

BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	
MURPHY OIL USA, INC.	)	
	)	
MERAUX REFINERY	)	
ST. BERNARD PARISH, LOUISIANA	)	ORDER RESPONDING TO
	)	PETITIONER'S REQUEST
	)	THAT THE
	)	ADMINISTRATOR
	)	OBJECT TO THE
Permit Number: 2500-00001-V5	)	ISSUANCE OF A TITLE V
	)	OPERATING PERMIT
ISSUED BY LOUISIANA DEPARTMENT	)	
OF ENVIRONMENTAL QUALITY ON	)	
October 15, 2009	)	Petition Number VI-2011-02

ORDER GRANTING IN PART AND DENYING IN PART  
PETITION FOR OBJECTION TO PERMIT

**I. INTRODUCTION**

On December 10, 2009, the United States Environmental Protection Agency (EPA) received a Petition from the Concerned Citizens Around Murphy (CCAM) pursuant to section 505(b)(2) of the Clean Air Act (CAA or Act), 42 U.S.C. § 7661d(b)(2). The Petition requests that the EPA object to the title V operating permit issued by the Louisiana Department of Environmental Quality (LDEQ) on October 15, 2009, to Murphy Oil USA, Inc. (MOU), Meraux Refinery in St. Bernard Parish, Louisiana.

The Petitioner has requested that the Administrator object to the MOU title V permit because the permit does not comply with the CAA and implementing regulations at 40 C.F.R. Part 70 in that: (1) MOU does not provide information sufficient to evaluate the source and its application and to determine applicable requirements; (2) the netting analysis fails to include emergency flaring emissions; (3) the project triggers New Source Review (NSR) for sulfur dioxide (SO<sub>2</sub>) and volatile organic compounds (VOCs); and (4) the netting analyses relies on limitations that are not practically enforceable.

The EPA has reviewed these allegations pursuant to the standard set forth in section 505(b)(2) of the Act, which requires the Administrator to issue an objection if the Petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the Act. *See also* 40 C.F.R. § 70.8(d); *New York Public Interest Research Group v. Whitman (NYPIRG)*, 321 F.3d 316, 333 n.11 (2<sup>nd</sup> Cir. 2003). In considering the allegations made by the

Petitioner, the EPA reviewed the Petition; relevant statutory and regulatory authorities; and the permit record for this permitting action, which includes the title V operating permit (2500-00001-V5), the statement of basis, LDEQ's public response to comment document (RTC), the LDEQ Basis of Decision, the public hearing summary document, and public comments.<sup>1</sup> Based on a review of all of the information before me, and for reasons detailed in this Order, I grant in part and deny in part the Petitioner's request for an objection to the permit.

## II. STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to the EPA an operating permit program intended to meet the requirements of title V of the CAA. The state of Louisiana submitted a title V program governing the issuance of operating permits on November 15, 1993, and revised this program on November 10, 1994. 40 C.F.R. Part 70, Appendix A. In September 1995, the EPA granted full approval to Louisiana's title V operating permits program. *60 Fed. Reg. 47,296* (September 12, 1995); 40 C.F.R. Part 70, Appendix A. This program, which became effective on October 12, 1995, is codified in Louisiana Administrative Code (L.A.C.), Title 33, Part III, Chapter 5.<sup>2</sup>

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable State Implementation Plan (SIP). *See* CAA §§ 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program does not generally impose new substantive air quality control requirements (referred to as "applicable requirements"), but does require permits to contain monitoring, recordkeeping, reporting, and other requirements to assure compliance by sources with applicable requirements. *57 Fed. Reg. 32,250, 32,251* (July 21, 1992) (the EPA final action promulgating Part 70 rule). One purpose of the title V program is to "enable the source, states, the EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements." *Id.* Thus, the title V operating permits program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and that compliance with these requirements is assured.

Under section 505(a), 42 U.S.C. § 7661d(a), of the CAA and the relevant implementing regulations (40 C.F.R. § 70.8(a)), states are required to submit each proposed title V operating permit to the EPA for review. Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the permit if it is determined not to be in compliance with applicable requirements or the requirements under 40 C.F.R. Part 70.<sup>3</sup> 40 C.F.R. § 70.8(c). If the EPA does

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<sup>1</sup> Electronic Data Management System (EDMS) is the LDEQ's electronic repository of official records that have been created or received by LDEQ. The public can search and retrieve documents stored in the EDMS via the website at <http://edms.deq.louisiana.gov/app/doc/querydef.aspx>.

