>431</sup> there is no evidence that Protestants do not have the financial wherewithal to pay their fair share. Thus, Applicant's ability to pay is not dispositive.

**3. The extent to which the party participated in the hearing**

Applicant and Protestants participated in the hearing.<sup>432</sup> Thus, this factor shows that Applicant and Protestants each should be assessed a fair share of the transcript costs.

**4. The relative benefits to the parties of having a transcript**

Applicant and Protestants benefitted equally from the transcript in the creation of an evidentiary record and in their preparation of closing arguments and replies.<sup>433</sup> Therefore, this

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<sup>428</sup> Protestants' Closing Argument at 46.

<sup>429</sup> See SOAH Order No. 2 at 7.

<sup>430</sup> 30 TAC § 80.23(b) provides in part that "A request for a transcript of a proceeding already reported may be made directly to the court reporter" and 30 TAC § 80.23(f) allows for a court reporter to sell copies of the transcript in proceedings in accordance with TCEQ's court reporter services agreement (if applicable), but that TCEQ must comply with the Public Information Act. Protestants' Closing Argument states that Protestants obtained a copy of the transcript from the TCEQ Chief Clerk. Protestants Closing Argument at 46.

<sup>431</sup> See 30 TAC § 80.23(d)(1)(B)(financial ability to pay).

<sup>432</sup> 30 TAC § 80.23(d)(1)(C)(participation in the hearing).

<sup>433</sup> 30 TAC § 80.23(d)(1)(D)(relative benefits).

factor preponderates toward a recommendation that Applicant and Protestants should be assessed their fair share of the transcript costs.

**5. Budgetary constraints of a participating state administrative agency**

The ED and OPIC fulfilled their statutory duties by participating in the hearing. The ED's participation in any contested case hearing is limited to two issues: (1) to provide information to complete the administrative record; and (2) to support the ED's position developed during the underlying proceeding. OPIC cannot be assessed transcription costs since it cannot appeal any act of the Commission.<sup>434</sup> Thus, transcript costs should not be assessed against the ED or OPIC.

**6. Any other factor relevant to a just and reasonable assessment of costs**

Other factors "relevant to a just and reasonable assessment of costs,"<sup>435</sup> Applicant contended, are: (1) although Protestants raised numerous issues in their comments and in their disclosures under Rule 194 of the Texas Rules of Civil Procedure, they only asked questions during cross-examination about a fraction of the issues that they had raised; (2) their only witness was Mr. Powers; (3) they did not depose a single witness for Applicant; (4) they propounded extensive discovery requests which prompted Applicant to identify and produce approximately 11,809 documents (comprising 343,708 pages) to Protestants, none of which were raised by Protestants in their pre-filed testimony or in the hearing on the merits; (5) they produced very little of their own evidence to enter into the record and would not agree on any meaningful stipulations to streamline the hearing on the merits;<sup>436</sup> and (6) Protestants readily admitted they were not prepared to challenge more than a limited number of issues in the

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<sup>434</sup> Tex. Water Code §§ 5.228 (ED participation at hearings), 5.273 (OPIC is a statutory party), 5.275 (OPIC may not appeal); *see also* 30 TAC § 80.23(d)(2)(no transcript costs to statutory parties who may not appeal).

<sup>435</sup> 30 TAC § 80.23(d)(1)(G)(other factors).

<sup>436</sup> Preliminary Hearing Tr. at 47-50; Tr. at 16.

Application.<sup>437</sup> Although Protestants suggested that they opposed an expedited hearing, the fact is, as acknowledged by SOAH Order No. 2 in this case,<sup>438</sup> Protestants agreed to the hearing schedule at the preliminary hearing and even suggested that “we might need a couple extra days [for the hearing on the merits] . . . but the first day we can certainly agree on would be [October 1, 2013].<sup>439</sup>

Applicant concluded that not assessing some of the transcript costs against Protestants would be inequitable and unjust to Applicant.

## **B. ALJs’ Analysis and Conclusion**

The ALJs find that dividing the transcript costs between Applicant and Protestants is just and reasonable, based on the factors that must be considered in accordance with TCEQ’s rules. The ALJs therefore recommend that Applicant be assessed 75% of the transcript costs and Protestants pay 25% of the transcript costs.

## **VII. CONCLUSION**

Because the Application was directly referred to SOAH for a contested case hearing, Applicant had the burden to prove by a preponderance of the evidence that the Application satisfies all applicable statutory and regulatory requirements.<sup>440</sup> However, the only disputed issues are those identified in the Post-Hearing Briefing Outline.<sup>441</sup> All other issues are not in dispute. Applicant has demonstrated by a preponderance of the evidence that the Application satisfies the requirements necessary for approval with regard to the disputed issues that are

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<sup>437</sup> Protestants explained that because the case was directly referred to SOAH, the hearing was not limited to issues raised in Protestants’ hearing requests. Protestants’ Closing Argument at 46.

<sup>438</sup> SOAH Order No. 2 at 2.

<sup>439</sup> Preliminary Hearing Tr. at 165.

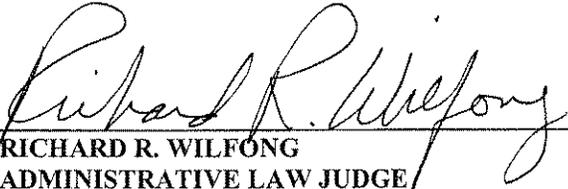
<sup>440</sup> *TCEQ Interim Order Concerning the Application of ExxonMobil Chemical Corporation for a new Air Quality Permit No. 102892*; TCEQ Docket No. 2013-0657-AIR (April 22, 2013); Tex. Water Code § 5.557(a); 30 TAC § 55.210(b).

<sup>441</sup> See Rule 11 Agreement filed by the parties on October 4, 2013, pursuant to Tex. R. Civ. P. 11.

identified in the Post-Hearing Briefing Outline, as discussed herein. Therefore, the ALJs recommend that the Commission approve the Application, issue a permit consistent with the Final Draft Permit, and adopt the Proposed Findings of Fact and Conclusions of Law that are being submitted separately.

