

## Mattson, Tracy M. (DNREC)

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**Subject:** FW: Hearing Request and Comments on Draft Renewal Title V Permit for Delaware City Refinery  
**Attachments:** Hearing request and comments of Del Audubon Society, Sierra Club, EIP, Earthjustice - Del City Refinery Title V permit.pdf; Ex. 6 - Ltr. from J. Robinson to R. Hyde.pdf; Ex. 5 - 1-15-19 Email with DCRC Coker CO Boiler Preliminary Emissions Estimate.pdf; Ex. 2 - DNREC Violation List as of June 2019.PDF; Ex. 1 - Excerpts from 11-17-17 DNREC Memo- 2017 Partial Compliance Evaluation Report.pdf; Ex. 4 - 10-02-18- Coker Boiler Trip Event Incident Rpt.pdf; Ex. 3 - 9-20-18 FCCU CO exceedance incident report.pdf

**From:** Patton Dycus [<mailto:pattondycuslaw@gmail.com>]

**Sent:** Friday, May 22, 2020 3:03 PM

**To:** DAQPERMITTINGINFO <[DAQPERMITTINGINFO@delaware.gov](mailto:DAQPERMITTINGINFO@delaware.gov)>

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**Subject:** Hearing Request and Comments on Draft Renewal Title V Permit for Delaware City Refinery

Dear DNREC: Please see the attached hearing request and comments of Delaware Audubon Society, Sierra Club, Environmental Integrity Project, and Earthjustice on the draft renewal Title V permit for the Delaware City Refinery. Our hearing request and comments include six exhibits, which are also attached.

Please confirm receipt of the hearing request/comments and the six exhibits.

Thank you.

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May 22, 2020

Department of Natural Resources and Environmental Control  
Division of Air Quality  
State Street Commons, Suite 6A  
100 W. Water Street  
Dover, DE 19904  
Via e-mail to [daqpermittinginfo@delaware.gov](mailto:daqpermittinginfo@delaware.gov)

Re: Request for Hearing and Initial Public Comments on the Draft Title V Renewal Permit for Delaware City Refining Company (Permit No. AQM-003/00016 - Part 1 (Renewal 3), Part 2 (Renewal 2), and Part 3 (Renewal 3))

Dear DNREC,

Delaware Audubon Society, Sierra Club, Environmental Integrity Project, and Earthjustice (“Commenters”) submit this request for a public hearing and the below initial comments regarding all parts of the draft Title V renewal permit for the Delaware City Refinery owned and operated by Delaware City Refining Company.<sup>1</sup> These comments highlight some of the serious problems with the draft permit. Commenters seek a public hearing and opportunity to submit supplemental comments pointing out these and additional problems and concerns with the permit, and to respectfully request that DNREC take action to strengthen the permit before finalizing.

As discussed below in more detail, DNREC must revise the draft permit<sup>2</sup> because it contains numerous unlawful provisions applicable during periods of refinery startup, shutdown, and malfunction (“SSM”) that allow spikes in dangerous pollution that harm the health and environment of the local community. Some of these provisions purport to give Delaware City Refining Company an avenue to be relieved of noncompliance with emissions limits during SSM periods, and other provisions allow the refinery to comply with unlawfully lax limits during these periods. The Delaware City Refinery has a long history of malfunctions and other events causing large releases of air pollution—events that Delaware City Refining Company might argue are subject to the unlawful SSM provisions, thereby potentially affecting the ability of the public and EPA to enforce and remedy violations that occur during SSM periods. Some of those violations are detailed below. *See infra* at 4. In addition, EPA’s Enforcement and Compliance History Online (“ECHO”) makes clear that this refinery is prone to serious violations of the

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<sup>1</sup> Notice, <https://dnrec.alpha.delaware.gov/2020/04/26/title-v-permit-renewal-application-delaware-city-refining-company/>.