<sup>2</sup> Date of signature by the Secretary is November 9, 1993; published in the November 20, 1993 issue of the *Louisiana Register*.

<sup>3</sup> Under 40 C.F.R. § 70.1(b), "[a]ll sources subject to [the title V regulations] shall have a permit to operate that assures compliance by the source with all applicable requirements." "Applicable requirements" are defined in 40 C.F.R. § 70.2 to include "(1) [a]ny standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the [Clean Air] Act that implements the

not object to a permit on its own initiative, section 505(b)(2) of the Act provides that any person may petition the Administrator, within 60 days of expiration of the EPA's 45-day review period, to object to the permit. 42 U.S.C. § 7661d(b)(2), *see also* 40 C.F.R. § 70.8(d). The petition must "be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period)." CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2).

In response to such a petition, the CAA section 505(b)(2) requires the Administrator to issue an objection if the petitioner demonstrates that a permit is not in compliance with the requirements of the CAA. 42 U.S.C. § 7661d(b)(2). *See also* 40 C.F.R. § 70.8(c)(1); *NYPIRG*, 321 F.3d at 333 n.11. Under CAA section 505(b)(2), the burden is on the petitioner to make the required demonstration to the EPA. *Sierra Club v. Johnson*, 541 F.3d 1257, 1266-1267 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677-678 (7th Cir. 2008); *Sierra Club v. EPA*, 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden of proof in title V petitions); *see also NYPIRG*, 321 F.3d at 333 n.11. *See also McClarence v. EPA*, 596 F.3d 1123, 130-31 (9th Cir. 2010). If, in responding to a petition, the EPA objects to a permit that has already been issued, the EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4) and (5)(i) – (ii), and 40 C.F.R. § 70.8(d).

### III. BACKGROUND

#### A. The Facility

According to the permit record, MOU owns and operates a petroleum refinery in Meraux, Louisiana. The refinery is located in St. Bernard Parish, which is in attainment for all criteria pollutants. This facility refines crude oil into several petroleum products, such as propane, motor gasoline, kerosene, diesel, No. 6 fuel oil, and other miscellaneous petroleum products. The refinery consists of the following processes and operations: Crude Distillation Unit, Rose Unit, Hydrofluoric Acid Alkylation Unit, Hydrobon Unit, Platformer Unit, Amine Unit, Sulfur Recovery Units, Distillate Hydrotreating Unit, C3/C4 Splitter Unit, Middle Distillate Hydrotreating Unit, Merox Process, Sour Water Stripper Process, Liquid Petroleum Gas Recovery Unit, Fluid Catalytic Cracking Units, Wastewater Treatment System, and Steam Generation Unit. Basis for Decision for Part 70 Operating Permit No. 2500-00001-V5 (Meraux Refinery). LDEQ. Pages 2-3

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relevant requirements of the Act, including any revisions to that plan promulgated in [40 C.F.R.] part 52." Similarly, the State's definition of "federally applicable requirement" includes any standard or other requirement provided for in the Louisiana State Implementation Plan approved or promulgated by EPA through rulemaking under Title I of the Clean Air Act that implements the relevant requirements of the Clean Air Act, including any revisions to that plan promulgated in 40 CFR Part 52, Subpart T. L.A.C. 33:III.502. In this case, the "applicable requirements" include Louisiana's New Source Review (NSR) Procedures, L.A.C. 33:III.509 (Prevention of Significant Deterioration regulations (PSD)), as approved by EPA. EPA approved a PSD program in the state of Louisiana's SIP on April 24, 1987. 52 *Fed. Reg.* 13,671; 40 CFR § 52.986.

## B. The Permit

MOU submitted a permit application on February 25, 2009, to construct and operate a BenFree Unit (BFU) in order to comply with the the EPA's Mobile Source Air Toxics (MSAT) Phase 2 Rule promulgated on February 26, 2007.<sup>4</sup> The proposed permit was public noticed on May 28, 2009, and a public hearing was held on July 7, 2009. The public comment period was extended to August 6, 2009. LDEQ proposed the permit with the Basis of Decision and RTC to the EPA via email on August 25, 2009. The EPA did not object to the permit and LDEQ issued the permit on October 15, 2009.