**SIGNED December 18, 2013.**

  
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SHARON CLONINGER  
ADMINISTRATIVE LAW JUDGE  
STATE OFFICE OF ADMINISTRATIVE HEARINGS

  
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RICHARD R. WILFONG  
ADMINISTRATIVE LAW JUDGE  
STATE OFFICE OF ADMINISTRATIVE HEARINGS

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**



**AN ORDER CONCERNING THE APPLICATION OF EXXONMOBIL FOR ISSUANCE  
OF AIR QUALITY PERMIT NO. 102982 FOR THE CONSTRUCTION OF A NEW  
ETHYLENE PRODUCTION UNIT AT EXXONMOBIL'S BAYTOWN OLEFINS  
PLANT, LOCATED IN HARRIS COUNTY, TEXAS  
TCEQ DOCKET NO. 2013-0657-AIR  
SOAH DOCKET NO. 582-13-4611**

On \_\_\_\_\_, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of ExxonMobil Chemical Company (ExxonMobil) for issuance of Air Quality Permit No. 102982 for the construction of a new ethylene production unit at ExxonMobil's Baytown Olefins Plant, located in Harris County, Texas. A Proposal for Decision (PFD) was presented by Sharon Cloninger and Richard R. Wilfong, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH), who conducted a hearing concerning the application on October 1-2, 2013, in Austin, Texas.

After considering the ALJs' PFD, the Commission adopts the following Findings of Fact and Conclusions of Law:

**I. FINDINGS OF FACT**

1. On May 21, 2012, ExxonMobil Chemical Company (Applicant) filed an application (Application) with the Texas Commission on Environmental Quality (TCEQ or Commission) for a permit to construct a new Ethylene Production Unit (EPU) at Applicant's Baytown Olefins Plant (BOP) in Baytown, Texas. The Application was

supplemented from time to time after it was initially filed and included confidential material.

2. The Application proposes to construct an EPU that would include eight new steam cracking furnaces and recovery equipment, including a quench tower, caustic wash facilities, and a deethanizer and acetylene converter, a demethanizer system, and an ethylene recovery process.
3. Ancillary equipment proposed includes a decoking unit, a cooling tower, a flare system, a wastewater collection tank, small emergency diesel storage tanks, backup diesel engines, and a firewater booster pump.
4. The Application proposes equipment typical for chemical manufacturing plants similar to the proposed EPU.
5. On May 30, 2012, Applicant submitted revisions to TCEQ Form PI-1.
6. On May 30, 2012, the Executive Director (ED) declared the Application administratively complete.
7. On June 22, 2012, Applicant published a Notice of Receipt of Application and Intent to Obtain Air Permit in *The Baytown Sun* and *El Perico* (Spanish-language) newspapers generally circulated in Baytown, Texas.
8. On August 28, 2012, Applicant submitted a response to a TCEQ Request for Additional Information, which included confidential material.
9. On November 19, 2012, Applicant submitted an Air Quality Modeling Analysis to TCEQ.
10. Applicant responded to additional TCEQ Requests for Information on November 14, 16, December 5, 7, and 14, 2012.

11. On December 10, 2012, and January 8, 14, and 17, 2013, Applicant submitted supplemental information relating to the Air Quality Modeling Analysis.
12. On January 18, 2013, Applicant submitted a supplement to the Application, which included confidential material.
13. On April 1, 4, and 5, 2013 Applicant supplemented the Application with additional information relating to cooling tower emissions, which included confidential material.
14. On April 8, 2013, Applicant submitted supplemental information relating to testing of decoking vents.
15. On April 9, 2013, the ED concluded that the Application was technically complete, issued a Draft Permit, and recommended that the Application be approved.
16. On April 16, 2013, Applicant published a Notice of Application and Preliminary Decision in *The Baytown Sun* and *El Perico*.
17. The public comment period ended on May 16, 2013.
18. TCEQ received timely comment letters from the United States Environmental Protection Agency (EPA), Environmental Integrity Project (EIP) on behalf of Sierra Club and Air Alliance Houston (Protestants), and Jimbo Wells.
19. The Application was made available for public inspection during the entire public comment period at the Sterling Municipal Library in Baytown, Texas.
20. Applicant posted required signs, including alternative language signs.
21. On May 22, 24, 28, and 29, 2013, Applicant responded to TCEQ requests for additional modeling information, which included confidential material.
22. On March 27, 2013, Applicant formally requested that the Application be directly referred to SOAH.

23. On April 22, 2013, the Commission referred the matter to the SOAH to conduct a contested case hearing and to issue a proposal for decision (PFD).
24. On June 7, 2013, Applicant published an Amended Notice of Hearing in the *Baytown Sun*.
25. On June 28, 2013, the ED issued his Response to Public Comment and issued a Final Draft Permit.
26. Administrative Law Judges (ALJs) Sharon Cloninger and Richard R. Wilfong convened a preliminary hearing in Baytown, Texas, on July 8, 2013. No party contested either notice or jurisdiction and jurisdiction was established.
27. At the preliminary hearing, the ALJs granted party status to Protestants, which shared counsel and were aligned for purposes of their participation at the hearing.
28. The hearing on the merits was held October 1-2, 2013, at SOAH, William P. Clements State Office Building, 300 West 15th Street, Fourth Floor, Austin, Texas. All parties appeared and participated in the hearing. The record closed October 25, 2013, after the parties filed written closing arguments and replies.

#### Completeness of Application

29. The Application is for a minor New Source Review (NSR) air quality permit No.102982.
30. The Application includes a complete Form PI-1 General Application signed by Applicant's authorized representative. The Application was also submitted under the seal of a registered Texas Professional Engineer.
31. Applicant paid the \$75,000.00 application fee.
32. The Application fully addresses all of TCEQ's requirements for an air quality permit application.

33. The Application properly identifies and addresses all sources of air emissions from the proposed EPU.

Emissions

34. Applicant's proposed EPU may emit: CO, NO<sub>2</sub>, SO<sub>2</sub>, and PM, including PM<sub>10</sub> and PM<sub>2.5</sub>, and non-criteria pollutants H<sub>2</sub>SO<sub>4</sub>, acetylene, ammonia, benzene, 1,3 butadiene, butene, 1-butene, ethylbenzene, ethylene, n-hexane, isopropyl benzene, naphthalene, n-pentane, toluene, light VOCs, heavy VOCs, and xylene.