<sup>2</sup> DNREC’S public notice describes the permit as a “draft/proposed” permit and states that the permit has been submitted to EPA for “concurrent processing.” As discussed below, because Commenters are submitting these significant public comments (and will later submit additional significant comments) on the permit, the permit is a draft permit—not a proposed permit—under EPA’s Title V regulations.

Clean Air Act, listing the refinery as a “High Priority Violator” for each of the past nine quarters.<sup>3</sup>

Commenters request a public hearing to address these unlawful SSM provisions, as well as provide further detail about additional problems with the draft permit. Commenters need more time to be able to fully address the permit’s problems, in view of the long and complicated nature of the refinery’s Title V permit and the current covid-19 pandemic, which has undermined Commenters’ ability to review the permit in the usual time provided. As discussed below, DNREC must hold a public hearing because this request is timely and “meritorious” within the meaning of DNREC’s Title V regulations. *See* 7 Del. Admin. Code 1130 § 7.10.

DNREC’s public notice of this permit indicates that DNREC has forwarded the permit at issue to EPA for EPA’s statutory 45-day review period prior to the conclusion of the public comment period on the draft permit. Petitioners are submitting—and intend, in concert with the public hearing, to submit additional—significant and timely comments on the draft permit. Thus, DNREC must withdraw the permit from EPA review and respond to the submitted comments before sending a new, revised permit to EPA for that agency’s 45-day review period. *See* 40 C.F.R. § 70.8(a)(1)(ii).

## BACKGROUND

### I. COMMENTERS

**Delaware Audubon Society (“DAS”)** is a 1,500 member state-wide non-profit Chapter of the National Audubon Society that advocates for a cleaner Delaware on behalf of birds that utilize our natural resources. DAS has tremendous concern for the natural environment around the Delaware City Refinery, especially the northern most heronry located at Pea Patch Island nearby.

**Sierra Club** is one of the oldest and largest national nonprofit environmental organizations in the country, with approximately 3.5 million members and supporters dedicated to exploring, enjoying, and protecting the wild places and resources of the earth; practicing and promoting the responsible use of the earth’s ecosystems and resources; educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out these objectives. One of Sierra Club’s priority national goals is promoting and improving air quality.

**Environmental Integrity Project (“EIP”)** is a non-profit, non-partisan watchdog organization that advocates for effective enforcement of environmental laws. EIP has three goals: (1) to illustrate through objective facts and figures how the failure to enforce and implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help communities obtain protections guaranteed by environmental laws.

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<sup>3</sup> <https://echo.epa.gov/detailed-facility-report?fid=110001148598>

Commenters submit this request and initial comments on behalf of themselves as well as their respective members who are Delaware citizens, some of whom live within the vicinity of the Delaware City Refinery and are adversely impacted by air pollution from that facility.

## II. GENERAL TITLE V PERMIT REQUIREMENTS

To protect public health and the environment, the Clean Air Act prohibits stationary sources of air pollution from operating without or in violation of a valid Title V permit, which must include conditions sufficient to “assure compliance” with all applicable Clean Air Act requirements. 42 U.S.C. §§ 7661c(a), (c); 40 C.F.R. §§ 70.6(a)(1), (c)(1). “Applicable requirements” include all standards, emissions limits, and requirements of the Clean Air Act. 40 C.F.R. § 70.2. Congress intended for Title V to “substantially strengthen enforcement of the Clean Air Act” by “clarify[ing] and mak[ing] more readily enforceable a source’s pollution control requirements.” S. Rep. No. 101-228 at 347, 348 (1990), *as reprinted in* A Legislative History of the Clean Air Act Amendments of 1990 (1993), at 8687, 8688. As EPA explained when promulgating its Title V regulations, a Title V permit should “enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements.” Operating Permit Program, Final Rule, 57 Fed. Reg. 32,250, 32,251 (July 21, 1992).

Among other things, a Title V permit must include compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1). The D.C. Circuit has explained that Title V requires that a “monitoring requirement insufficient ‘to assure compliance’ with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards.” *See Sierra Club v. EPA*, 536 F.3d 673, 677 (D.C. Cir. 2008).