## C. The Project

As represented in the permit record, the BFU will receive feed directly from the Platformer Unit and will operate only when the Platformer is in operation. Reformate from the Platformer will enter the Platformer Splitter, which will be fired by a reboiler and will be separated into two streams. The heavy reformate (toluene and heavier) will be piped to gasoline storage tanks, while the light reformate will be routed to the BFU. Benzene in the light reformate will be selectively saturated when the light reformate is mixed with hydrogen on a fixed catalyst bed in the Reactor in the BFU. Finally, the BenFree product will be blended with gasoline in storage tanks. The permit record states that the offgas from the BFU will be routed to the fuel gas system, and that in an emergency or during maintenance activities, emissions from the BFU will be controlled by routing the vent to the existing North Flare via the Area 6 Flare Knockout Drum.<sup>5</sup>

The permit includes the BFU's turnaround emissions in the overall facility turnaround emissions, and the emissions from the BFU reboiler will be included in a "heater CAP" for the facility. In addition to the permitting of the BFU, there are other changes to this permit which are not related to the BFU.

LDEQ determined that the BFU project did not trigger Prevention of Significant Deterioration (PSD) permitting requirements.

## IV. ISSUES RAISED BY THE PETITIONER

### A. Permit Application Requirements

The Petitioner claims that the Administrator must object to the title V permit because MOU did not provide information sufficient to evaluate the source and its application, and to determine all applicable requirements. Petition at 6-8. Further, the Petitioner contends that the application lacked emission information critical for determining applicable requirements and setting appropriate limits and conditions. Petition at 6 and 7, *citing* 42 U.S.C. § 7661b(c), 40 C.F.R. 70.5(c) and 40 C.F.R. 70.5(a)(2). Specifically, the Petitioner states that many of the emission calculations in Appendix D are illegible and supported only by reference to personal

<sup>4</sup> Meraux Refinery Air Permit Briefing Sheet: Agency Interest No. 1238. LDEQ. Page 8.

<sup>5</sup> Basis for Decision for Part 70 Operating Permit No. 2500-00001-V5 (Meraux Refinery). LDEQ. Pages 2-3.

communications. An example cited by the Petitioner is that the combustion calculations for “NO<sub>x</sub>, SO<sub>x</sub>, CO, PM, and VOCs from the BenFree Reboiler are based on ‘email correspondence between Matt Dobbins (MOUSA) and Cheri Kwast (Trinity) on December 4, 2008 and January 14, 15, and 26, 2009 and personal communication phone conversations on December 17, 2008.’” *Id.* at 7-8. The Petitioner also points to fugitive emissions calculations for the BFU, claiming these are based on personal communications and emails that are not in the record. Additionally, the Petitioner alleges that an email and stack test referenced in Appendix D for the CO emission factor of 0.275lbs/MMBTU were missing.

*EPA Response:*

The EPA grants on this issue because LDEQ failed to provide an adequate response to comment regarding the inclusion of sufficient information in the permit application to evaluate and support all applicable requirements. Further, based on the EPA review, we cannot determine whether all necessary information is located within the permit record. It may be that all “sufficient” information within the meaning of 40 C.F.R. §§ 70.5(a)(2) and 70.5(c) is already part of the permit record, but this is not clear from our examination of the permit record.

LDEQ has an obligation to respond adequately to significant comments on the draft title V permit. Section 502(b)(6) of the Act, 42 U.S.C. § 7661a(b)(6), requires that all title V permit programs include adequate procedures for public notice regarding the issuance of title V operating permits, “including offering an opportunity for public comment.” *See also*, 40 C.F.R. § 70.7(h). It is a general principle of administrative law that an inherent component of any meaningful notice and opportunity for comment is a response by the regulatory authority to significant comments. *Home Box Office v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977) (“the opportunity to comment is meaningless unless the agency responds to significant points raised by the public.”). *See also, e.g., In the Matter of Louisiana Pacific Corporation*, Petition V-2006-3, at 4-5 (November 5, 2007) (*Louisiana Pacific Order*).