Location

35. The EPU will be located in a portion of Harris County, Texas, that has been designated a non-attainment area for ozone.
36. There are no schools located within 3,000 feet of the proposed site.

Protection of Public Health and Welfare, 30 TAC § 116.111(a)(2)(A)

37. Emission rates of regulated air contaminants were calculated using conservative and widely-accepted emissions factors and methodologies published in EPA and TCEQ guidance documents.
38. Applicant performed air dispersion modeling to demonstrate that emissions from the proposed EPU will be protective of public health and welfare.
39. Applicant submitted a modeling protocol to TCEQ for review prior to conducting the air dispersion modeling; the ED approved the modeling protocol. The protocol addressed all modeling inputs, including the control options, source options, receptor options, boundary options, meteorological options, terrain options, output options, and contaminants modeled.

40. Applicant used the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 12060.
41. The modeling was conducted in accordance with TCEQ and EPA guidelines.
42. All sources of air contaminants were included in the modeling analysis.
43. The modeling submitted by Applicant yielded conservatively high predictions of ambient impacts. Actual impacts from the proposed EPU will be only a fraction of the impacts estimated by the model.
44. Applicant's Air Dispersion Modeling was acceptable.
45. The Application complies with all applicable rules and policies, and documented its conclusion in an internal report called the "Construction Permit Source Analysis & Technical Review."
46. The modeling analysis was acceptable for all review types and pollutants and the predicted impacts from the proposed project were acceptable in accordance with TCEQ rules and guidelines.
47. Demonstrating compliance with all rules and regulations of TCEQ demonstrates that the Application both protects public health and welfare and that the Application complies with the intent of the Texas Clean Air Act (TCAA).
48. Applicant will comply with all TCEQ rules and regulations and with the intent of the TCAA, including the protection of the health and property of the public.

#### NAAQS Analysis

49. National Ambient Air Quality Standards (NAAQS) apply throughout the United States and are set at levels protective of public health and welfare with an adequate margin of safety.

50. Primary NAAQS are health-based standards set to protect the health of sensitive individuals, such as asthmatics, children, and the elderly.
51. Secondary NAAQS are established to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.
52. The EPA has established NAAQS for six pollutants, referred to as “criteria” pollutants: sulfur dioxide (SO<sub>2</sub>), ozone, nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), lead, and particulate matter (PM), including PM with an aerodynamic diameter less than 10 micrometers (PM<sub>10</sub>) and PM with an aerodynamic diameter less than 2.5 micrometers (PM<sub>2.5</sub>).
53. Air dispersion modeling is used to determine whether predicted ground level concentrations (GLCs) of air contaminants will cause or contribute to exceeding NAAQS.
54. If the highest predicted concentration of a pollutant at or beyond the property line due to an applicant’s emissions fall below the corresponding NAAQS Significant Impact Level (SIL)—which is a conservative screening level set by the EPA for each NAAQS criteria pollutant—then no further analysis is required and compliance with NAAQS has been demonstrated.
55. Applicant modeled CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub> for the purpose of the State NAAQS analysis. Applicant’s modeling showed maximum concentrations did not exceed the SIL for CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> (annual), and SO<sub>2</sub>, and therefore, demonstrated compliance with the NAAQS for these pollutants and averaging times.
56. No NAAQS demonstration is required for ozone in nonattainment areas. No ozone modeling is required for the Application because ozone modeling is not required in an

ozone nonattainment area, but ozone is instead addressed through TCEQ's cap-and-trade programs for NOx and VOCs.

57. Lead will not be emitted from the proposed EPU.
58. Applicant's modeling analysis predicted the maximum GLC for PM<sub>2.5</sub> (24-hour) is above the SIL; therefore, a further site-wide Refined Screening Analysis was performed.
59. Applicant's Refined Screening Analysis for PM<sub>2.5</sub> (24-hour) included the proposed maximum allowable emissions authorized for PM<sub>2.5</sub> (24-hour) in the Final Draft Permit in addition to all existing emission sources of PM<sub>2.5</sub> at the BOP, at their maximum allowable emissions rates, and from planned maintenance, startup, and shutdown (MSS), and a few sources at off-site locations recently permitted but not constructed. A representative background concentration of PM<sub>2.5</sub> (24-hour) from a nearby monitoring station was added and the sum was compared to the 24-hour PM<sub>2.5</sub> NAAQS.
60. The Refined Screening Analysis resulted in a total PM<sub>2.5</sub> (24-hour) concentration of 30.4 µg/m<sup>3</sup>, which is below the 24-hour primary and secondary NAAQS of 35 µg/m<sup>3</sup>.
61. The modeling was conservative and demonstrated the project will not cause or contribute to exceeding NAAQS for PM<sub>2.5</sub> (24-hour).
62. The PM<sub>2.5</sub> (Annual) NAAQS analysis demonstrates that the maximum predicted GLC-max for annual PM<sub>2.5</sub> was 0.2 µg/m<sup>3</sup>, which is only 65.1% of the SIL for annual PM<sub>2.5</sub>, which is set at 0.3 µg/m<sup>3</sup>. Thus, no additional modeling to demonstrate compliance with the PM<sub>2.5</sub> (Annual) NAAQS of 12 µg/m<sup>3</sup> was required based on recent EPA guidance.
63. The PM<sub>2.5</sub> NAAQS analysis was appropriate based on recent EPA guidance adopted in response to a United States Court of Appeals decision that vacated the PM<sub>2.5</sub> SILs.

64. Emissions from Applicant's proposed EPU will not cause or contribute to any exceeding of the NAAQS.
65. Since the proposed emissions will not cause or contribute to exceeding the NAAQS, no adverse health or welfare effects will result from any emissions of criteria pollutants from the proposed EPU.