If a state proposes a Title V permit that fails to include and assure compliance with all applicable Clean Air Act requirements, EPA must object to the issuance of the permit before the end of its 45-day review period. 42 U.S.C. § 7661d(b)(1); 40 C.F.R. § 70.8(c). If EPA does not object to a Title V permit during its 45-day review period, “any person may petition the Administrator within 60 days after the expiration of the Administrator’s 45-day review period ... to take such action.” 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). The Clean Air Act provides that EPA “shall issue an objection ... if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the” Act. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1); *see also N.Y. Pub. Interest Group v. Whitman*, 321 F.3d 316, 333 n.12 (2d Cir. 2003) (explaining that under Title V, “EPA’s duty to object to non-compliant permits is nondiscretionary”).

### **III. ENVIRONMENTAL JUSTICE CONCERNS AND THE REFINERY'S HISTORY OF SSM RELEASES AND COMPLIANCE PROBLEMS MANDATE INCREASED FOCUS BY DNREC TO ENSURE THAT THE PERMIT'S PROVISIONS COMPLY WITH TITLE V REQUIREMENTS.**

Over recent years, the Delaware City Refinery has caused large releases of air pollution—particularly during SSM periods, and often at the refinery's fluid coking unit ("FCU") and fluidized catalytic cracking unit ("FCCU). For example, two separate incidents at the FCU in April 2015 resulted in the release of 310 tons—and then over 260 tons—of sulfur dioxide ("SO<sub>2</sub>").<sup>4</sup> In late January through early February 2016, a power outage at the refinery<sup>5</sup> caused the unpermitted release of 105 tons of SO<sub>2</sub>, apparently from the facility's flares.<sup>6</sup> In August 2018, the FCCU's CO boiler tripped offline, causing the release of 82 tons of CO.<sup>7</sup> In September 2018, a boiler trip caused the FCU to release almost 100 tons of carbon monoxide ("CO") and 21 tons of SO<sub>2</sub>, as well as 310 lbs of hydrogen cyanide ("HCN") and over a ton of ammonia.<sup>8</sup> And in January 2019, a trip at the FCU's CO boiler caused the release of 30 tons SO<sub>2</sub>, 170 tons CO, 6 tons hydrogen sulfide, 2.5 tons of ammonia, 600 lbs HCN, and 90 lbs carbonyl sulfide.<sup>9</sup> Most recently, on May 16, 2020, a compressor breakdown caused the release of two tons of SO<sub>2</sub>.<sup>10</sup>

Relatedly, as noted above, EPA's ECHO page for the refinery lists it as a "High Priority Violator" for each of the past nine quarters.<sup>11</sup> That same page also notes that, from formal enforcement actions over the past five years, the refinery has been subject to \$1,017,968 in penalties for Clean Air Act violations. And the page lists 11 failed stack tests at the refinery from 2017 forward.

It is unclear what corrective action, if any, DNREC has required Delaware City Refining Company to take to remedy these past violations. It is also unclear how DNREC has reviewed or addressed these compliance concerns in the draft Title V permit. These are just a few examples

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<sup>4</sup> See Ex. 1, Excerpts from 11/17/17 DNREC Memo: 2017 Partial Compliance Evaluation Report, at 12-13.

<sup>5</sup> <https://www.delawareonline.com/story/weather/2016/01/23/power-outage-causes-delaware-city-refinery-shutdown/79232236/>

<sup>6</sup> See Ex. 2, DNREC Violation List as of June 2019, at 5-7.

<sup>7</sup> See Ex. 3, 9/20/18 FCCU CO Exceedance Incident Report, at 2-3.

<sup>8</sup> See Ex. 4, 10/2/18 Coker Boiler Trip Event Incident Report, at 3-4.

<sup>9</sup> See Ex. 5, 1/15/19 Email with DCRC Coker CO Boiler Preliminary Emissions Estimate.