During the public comment period, CCAM and the Tulane Environmental Clinic specifically requested LDEQ provide information on which MOU or LDEQ based the emission calculations for the proposed modification, explaining that, “it is difficult, if not impossible to comment on PSD review and BACT applicability without seeing the basis of emission calculations.”<sup>6</sup> With respect to SO<sub>2</sub>, LDEQ responded with information regarding the calculation of the SO<sub>2</sub> emission factor. *See* RTC at 22-23. The EPA recognizes that LDEQ included calculation information for the SO<sub>2</sub> emission factor in its RTC; however, LDEQ’s response failed to explain why the method in Subpart J is adequate for use in calculating the emissions from the BFU project. With respect to other pollutants, LDEQ stated in the RTC that the “footnotes, emails, and personal communications do not reflect the absence of any essential information needed to review the permit application and proposed permit. . . . The applicable requirements, emission factors, emission calculations, and the PSD analysis associated with this proposed permit are clearly disclosed in the permit application.” RTC at 23. As noted above, however, the EPA has not been able to determine from LDEQ’s response and its review of the record whether

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<sup>6</sup> Comments from Suzanne Kneale on behalf of CCAM made during the public hearing on July 7, 2009. EDMS document 42107180. *See also* Comment Letter to LDEQ from Tulane Environmental Law Clinic on behalf of CCAM, regarding the draft MOU permit (August 4, 2009), at 10-12.

all the necessary information is located within the permit record. The record is unclear concerning how emission increases from the BFU project for pollutants other than SO<sub>2</sub> were determined. For example, as Petitioner notes, it is not clear how the CO emission factor of 0.275 lb/MMBtu was derived from the March 2004 stack tests.<sup>7</sup>

Accordingly, LDEQ must provide an adequate response to comment and clearly explain how the permit record is complete within the meaning of 40 C.F.R. §§ 70.5(a)(2) and 70.5(c), with proper citations, and ensure that the record contains sufficient information to evaluate the source and determine all applicable requirements. For SO<sub>2</sub>, and for other pollutants if necessary information is determined to be missing, LDEQ needs to incorporate this information into the permit record and take any further action as necessary, consistent with its SIP.

## B. Emergency Flaring Emissions

The Petitioner alleges that LDEQ improperly excluded certain emergency emissions due to malfunctions at the BenFree Unit from the “netting analysis.”<sup>8</sup> Petition at 8-9. More specifically, the Petitioner alleges that the “netting analysis” must include emergency flare emissions unless they are subject to legally and practically enforceable limits. Petition at 10-11, 13, *citing inter alia In the Matter of BP Products, North America Whiting Business Unit*, Permit No. 089-25488-00453 (August 10, 2009) and Letter from Steven C. Riva, USEPA Region 2 to William O’Sullivan, Division of Air Quality, N.J. Department of Environmental Quality (February 14, 2006). The Petitioner claims that the permit lacks enforceable limits on emergency flaring emissions for three reasons: 1) blanket restrictions on emergency flaring do not qualify as enforceable limits; 2) LDEQ’s PSD regulations exempt certain emergency emissions;<sup>9</sup> and 3) by definition, some emergency releases are “unavoidable,” which makes it unlikely that any restrictions on such emissions would be practically enforceable. Petition at 13. The Petitioner alleges that withholding permission and threatening enforcement do not amount to “legally and practically enforceable” prohibitions. Petition at 10.

Additionally, the Petitioner states that the regulatory definition of “potential to emit” (PTE) requires sources to calculate emissions from all affected units, including the flare and the emergency flaring emissions from the modification. Petition at 8-11, *citing* LAC 33:III.509.B and 40 CFR 51.51.166(b)(4). Petitioner cites a document that it argues indicates that netting calculations should include emergency emissions.<sup>10</sup> The Petitioner also cites to an EPA Environmental Appeals Board decision and a title V petition order, which they allege require that PTE must account for emergency flaring emissions. Petition at 11-12, n.18-21.

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<sup>7</sup> See Petition at Exhibit 1, pg 38.

<sup>8</sup> While the Petitioner refers to the “netting analysis” throughout the Petition, LDEQ suggests in the record that no netting analysis was performed. Meraux Refiner Air Permit Briefing Sheet: Agency Interest No. 1238. LDEQ Page 9. EPA assumes that the Petitioner intends to refer to the NSR applicability determination calculations and analyses.

<sup>9</sup> The Petitioner claims that Louisiana regulations provide a four-hour (continuous) exemption from emission limitations where upsets (i.e., emergencies or malfunctions) have caused excessive emissions (*citing* LAC 33: III.1507(B)); and allow an affirmative defense to an action for excessive emissions due to unavoidable (i.e., emergency) events (*citing* LAC 33: III.,507(j)). Petition at 13.