#### State Property Line Analysis

66. State property line standards for sulfur compounds set maximum concentrations of such compounds due to emissions from within an applicant's property lines.
67. Applicant's proposed EPU will emit SO<sub>2</sub> and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), substances for which State Property Line Standards exist.
68. The maximum modeled 1-hour SO<sub>2</sub> concentration predicted to result from Applicant's EPU emissions is 6.4 µg/m<sup>3</sup>, which is below TCEQ's 1-hour standard of 715 µg/m<sup>3</sup>.
69. The maximum modeled H<sub>2</sub>SO<sub>4</sub> concentrations predicted to result from Applicant's EPU emissions are <0.1 µg/m<sup>3</sup> (1-hour) and <0.1 µg/m<sup>3</sup> (24-hour), which are below TCEQ's 1-hour standard of 50 µg/m<sup>3</sup> and 24-hour standard of 15 µg/m<sup>3</sup>.
70. Applicant's EPU emissions will not exceed any State Property Line Standard.

#### State Effects (ESL) Analysis

71. Effects Screening Levels (ESLs) are conservative health or welfare-based screening levels used to evaluate the potential for health and welfare effects for constituents without a NAAQS or TCEQ Property Line Standard. Modeled GLCs are compared to the ESLs in accordance with TCEQ guidance. TCEQ has developed ESLs for more than 5,000 compounds.

72. ESLs are conservative guidelines set at levels well below those where health or welfare effects are likely to occur. If modeled concentrations of a constituent are below the ESL, adverse effects are not expected. Modeled concentrations that exceed the ESLs do not indicate that adverse health or welfare effects are likely but instead point to the need for additional modeling or technical evaluation.
73. Applicant estimated impacts of sixteen compounds: acetylene, ammonia, benzene, 1,3 butadiene, butene, 1-butene, ethylbenzene, ethylene, n-hexane, isopropyl benzene, naphthalene, n-pentane, toluene, light VOC, heavy VOC, and xylene. All pollutants that would be emitted from the EPU that were not previously modeled in the NAAQS or State Property Line Analysis were modeled as part of the State Effects modeling.
74. The off-site GLC-max of all the pollutants that were modeled for the hourly and annual averaging periods are below 10% of the ESL, except ammonia, ethylene, and light VOC. Therefore, the modeling demonstrated that emissions of acetylene, benzene, 1,3 butadiene, butene, 1-butene, ethylbenzene, n-hexane, isopropyl benzene, naphthalene, n-pentane, toluene, heavy VOCs, and xylene would be protective of health and welfare, and no further analysis was required.
75. Applicant conducted refined site-wide (including both project-related and non-project-related emissions at the BOP) for ammonia, ethylene, and light VOC that resulted in predicted annual GLC-max concentrations for all three compounds that were below their respective ESLs and an hourly GLC-max concentration of ethylene that was below the 1-hour ESL for ethylene. Therefore, the modeling demonstrated that the emissions of ammonia (annual), ethylene (both 1-hour and annual), and light VOC (annual) will be protective of health and welfare.

76. The GLC-max predicted for ammonia (1-hour) and light VOC (1-hour) were further evaluated based on: 1) the magnitude of the ESL exceedance; 2) the frequency of exceedances; and 3) whether the GLC-max was predicted to occur on industrial or non-industrial property, in accordance with TCEQ guidance.
77. Applicant predicted a 1-hour GLC-max for ammonia approximately 2.6 times the ESL and a 1-hour GLC-max for light VOC approximately 2.5 times the ESL. Both concentrations were expected to occur only 14-16 hours per year on industrial property and 5 hours per year on non-industrial property. Given the small magnitude and frequency of exceedences, no adverse health or welfare effects are expected to occur from these emissions.
78. The ED reviewed the modeling analysis for non-criteria pollutants and determined that the results of the State Effects Review demonstrated that emissions from the proposed EPU would be protective of health and welfare.

Measurement of Emissions, 30 TAC § 116.111(a)(2)(B)

79. Applicant is required to comply with applicable sampling requirements to measure emissions in accordance with 30 Texas Administrative Code § 116.115(b)(2)(C).
80. Applicant is required to perform initial stack testing to confirm the actual quantities of air contaminants being emitted into the atmosphere from the furnaces.
81. Applicant is required to properly install, operate, and maintain continuous emissions monitoring systems (CEMS) to provide a continuous demonstration of compliance with limits on emissions of NO<sub>x</sub> and CO from the furnaces based on the design and performance standards in 40 CFR Part 60, Appendix B, Performance Specification Nos. 1 through 9.

82. Applicant is required to measure ammonia concentrations in each exhaust stack associated with the selective catalytic reduction (SCR) control device.
83. Applicant is required to install and operate flow meters to measure fuel flow usage for each furnace and for monitoring stack exhaust from the furnaces as required by EPA specifications in 40 CFR Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.
84. Applicant is required to monitor the flow and composition of streams sent to the flares as required by EPA specifications in 40 CFR Part 60, Section 10.0, Appendix B, Performance Specification 9, and the heating value of gas combusted in the flares must be calculated in accordance with 40 CFR § 60.18(f).
85. Applicant is required to sample total dissolved solids (TDS) and conductivity of the cooling water to demonstrate compliance with cooling tower emission limits.
86. The Final Draft Permit contains adequate provisions for measuring emissions that are required by federal standards such as the New Source Performance Standards (NSPS) that apply, and as required by TCEQ's rules in 30 Texas Administrative Code § 101.8 relating to sampling and 30 Texas Administrative Code § 101.9 relating to sampling ports.
87. The Final Draft Permit's provisions for measuring emissions from the EPU are comparable to other issued permits approved by TCEQ for similar facilities and are adequate to assure compliance with the permit conditions and emissions limitations.