<sup>10</sup> <https://delawarebusinessnow.com/2020/05/compressor-breakdown-leads-to-release-of-4000-pounds-of-sulfur-dioxide-at-delaware-city-refinery/>

<sup>11</sup> <https://echo.epa.gov/detailed-facility-report?fid=110001148598>

of the large releases of air pollution that the refinery has experienced in the past, demonstrating that DNREC must require stronger terms and conditions in the permit to assure compliance with Clean Air Act requirements. Commenters are extremely concerned about these problems and seek an opportunity for a public hearing to discuss and seek action from DNREC in the permit to prevent malfunction and related releases like this in the future. The Act requires DNREC both to include monitoring and reporting sufficient to assure compliance with all applicable requirements, and also requires DNREC to address and include a compliance schedule for any provisions for which DCRC is currently out of compliance. Currently all the draft permit states is that DCRC is currently “not under a compliance schedule.” DNREC Review Memo at 19. This fails to demonstrate that DNREC has met its responsibility to determine whether the permit should include a compliance schedule or how EPA could have decided none is needed in view of the significant concerns and recent enforcement matters shown in the facility’s ECHO record. Commenters seek a public hearing to evaluate and elaborate further on this and related concerns regarding the facility’s air emissions.

The communities surrounding the refinery include a significant population of people of color and low-income residents, as well as large numbers of community members who face increased vulnerability to health effects from air pollution due to their age (under 18 or over 65).<sup>12</sup> Specifically, EPA found, based on 2010 U.S. Census and American Community Survey data, that 81,728 people live within a five mile radius of the refinery—of whom 47% are people of color, 26% are minors under the age of 18, 8% are seniors over the age of 65, and nearly a quarter (19,074) live below the poverty level.<sup>13</sup> That same data show that 13,807 people live within a three mile radius of refinery—of whom 36% are people of color, 26% are minors under the age of 18, 9% are seniors over the age of 65, and nearly a quarter (3,238) live below the poverty level. These community members are exposed to large amounts of toxic air pollution from the refinery: ECHO notes that, for 2018, the refinery reported emitting over 560,000 pounds of air toxics to the Toxics Release Inventory.<sup>14</sup>

In these circumstances, there is a compelling need for DNREC to devote increased, focused attention to ensure that all Title V requirements have been complied with. EPA has recognized this in responding to a prior Title V permit petition. *See, e.g., In the Matter of United States Steel Corp. – Granite City Works*, Order on Petition No. V-2011-2 (Dec. 3, 2012) at 4-6 (because of “potential environmental justice concerns” raised by the fact that “immediate area around the [] facility is home to a high density of low-income and minority populations and a concentration of industrial activity,” “[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions [was] warranted”) (citing in part to Executive Order

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<sup>12</sup> *See* Env’tl Justice Health Alliance for Chemical Policy Reform *et al.*, *Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities* (2018), <https://new.comingcleaninc.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf>.

<sup>13</sup> *See* <https://echo.epa.gov/detailed-facility-report?fid=110001148598>

<sup>14</sup> <https://echo.epa.gov/air-pollutant-report?fid=110001148598>

12898 (Feb. 11, 1994)).<sup>15</sup> As the *Granite City Works* order makes clear, EPA has the authority under Title V to object to DNREC’s proposed permit if the permit does not adequately take into account environmental justice concerns.

## REQUEST FOR PUBLIC NOTICE AND COMMENT HEARING

Commenters request a local public notice and comment hearing on this draft permit pursuant to 42 U.S.C. § 7661a(b)(6), 40 C.F.R. § 70.7(h), and 7 Del. Admin. Code 1130 § 7.10. Under Delaware’s Title V regulations, DNREC “shall” hold a hearing on a draft Title V permit if DNREC receives a “meritorious” request for a hearing within a “reasonable time, as stated in the advertisement.” 7 Del. Admin. Code 1130 § 7.10.3. A hearing request “shall be deemed meritorious” if it “exhibits a familiarity with the application and a reasoned statement of the permit’s probable impact.” *Id.* In addition, a hearing “may be held” if the “Secretary deems it to be in the best interest of the State.”