<sup>10</sup> The Petitioner cites the 2004 “Gaming the System” Report by Environmental Integrity Project. Petition at 9, n. 16. The Petition also refers to flaring emission data compiled by the Bay Area Air Quality Management District at: [www.baaqmd.gov/enf/flares/](http://www.baaqmd.gov/enf/flares/). *Id.* at n. 15.

*EPA's Response:*

The EPA grants the Petition on this issue because LDEQ did not provide an adequate permit record concerning whether the BFU project would result in a significant increase in emissions of a regulated NSR pollutant. For example, it is not clear from the permit record which state regulations, guidance, or policies LDEQ relied upon in completing its PSD analysis, particularly with regard to emergency flaring emissions. In the RTC, LDEQ indicates that the emission increases due to the BFU project were evaluated on the actual to potential basis by comparing baseline actual emissions to post project potential emissions. RTC at 7. But LDEQ also references the definitions of baseline actual emissions and projected actual emissions in explaining why emergency releases and malfunctions are not included in determining emission increases. RTC at 10. Thus, as an initial matter, it is not clear from the permit record what framework LDEQ applied to evaluate PSD applicability in this instance (i.e., actual emissions to potential to emit, or baseline actual emissions to projected actual emissions). In addition, LDEQ has not adequately explained the basis for its PSD applicability calculations with respect to the applicable framework. Specifically, LDEQ stated in the RTC that it

does not permit or authorize emissions resulting from malfunctions. Such emissions must be reported as deviations and are subject to enforcement action. Further, because “emergency releases” are not permitted, excluding such emissions from a netting analysis is consistent with federal and state PSD regulations.

RTC at 10. However, it is not clear from the RTC whether LDEQ means that malfunction emissions are not expressly authorized in MOU’s permit, or whether LDEQ means that these emissions are prohibited. The RTC does not point specifically to any prohibition or limit that LDEQ believes applies to the emergency flaring emissions at issue here, such as a prohibition based on a state rule or a permit limit. Accordingly, the permit record, including the information in the RTC, fails to provide an adequate basis and rationale for LDEQ’s determination that PSD did not apply to this project. *Cf. In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station*, Petition VIII-2008-02 at 5 (October 8, 2009) (granting petition to object where permitting authority’s permit record failed to provide an adequate rationale for its determination of the source for PSD and title V purposes).

In responding to this Order, LDEQ must review its PSD applicability determination and the permit record on this matter, and better explain its determination. If LDEQ concludes upon further review that its determination in the record is not supportable, LDEQ must make a new determination concerning whether the BFU project would result in a significant increase in emissions of regulated NSR pollutants and ensure that any such new determination is adequately supported in the permit record.

From the EPA’s review of the permit record, we note that LDEQ appears to have determined that the BFU project would not be subject to PSD review under state PSD rules that are different from those that the EPA has approved into LDEQ’s SIP. In conducting this review consistent with this Order and making any subsequent determination concerning major NSR applicability, LDEQ should consider the applicable provisions of its SIP. For example, LDEQ

should address any applicable SIP provisions concerning authorization of malfunction or emergency emissions as they relate to determination of major NSR applicability. If LDEQ determines that the BFU project would result in an emissions increase such that major NSR permitting obligations are triggered, LDEQ must take appropriate action according to the provisions of its SIP. To any extent that LDEQ's determination would include or rely on limits on potential to emit to avoid major NSR applicability, those limits must be practicably and legally enforceable.

### C. NSR Review of SO<sub>2</sub> and VOC

#### 1) MOU's estimate of SO<sub>2</sub> emissions

The Petitioner alleges that the SO<sub>2</sub> emissions were inappropriately estimated based only on the content of hydrogen sulfide (H<sub>2</sub>S) in the fuel gas, and not the total sulfur in the fuel. Petition at 14-16. The Petitioner asserts that the unaccounted for sulfur in the refinery fuel gas is "at least double the claimed SO<sub>2</sub> emissions," and over the PSD significance threshold to trigger PSD review for SO<sub>2</sub>. Petition at 14 and 15. The Petitioner cites two letters<sup>11</sup> to support the contention that the refinery fuel gas could contain additional reduced sulfur compounds. *Id.* at 14-15.