Nonattainment Review, 30 TAC § 116.111(a)(2)(H) and  
Prevention of Significant Deterioration, 30 TAC § 116.111(a)(2)(I)

88. Applicant established a Plant-wide Applicability Limit (PAL) for VOCs, NO<sub>x</sub>, PM, SO<sub>2</sub>, CO, and Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) in Permit No. 3452 (PAL6) that was issued on August 24, 2005.
89. Applicant's existing PAL6 does not authorize any facility to emit air pollutants, but establishes an annual emissions level below which new and modified facilities, or emissions units at a major stationary source, will not be subject to major new source review so long as the new emissions added to existing emissions at the site are under the PAL Caps.
90. Applicant's existing BOP site is in compliance with PAL6.
91. The Semi-Annual Report (SAR) is used to determine compliance with PAL6.
92. The Annual Emissions Inventory Update is not used to determine compliance with PAL6.
93. PAL6 specifies the methods that must be used by Applicant to demonstrate compliance with the PALs. All SARs prepared by Applicant have demonstrated compliance with the PALs contained in PAL6.
94. PM emissions from cooling towers were not included in the PM PAL Cap in 2005 based on TCEQ policy and practice when PAL6 was issued. Determining compliance with PAL6 does not include PM emissions from the cooling towers.
95. The PM PAL limit in Applicant's PAL6 also includes a PM<sub>2.5</sub> and a PM<sub>10</sub> PAL based on TCEQ practice and EPA's Surrogate Policy. Once a PAL is issued, it remains the federal applicability limit through the term of the 10-year PAL.
96. Applicant can manage new emissions under the existing PAL Caps by instituting additional emission reductions, if necessary, in other areas of the BOP.

97. The Application does not trigger federal nonattainment NSR and is not subject to federal PSD permitting requirements because emissions proposed to be authorized in the Application for the EPU will be managed by Applicant such that they will fit under the existing PAL Caps.

Best Available Control Technology (BACT), 30 TAC § 116.111(a)(2)(C)

98. BACT is an air pollution control method for a new or modified facility that, through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. The emissions reduction can be achieved through technology such as the use of add-on control equipment or by enforceable changes in production processes, systems, methods, or work practice.
99. The Application includes a complete and accurate BACT analysis that satisfies TCEQ requirements.
100. In undertaking its BACT analysis, Applicant considered reliable authorities, including TCEQ guidance and BACT analyses in other permit applications, primarily the ChevronPhillips permit for a similar EPU.
101. BACT applies to the steam cracking furnaces, including the decoking drums, the atmospheric process vent, the cooling tower, the flare system, the storage tanks, the diesel engines, equipment component fugitives, and planned MSS activities.
102. The Application provides sufficient information about the design and operation of the furnaces necessary to perform BACT analyses on the furnaces.
103. Applicant reviewed the ChevronPhillips application as well as other applications for similar EPUs to determine what those applications had proposed as BACT for cracking

furnaces; no other permit contained a furnace BACT that is more stringent than what is proposed in the Application.

104. Applicant will achieve BACT for the proposed furnaces by the use of ultra-low NOx burners, SCR, good design and combustion practices, and the combustion of low sulfur fuel.
105. TCEQ guidance for process furnaces provides for a case-by-case Tier I BACT review when the NOx emissions rate will be above 0.01 lb NOx per MMBtu.
106. Applicant will meet 0.01 lb NOx per MMBtu on an annual average basis for the furnace block with ultra-low NOx burners, using SCR and good design and combustion practices, which is BACT for NOx for pyrolysis furnaces.
107. Applicant's SCR systems for the proposed furnaces will be designed and operated to control NOx emissions while meeting the ammonia slip requirements. Applicant will meet 10 ppmvd at 3% O<sub>2</sub> on a 12-month rolling average, which is BACT for ammonia.
108. Applicant will control CO emissions to 50 ppmvd at 3 vol% O<sub>2</sub> on a 12-month rolling average using good combustion and maintenance practices. This represents BACT for CO from the furnaces.
109. Applicant will meet BACT for PM emissions from the furnaces, which is less than 5% opacity.
110. Applicant will control SO<sub>2</sub> emissions from the furnaces with the use of a low-sulfur fuel, such as natural gas. The proposed furnaces will exceed BACT for SO<sub>2</sub> through the firing of supplemental hydrogen from the process because hydrogen contains no sulfur and, therefore, results in no SO<sub>2</sub> emissions.

111. Applicant will control VOC from the furnaces through the use of good combustion practices and the existence of high combustion temperature in the furnaces. The proposed furnaces will exceed BACT for VOC through the firing of hydrogen from the process because the burning of hydrogen results in no VOC emissions.
112. Because ChevronPhillips' EPU application triggered a federal nonattainment review, the lowest achievable emissions rate (LAER), a higher level of control than BACT, was required for VOC. Applicant's proposed BACT for VOC was equivalent to ChevronPhillips' and therefore exceeds BACT.
113. Applicant will use good combustion and maintenance practices and the use of cyclonic separation that will achieve 95% control which is BACT for PM for the decoking drum.
114. Applicant will use good combustion and maintenance practices, which includes the use of a minimum steam rate of 45,000 lbs/hr which is BACT for CO from the decoking drum.
115. Applicant's flare system will consist of a steam-assisted elevated flare and a multi-point ground flare (MPGF) system.
116. Applicant designed the elevated flare for smokeless operation pursuant to TCEQ guidance; therefore, the elevated flare will not generate PM emissions.
117. The elevated flare is designed with destruction and removal efficiency (DRE) of 99% for hydrocarbons with three or less carbon atoms and 98% for hydrocarbons with more than three carbon atoms. This is BACT for VOCs from flare systems.
118. Applicant will control SO<sub>2</sub> emissions from the elevated flare by the use of low sulfur natural gas as the pilot, comply with 40 CFR § 60.18, and continuously monitor for presence of flame, which is BACT for SO<sub>2</sub> for flares.

119. Applicant designed the MPGF system for smokeless operation pursuant to TCEQ guidance; therefore, the MPGF system will not generate PM emissions.
120. Applicant will use low sulfur natural gas as the pilot and comply with 40 CFR § 60.18, which is BACT for VOCs for the MPGF system.
121. Emissions calculations for the MPGF system were estimated based on a DRE of 99% for hydrocarbons with three or less carbon atoms and 98% for hydrocarbons with more than three carbon atoms, but the MPGF system is expected to achieve greater than the 98% and 99% DRE, and is, therefore, expected to exceed BACT for VOCs from flares.
122. Applicant will control SO<sub>2</sub> emissions from the MPGF system by the use of low sulfur natural gas as the pilot, comply with 40 CFR § 60.18, and continuously monitor for presence of flame, which is BACT for SO<sub>2</sub> from the MPGF system.
123. Applicant will control PM emissions from the cooling tower by using high-efficiency drift eliminators to limit drift to no more than 0.0005% of the towers' circulation rates, which is reflected in the MAERT allowable emissions rate for the cooling tower. This exceeds TCEQ's BACT level of 0.001% of the circulation rate for PM from cooling towers.
124. Applicant will control VOCs from the cooling tower through the use of a non-contact cooling tower design, monthly monitoring, and repairing any process leaks of VOCs into the cooling water as soon as possible. The Application exceeds BACT for VOCs because air-strippable VOCs will be continuously monitored at each inlet, which will allow for earlier detection and repair of VOC leaks.
125. The Acetylene Converter Regeneration Vent is proposed as an intermittent source. Therefore, based on infrequent operation and minimal emissions, BACT for VOC (the

only regulated pollutant that could be emitted from this vent) complies with the TCEQ vent gas rules located in 30 Texas Administrative Code ch. 115.

126. Because the wastewater emissions associated with the operation of Applicant's proposed EPU will be less than 5 tons per year (tpy), BACT is piping the wastewater, or sending it in a covered conveyance, to storage and off-site biological treatment. Wastewater will be collected and stored within the equalization tank (EPN XXZTK05) which is a vertical tank equipped with an internal floating roof, and the collected wastewater will be conveyed via enclosed piping to an existing wastewater treatment plant authorized in Permit No. 3452.
127. Emergency generator diesel storage tanks, the compressor wash oil tank, and the firewater pump diesel storage tanks, all of which are fixed roof tanks, will have tank capacities far less than 25,000 gallons, store materials with vapor pressures far less than 0.5 psia, are equipped with submerged fill, and white or aluminum uninsulated exterior surfaces. These parameters meet BACT requirements.
128. The equalization tank will meet BACT requirements by having a tank capacity greater than 0.5 psia, an internal floating roof tank, white or aluminum exterior surfaces, and a liquid mounted primary seal.
129. Other tanks associated with the proposed EPU will either store a compound with vapor pressure less than 0.0002 psia, which is not considered a regulated air contaminant, or will be fixed roof tanks that will vent to the furnaces and thus meet BACT by having their emissions controlled with combustion.

130. Applicant will operate the proposed diesel engines in accordance with 30 Texas Administrative Code § 117.8140(b), Emission Monitoring for Engines, which requires that the proposed engines be checked for proper operation.
131. Applicant will test the proposed diesel engines approximately 1 hour each week to ensure they are working properly if needed during an emergency. The Final Draft Permit limits the engine run time for testing to 52 hours per year.
132. The proposed diesel engines (backup generator engines and the firewater booster pump engines) will be operated less than 850 hours per year and are therefore defined as emergency generators. Because the diesel engines are only proposed to be used during emergency or upset situations, their emissions are limited to 1 hour of testing per week and are not subject to a BACT review.
133. Applicant will minimize ammonia leaks from the fugitive equipment associated with the proposed SCR system by an audio, visual, and olfactory (AVO) inspection program which will occur twice per shift. Applicant will control fugitive VOC emissions by the 28 vaporized hydrogen peroxide (VHP) leak detection and repair program, which is BACT.
134. The Application requests authorization for the emissions from planned MSS activities associated with the flare systems, the furnaces, the backup/emergency generator, and fire water booster pump engines. All other allowable emissions from planned MSS are authorized under existing Permit No. 3452 and therefore, no BACT analysis was necessary for the emissions already authorized.

135. Planned MSS emissions associated with furnace combustion will be managed within the MAERT limits for the furnace section, which are based on emissions at BACT-equivalent levels.
136. The BACT analysis for the proposed furnaces and the backup generator engines and the firewater booster pump engines, encompassed BACT for planned MSS for the furnaces and the diesel engines.
137. An MPGF system is proposed to control specific high-volume emissions from intermittent vents, such as venting during planned MSS activities.
138. The proposed intermittent flaring from the MPGF will be limited to no more than 160 hours per year. Applicant will take all practicable steps to minimize venting to the MPGF during planned MSS and will comply with the requirements of 40 CFR § 60.18.
139. The use of MPGF constitutes BACT for VOCs from planned MSS.
140. The BACT analysis was conducted properly and the Final Draft Permit imposes conditions that meet or exceed BACT requirements for all proposed facilities and pollutants under all permitted operating conditions.
141. The control technologies selected in Applicant's BACT analysis represent BACT.

New Source Performance Standards (NSPS), 30 TAC § 116.111(a)(2)(D)

142. Applicant will comply with all applicable NSPS: Subparts Kb (Volatile Organic Liquid Storage Vessels), VVa (Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006), NNN (Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations), RRR (Volatile Organic Compounds (VOC) Emissions from

Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes) and IIII (Stationary Compression Ignition Internal Combustion Engines).

National Emission Standards for Hazardous Air Pollutants (NESHAPs),  
30 TAC § 116.111(a)(2)(E)

143. Applicant will comply with all applicable NESHAPs: Subparts A (General Provisions), J (Equipment Leaks (Fugitive Emissions Sources) of Benzene), V (Equipment Leaks (Fugitive Emissions Sources), and FF (Benzene Waste Operations).

NESHAPs for Source Categories (MACT), 30 TAC § 116.111(a)(2)(F)

144. Applicant will comply with all applicable NESHAPs for source categories (MACT): Subpart A (General Provisions), XX (Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations), and YY (Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards).

Performance Demonstration, 30 TAC § 116.111(a)(2)(G)

145. Applicant provided sufficient information to demonstrate that the proposed EPU has been planned to operate, and can and will be operated, so that the performance specified in the Application and in the Final Draft Permit will be achieved.
146. Applicant is required to comply with all of the representations made in its Application.
147. Applicant is required by the Final Draft Permit to demonstrate that it is achieving the performance specified in the Application and the emission limits in the MAERT when the EPU begins to operate.
148. Applicant will be required by the terms of the Final Draft Permit to perform testing for various emission sources and operate a CEMS to measure emissions to demonstrate continuous compliance. In addition, Applicant will be required to ensure that opacity limits are met.