#### *EPA Response:*

The EPA grants the Petition on this issue because LDEQ did not adequately respond to the comment during the public comment period on the draft MOU permit as to whether the SO<sub>2</sub> emissions were estimated correctly. As noted above, LDEQ must adequately respond to significant comments on the draft title V permit. *See, e.g., Louisiana Pacific Order*, at 4-5. In the RTC, LDEQ stated that MOU "complies with the requirements of 40 C.F.R. Part 60, Subpart J, ... [which] requires the refinery to limit the H<sub>2</sub>S content of fuel gas burned in fuel gas combustion devices," and stated that the emission factor for SO<sub>2</sub> was based on the New Source Performance Standards (NSPS) limit for H<sub>2</sub>S. RTC at 14. But LDEQ's statement that MOU complies with the requirements of 40 CFR 60 Subpart J does not explain why the methodology found in the NSPS is appropriate for calculating emissions for purposes of PSD applicability at this specific source.

In particular, LDEQ did not respond to the Petitioner's comment that SO<sub>2</sub> estimates should be based on total fuel sulfur rather than just H<sub>2</sub>S. In addition, LDEQ did not explain why the methodology in Subpart J is adequate for use in calculating the emissions from the BFU project. Accordingly, LDEQ needs to fully explain why its method for calculating SO<sub>2</sub> emissions for purposes of determining PSD applicability was appropriate for this source and why basing the SO<sub>2</sub> estimates on H<sub>2</sub>S only is sufficient to estimate sulfur dioxide emissions from the project.

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<sup>11</sup> Letter from Jack P. Broadbent, Executive Officer/APCO, Bay Area Air Quality Management District, to EPA Docket Center, Docket EPA-HQ-OAR-2007-0011, August 24, 2007; Garry Lee Ripperger, Process for Removing Sulfur from a Fuel Gas Stream, US Provisions Application No. 60/911.422, April 12, 2007. ("Certain of the refinery fuel gas streams such as a coker unit dry gas or a fluid catalytic cracking unit gas can contain concentrations of carbonyl sulfide (COS) and other sulfur compounds that are difficult to acceptably be removed there from by traditional caustic or absorption scrubbing and other methods to the lower sulfur concentration levels required by the newer regulations.")



Alternatively, on review LDEQ may determine that a different method is appropriate for estimating SO<sub>2</sub> emissions. If LDEQ determines that SO<sub>2</sub> emissions should be estimated using a different method, LDEQ should estimate emissions using that method and take any further action necessary based on the revised SO<sub>2</sub> emission estimates, consistent with its SIP.

## 2) Emission factor for VOC emissions from flaring

The Petitioner alleges that MOU used the wrong emission factor to calculate projected future flaring emissions. Petition at 16-21. The Petitioner asserts that the “netting analysis” for the project is estimated at 37.22 tons per year (TPY), just short of the PSD significance level, and that this estimate excluded several sources of VOC. The Petitioner further suggests that revised projected future flaring emissions could be based on the Ideal Gas Law.

The Petitioner asserts that MOU only calculated the increase in flaring as the difference between projected future flaring VOC emissions due to the BFU project and baseline flaring emissions, and that the emission increase of 0.44 TPY was calculated using an AP-42 emission factor “that does not apply to flaring of refinery fuel gas.” Petition at 16. Alleging that the EPA developed the flare AP-42 emission factor from tests in which a mixture of propylene and propane was burned, the Petitioner claims that the permit application does not disclose the composition of vent gas, but only indicates that it is refinery fuel gas, which the Petitioner contends contains very little propylene and propane. Petition at 17-18.

Additionally, the Petitioner claims that the Ideal Gas Law is one of the most commonly used methods to estimate VOC emissions from flares and cites reference documents.<sup>12</sup> The Petitioner indicates that, based on its calculations, the projected future flaring emissions would be about 79.83 TPY and is significantly different from the estimated 13.42 TPY estimated by MOU. Also, the Petitioner claims that the calculated numbers could be higher if the flare efficiency is less than 98%. Petition at 18-20.

### *EPA Response:*

The EPA grants the Petition on this issue because LDEQ did not adequately respond to the comment as to whether the VOC emissions were calculated correctly. As noted above, LDEQ must adequately respond to significant comments on the draft title V permit. *See, e.g., Louisiana Pacific Order*, at 4-5.