149. Applicant will be required to maintain ongoing records to demonstrate the levels of performance specified in the Application are met.

Air Dispersion Modeling, 30 TAC § 116.111(a)(2)(J)

150. Applicant performed computerized air dispersion modeling sufficient to demonstrate compliance with 30 Texas Administrative Code § 116.111(a)(2)(J).

Hazardous Air Pollutants, 30 TAC § 116.111(a)(2)(K)

151. The proposed EPU will not be a major source of HAPs. Therefore, this rule does not apply.

Mass Emissions Cap and Trade Program, 30 TAC § 116.111(a)(2)(L)

152. Applicant will manage NO<sub>x</sub> and HRVOC emissions from the EPU under existing allowances established by TCEQ or otherwise obtain allowances as needed under Subchapter H requirements in accordance with 30 Texas Administrative Code § 116.111(a)(2)(L).

Additional Findings Concerning Air Emissions and Other Disputed Issues

153. The Application does not circumvent the TCAA or TCEQ rules and complies with 30 Texas Administrative Code § 101.3.

154. Emissions proposed to be authorized by the Application will not cause a nuisance as described by TCEQ rules in 30 Texas Administrative Code § 101.4 or a condition of air pollution as defined by the TCAA.

155. The Application and Final Draft Permit would not authorize the discharge of quantities of air contaminants, uncombined water, or other materials that would cause or have a tendency to cause a traffic hazard with the normal road use in accordance with 30 Texas Administrative Code § 101.5.

156. Applicant will comply with the Final Draft Permit's specific requirements relating to sampling and sampling ports that are consistent with the requirements of TCEQ rules and 30 Texas Administrative Code §§ 101.8 and 101.9.
157. Applicant will comply with all TCEQ rules in 30 Texas Administrative Code ch. 101.
158. Applicant will comply with the opacity limits and particulate matter emission rates set forth in 30 Texas Administrative Code ch. 111, concerning control of air pollution from visible emissions and particulate matter.
159. Applicant will comply with the sulfur compound emission requirements set forth in 30 Texas Administrative Code ch. 112, concerning control of air pollution from sulfur compounds.
160. Applicant will comply with all applicable standards adopted by reference in 30 Texas Administrative Code ch. 113, relating to standards of performance for hazardous air pollutants and for designated facilities and pollutants.
161. The Application does not involve authorization for emissions from any motor vehicle required to be authorized under TCEQ's rules in 30 Texas Administrative Code ch. 114.
162. Applicant will comply with applicable requirements of 30 Texas Administrative Code ch. 115, related to control of air pollution from VOCs.
163. Applicant will comply with applicable requirements of 30 Texas Administrative Code ch. 117, related to control of air pollution from nitrogen compounds.
164. Applicant will comply with applicable requirements of 30 Texas Administrative Code ch. 118, related to control of air pollution episodes.
165. Upstream and downstream emissions sources were evaluated in determining emissions that must be authorized in the Application.

166. The depropanizer at Applicant's existing chemical plant is not an affected downstream source, and the proposed EPU will not affect emissions at the depropanizer because the depropanizer it is a closed-loop system.
167. There will be no increase in allowable emissions resulting from the proposed addition of the duct burners to the heat recovery steam generator section of the gas turbine generator train 5 at Applicant's existing BOP, which will provide supplemental heat and incremental steam. The duct burners are an upstream source that is properly considered in the authorization for Permit No. 3452, but not in the Application for the proposed EPU.
168. Any wastewater resulting from the proposed EPU will be managed by an existing wastewater treatment facility that is not part of the Application and any additional emissions resulting from such wastewater can be accommodated under the existing allowable emission rates of the existing wastewater treatment facility.

#### Compliance History

169. Applicant's compliance history is classified as "satisfactory" and therefore, does not affect whether the permit may be issued.

#### Transcript Costs

170. Applicant has been billed reporting and transcription costs in the amount of \$4,002.50 for the prehearing conference and for the evidentiary hearing in this matter.
171. Protestants fully participated in the hearing, have benefited from having a transcript, and did not demonstrate a financial inability to pay a portion of the costs.
172. Protestants should be apportioned 25% of the transcript costs.

Other Remaining Issues

173. With respect to all other contested issues and all unrefined issues, the Application and the remainder of the evidentiary record contain sufficient factual information to satisfy all applicable statutory and regulatory requirements.

**II. CONCLUSIONS OF LAW**

Jurisdiction

1. The Commission has jurisdiction over the Application pursuant to Texas Health & Safety Code ch. 382 and Texas Water Code ch. 5.
2. The Application was directly referred to SOAH pursuant to Texas Water Code § 5.557 and 30 Texas Administrative Code § 55.210(a).
3. Pursuant to Texas Government Code § 2003.047, SOAH has jurisdiction to conduct a hearing and prepare a Proposal for Decision (PFD) in this matter.
4. Proper notice of the Application was provided pursuant to Texas Health & Safety Code §§ 382.0516; 382.0517, 382.056; Texas Government Code § 2001.051 and 2001.052; and 30 Texas Administrative Code ch. 39.
5. Applicant properly submitted a complete Application pursuant to Texas Health & Safety Code §§ 382.0515, and 382.0518, and pursuant to 30 Texas Administrative Code §§ 116.110, 116.111, 116.140.

Burden of Proof

6. Pursuant to 30 Texas Administrative Code §§ 55.210 and 80.17(a), in a contested case hearing involving an air quality permit application that has been directly referred to SOAH, the burden of proof is on the applicant to prove by a preponderance of the evidence that the application satisfies all statutory and regulatory requirements.

7. Applicant met its burden of proof to demonstrate that the Application satisfies all applicable statutory and regulatory requirements.

TCAA Standards

8. Applicant may not construct its proposed EPU until it has obtained a permit from the Commission. Texas Health & Safety Code § 382.0518(a).