In response to comments on the VOC calculations in the draft MOU permit, LDEQ explains that “[o]nly a small portion of the VOC increase is due to flaring emissions,” and furthermore states that even with lower flare efficiencies, the increase would still be small. RTC at 17. Further, LDEQ explained that it used the emission factor set forth in AP-42, Section 13.5 to estimate VOC emissions from the flares. *Id.* at 15. LDEQ also acknowledges that the use of the Ideal Gas Law is a viable method for calculating emissions but asserts that if that method is

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<sup>12</sup> Specifically, the Petitioner cites: The Texas Commission on Environmental Quality New Source Review (NSR) Emission Calculations at: [http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emiss\\_calc\\_flares.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emiss_calc_flares.pdf).

used to calculate the potential and projected actual emissions, it should also be used for baseline actual emissions. *See id.* at 15.

Concerning the Petitioner's claim that MOU calculated its projected future flaring emissions using an emission factor that does not apply to flaring of refinery fuel gas, LDEQ responded that VOC emissions were calculated using the emission factor set forth in AP-42, Section 13.5- Industrial Flares. *Id.* at 15. However, LDEQ has not explained why the use of this AP-42 factor is appropriate for calculating VOC emissions from the BFU project, particularly in relation to the fuel type used. Although using the Ideal Gas Law to calculate VOC emissions may be an option, LDEQ is not required to use this procedure.

For the above reason, the Petition is granted on this issue. LDEQ must respond to the public comments on this issue, explaining why the selected method or emission factor is appropriate for calculating the VOC emission increases from the BFU project. If on review, LDEQ decides to use a different method for calculating these emissions, LDEQ must recalculate the emissions, adjust the permit record accordingly, and take any further action necessary, consistent with its SIP.

### 3) VOC emissions from roof landings

The Petitioner alleges that the "netting analysis" did not include VOC emission increases due to roof landings for the floating roof tanks, which typically occur when the facility takes the tank out of service due to an emergency or malfunction. Petition at 21. The Petitioner further claims that MOU calculated the VOC emission increases from these floating roof tanks using the EPA TANKS 4.0 model, and that this model assumes that the floating tank is always floating and thus does not calculate emission losses during the roof landings.

#### *EPA Response:*

The EPA grants the Petition on this issue because LDEQ did not respond adequately to the Petitioner's comments regarding accounting for any VOC emission increases from roof landing emissions. As noted above, LDEQ must adequately respond to significant comments on the draft title V permit. *See, e.g., Louisiana Pacific Order*, at 4-5.

In the RTC, LDEQ indicates that the tank cleaning emissions are permitted separately under the General Condition XCII Activity List, and they are existing emissions that will not change with the new BenFree Unit. RTC at 19. LDEQ further states that MOU complies with the applicable 40 CFR 60 Kb regulation that requires the floating roof tanks to be operated with the roof floating on the liquid surface at all times. *Id.* LDEQ indicated that during planned cleaning operations or upsets, a roof landing situation may occur, but such emissions need not be accounted for because "LDEQ does not permit upset conditions or malfunctions." *Id.* However, LDEQ did not identify a regulation or a permit term or condition that prohibits such upset conditions or malfunctions caused by roof landings.

For the above reason, the Petition is granted on this issue. In responding to this Order, LDEQ must fully respond to the Petitioner's comment. In doing so, LDEQ might find it helpful

to consider the longstanding EPA guidance on startup, shutdown, and malfunction (SSM) emissions.<sup>13</sup> Except to the extent that such emissions are excluded from PSD review under the approved Louisiana SIP, LDEQ should account for these emissions in determining the emission increase from the BFU project to determine if there is a significant emission increase for VOC from the project. If LDEQ determines that the BFU project would trigger major NSR, LDEQ must take appropriate action according to the provisions of its SIP.

#### 4) Analysis of Best Available Control Technology (BACT) for VOC

While LDEQ determined that the BFU project did not trigger PSD review, LDEQ stated in the RTC that certain public comments relating to the appropriateness of PSD review for VOCs were moot because “venting periodic releases to the North Flare would be BACT had PSD review been required.” RTC at 17. The Petitioner objects to this statement, claiming that once PSD is triggered, LDEQ must conduct a full PSD analysis, including a full BACT review. Petition at 20-21. The Petitioner further asserts that LDEQ cannot summarily conclude what BACT is in this situation without having required MOU to perform an appropriate BACT analysis.

#### *EPA Response:*

The EPA denies the Petition on this issue, based on the current record. The Petitioner is correct that a proposed new source or modification subject to PSD must apply BACT for each pollutant subject to regulation that is emitted from or that results from the facility. CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4); *see also* 40 CFR 52.21(j)(2)-(3), 40 CFR 51.166(j)(2)-(3). BACT only applies if a project is subject to PSD, however. The Petitioner acknowledges as much in their statement that “*once* NSR is triggered, the entire PSD review is required.” Petition at 21 (emphasis added). In this instance, LDEQ determined that the BFU project did not trigger PSD review. RTC at 7, 17. Although the Petitioner claims that this determination was in error and although the EPA has in this Order granted the Petition with regard to the record underlying the NSR applicability analysis performed by LDEQ, LDEQ has not yet responded to the EPA’s decision to grant or found that its prior applicability determination should be changed. Accordingly, this issue is not yet ripe for review. We note, however, that if PSD is found to apply to this project, a full PSD application and permit review, including a complete BACT analysis supported by a proper record, will be required, consistent with the applicable SIP-approved PSD regulations.

Because the Petitioner has not demonstrated that the permit is inconsistent with the requirements of the Act in this regard, the Petition is denied with respect to this issue.

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<sup>13</sup> *See, e.g.*, Memorandum from Kathleen M. Bennett, Assistant Administrator for Air And Radiation, to the Regional Administrators, entitled “Policy Regarding Excess Emissions During Startup, Shutdown, Scheduled Maintenance, and Malfunctions” (February 15, 1983). Memorandum from John B. Rasnic, Director, Stationary Source Compliance Division, Office of Air Quality Planning and Standards, U.S. EPA, to Linda M. Murphy, Director, Air, Pesticides and Toxics Management Division, U.S. EPA Region I (Jan. 28, 1993). These memos are available at <http://www.epa.gov/region7/air/nsr/nsrpg.htm>.

#### D. Practical Enforceability of Limitations and the “Netting Analysis”

The Petitioner alleges that the permit fails to provide mechanisms to ensure compliance with what it states is “the most fundamental requirement: that net emissions remain below significance thresholds.” Petition at 22. The Petitioner claims that the netting analysis is flawed because the permit does not have sufficient operating limits, emission limits, monitoring and recordkeeping to assure MOU meets these emission limits in the netting analysis. The Petitioner alleges that the permit fails to provide mechanisms to ensure compliance with monitoring of SO<sub>2</sub> emission increases of 26.85 TPY, and there is no monitoring for the flaring of VOC.

The Petitioner further contends that compliance with NSPS does not ensure emission levels do not exceed the PSD significance criteria levels for criteria pollutants. The Petitioner also states that, with respect to the netting analysis, the permit does not require monitoring of SO<sub>2</sub> from any of the fired sources, nor does it require Murphy Oil to monitor total sulfur in the fuel gas. Finally, the Petitioner argues that the permit does not require any monitoring of VOC emissions from flaring.

#### *EPA Response:*

The EPA denies the Petition on this issue because the Petitioner has not demonstrated that the permit fails to provide mechanisms to ensure compliance with an applicable requirement as required under title V. The Petitioner has made general claims, but has not cited any specific applicable requirement or terms or conditions that lack “monitoring...requirements to assure compliance.” Petition at 21-24. Further, the Petition does not identify any permitted emissions limitations that are not practicably enforceable, and did not explain why LDEQ’s response was inadequate.

Title V requires that a permit contain terms and conditions to assure compliance with applicable requirements and sufficient monitoring “to assure compliance with permit terms and conditions.” 42 U.S.C. § 7661c(a) and (c); *see also* 40 CFR 70.6(c)(1). However, title V does not require a permit to contain sufficient compliance measures to ensure that the source comply with a requirement that is not applicable to that source. *See In the Matter of Portland Generating Station*, Permit No. 48-00006 at 8 (June 20, 2007). As explained earlier, although the EPA has granted this Petition with regard to the record underlying the NSR applicability analysis, LDEQ has not yet responded to the EPA’s decision to grant or found that its prior applicability determination should be changed. Therefore, the Petitioner has not demonstrated that the permit lacks required monitoring. To any extent the Petitioner is claiming that LDEQ incorrectly determined that the PSD significance level was not exceeded, please see the EPA response to Issues IV.B and C above.

**V. CONCLUSION**

For the reasons set forth above, and pursuant to Section 505(b) of the Act, 42 U.S.C. § 7661d (b), and 40 C.F.R. § 70.8(d), I partially deny and partially grant the Petition.

Lisa P. Jackson  
Administrator

SEP 21 2011

Dated: 