9. Texas Health & Safety Code § 382.0518(b) states:

The commission shall grant within a reasonable time a permit or permit amendment to construct or modify a facility if, from the information available to the commission, including information presented at any hearing held under Section 382.056(k), the commission finds:

(1) the proposed facility for which a permit, permit amendment, or a special permit is sought will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility; and

(2) no indication that the emissions from the facility will contravene the intent of this chapter, including protection of the public's health and physical property.

Protection of Public Health and Welfare, 30 TAC § 116.111(a)(2)(A)

10. In accordance with 30 Texas Administrative Code § 101.4, Applicant's EPU will not cause any nuisance conditions.
11. Applicant's EPU emissions will comply with the opacity limits and particulate matter emissions rates set forth in 30 Texas Administrative Code ch. 111 concerning control of air pollution from visible emissions and particulate matter.

12. Applicant's EPU emissions will comply with the sulfur compound emission requirements set forth in 30 Texas Administrative Code ch. 112 concerning control of air pollution from sulfur compounds.
13. Applicant's EPU will comply with all applicable standards adopted by reference in 30 Texas Administrative Code ch. 113, relating to standards of performance for hazardous air pollutants and for designated facilities and pollutants.
14. The Application does not seek authorization for the activities covered by 30 Texas Administrative Code ch. 114, related to emissions from any motor vehicle; therefore, the provisions of Chapter 114 do not apply to this decision.
15. Applicant's EPU will comply with all applicable requirements set forth in 30 Texas Administrative Code ch. 115, related to control of air pollution from VOCs.
16. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(A)(i), emissions from the EPU will comply with all Commission rules and regulations and the intent of the TCAA, including protection of the health and property of the public.
17. Applicant will comply with the applicable standards in 30 Texas Administrative Code ch. 117 concerning control of air pollution from nitrogen compounds.
18. Applicant's EPU is required to operate in compliance with any orders of the Commission relating to generalized and localized air pollution episodes under 30 TAC Ch. 118.

Measurement of Emissions, 30 TAC § 116.111(a)(2)(B)

19. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(B), Applicant's EPU will comply with provisions for measuring the emission of air contaminants as determined by the Commission's ED.

Nonattainment Review, 30 TAC § 116.111(a)(2)(H) and  
Prevention of Significant Deterioration, 30 TAC § 116.111(a)(2)(I)

20. The Application is a minor NSR application and Nonattainment review requirements and PSD review are not applicable to the Application for the proposed EPU.

Best Available Control Technology, 30 TAC § 116.111(a)(2)(C)

21. BACT is “an air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility.” 30 Texas Administrative Code § 116.10(1).
22. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(C) and applicable Commission policies, Applicant’s EPU will utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emissions from the facilities of which it will be comprised.

New Source Performance Standards (NSPS), 30 TAC § 116.111(a)(2)(D)

23. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(D), the emissions from the proposed EPU will meet the requirements of any applicable NSPS as listed under 40 CFR Part 60.

NESHAPs, 30 TAC § 116.111(a)(2)(E)

24. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(E), the emissions from the proposed EPU will meet the requirements of any applicable NESHAP as listed under 40 CFR Part 61.

NESHAPs for Source Categories, 30 TAC § 116.111(a)(2)(F)

25. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(F), the emissions from the proposed EPU will meet the requirements of any applicable NESHAPs for source categories as listed under 40 CFR Part 63, in accordance with 40 CFR § 63.6590(c)(1).

Performance Demonstration, 30 TAC § 116.111(a)(2)(G)

26. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(G), the proposed EPU will achieve the performance specified in the Application.

Air Dispersion Modeling, 30 TAC § 116.111(a)(2)(J)

27. In accordance with 30 TAC § 116.111(a)(2)(J), computerized air dispersion modeling was performed as required to determine the air quality impacts of the proposed EPU.

Mass Emissions Cap and Trade Program, 30 TAC § 116.111(a)(2)(L)

28. Applicant will comply with the Mass Emissions Cap and Trade Program.

Final Draft Permit

29. The special conditions in the Final Draft Permit are appropriately imposed under 30 Texas Administrative Code §§ 116.115(c)(1) and 116.186(c) and are consistent with the TCAA.
30. Applicant has made all demonstrations required under applicable statutes and regulations, including 30 Texas Administrative Code § 116.111 regarding air permit applications, to be issued a minor NSR air quality permit, with conditions as set out in the Final Draft Permit.
31. In accordance with Texas Health & Safety Code § 382.0518(b)(2), emissions from the proposed EPU will not contravene the intent of the TCAA and will be protective of the

public's health and physical property, consistent with the long-standing interpretations of the Commission's rules, regulations, and guidance.

32. In accordance with Texas Health & Safety Code § 382.0518(b), the Application for Air Quality Permit No. 102982 should be granted, under the terms expressed in the Final Draft Permit.

Transcript Costs

33. Protestants should reimburse Applicant for 25% of the total transcript costs. 30 Texas Administrative Code § 80.23.

**NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:**

1. The application for Air Quality Permit No. 102982 is approved and the attached Air Quality Permit No. 102982 is issued.
2. The attached Air Permit No. 102982 shall take effect on the date of issuance of this Order.
3. The ED's Response to Public Comment concerning Applicant's Air Permit No. 102982 is adopted and approved. Should there be any conflict between the Commission's Order and the ED's Response to Public Comment, the Commission's Order prevails.
4. Applicant shall pay 75% and Protestants shall pay 25% of the court reporting and transcript costs for this case.
5. The effective date of this Order is the date the Order is final, as provided by 30 Texas Administrative Code § 80.273 and Texas Government Code § 2001.144.

6. The Chief Clerk of the Commission shall forward a copy of this Order to all parties and issue the attached permit as changed to conform to this Order.
7. All other motions, requests for specific Findings of Fact or Conclusions of Law, and other requests for general and specific relief, if not expressly granted, are denied for want of merit.
8. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.
9. The effective date of this Order is the date the Order is final, as provided by 30 Texas Administrative Code § 80.273 and Texas Government Code § 2001.144.

ISSUED:

TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

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Bryan W. Shaw, Ph.D, Chairman  
For the Commission