Here, DNREC must hold a hearing because this request is meritorious and timely submitted, within the time period stated in DNREC’s public notice for the draft permit.<sup>16</sup> This request is meritorious because it “exhibits a familiarity with the application and a reasoned statement of the permit’s probable impact.” More specifically, Petitioners are clearly familiar with the application and draft permit: they below point out numerous, detailed reasons that the draft permit’s SSM provisions are unlawful and provide ways DNREC must strengthen the permit to assure compliance with the Act. And the probable impact of those provisions is immense, since they can prevent state enforcement and also attempt to affect the public’s and EPA’s ability to enforce—through a “citizen suit” under 42 U.S.C. § 7604 of the Clean Air Act or EPA enforcement under § 7413—emission limits designed to protect public health and the environment that are otherwise unquestionably applicable and enforceable during SSM periods (periods during which emissions can be massive) but for the unlawful provisions. Commenters are extremely concerned about the impact of these serious problems with the draft permit on air quality and public health in the affected community. These problems are especially immediate given that Delaware is designated nonattainment for ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards (“NAAQS”) due to unhealthy levels of these harmful air pollutants.<sup>17</sup>

The hearing request is also meritorious because Commenters need additional time to be able to raise additional problems and demonstrate why DNREC should revise the draft permit to correct these issues. For example, Commenters need a public hearing to be able to address and raise comments on the following issues: other components of unlawful SSM provisions in

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<sup>15</sup> Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12898 (Feb. 11, 1994); *see also* EPA, EJ 2020, <https://www.epa.gov/environmentaljustice/ej-2020-action-agenda-epas-environmental-justice-strategy>; EPA, Plan EJ 2014, Considering Environmental Justice in Permitting (2014), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100ETRR.PDF?Dockey=P100ETRR.PDF>.

<sup>16</sup> The public notice is available here: <https://dnrec.alpha.delaware.gov/2020/04/26/title-v-permit-renewal-application-delaware-city-refining-company/>

<sup>17</sup> [https://www3.epa.gov/airquality/greenbook/anayo\\_de.html](https://www3.epa.gov/airquality/greenbook/anayo_de.html)

addition to those discussed below; the permit's failure to include monitoring and other requirements sufficient to ensure compliance with the permit's and Clean Air Act limits; the adequacy of the permit's implementation of provisions from 40 C.F.R. Part 63, Subparts CC and UUU that were revised as part of EPA's 2015 risk and technology review for the petroleum refinery sector; expanding on the existing fence-line monitoring network to require optical remote sensing, real-time fence-line monitoring to enable the communities living near and downwind of the refinery to determine when there are spikes of emissions of hazardous air pollutants, such as benzene and other toxic volatile organic compounds; and the adequacy's of the permit's provisions addressing chemical accident prevention requirements from 40 C.F.R. Part 68 and certain "general duty" requirements, including requirements from Clean Air Act § 112(r)(1).

For example, thus far, the only reference Commenters could find to the important chemical disaster prevention measures is the following statement in the Review Memorandum (at 19): "1990 CAAA, Section 112(r), The facility is subject to and has registered in compliance with the State of Delaware." That does not satisfy DNREC's obligation under 40 C.F.R. § 68.215 for the applicable Risk Management Program ("RMP") regulations, nor does it address at all or show that the permit includes terms and conditions necessary to assure compliance with the additional and important general duty provisions. Further, the draft permit condition on page 18 does not include a definitive certification requirement – and conflicts with the statement in the memorandum by suggesting that the facility might not be subject to the RMP provisions. Commenters need additional time to evaluate the permit in view of these and important Delaware requirements and ensure that DNREC addresses the need to prevent serious hazardous releases. Because the permit contains provisions that allow for emission spikes during malfunctions, there is a particularly strong need for DNREC to provide a public hearing to ensure a meaningful opportunity for the community to engage on the need to prevent (not authorize) malfunctions, upsets, and accidental releases of highly hazardous chemicals.

A public hearing will allow people who live near and are affected by the refinery's air pollution to speak directly to DNREC about their concerns and about the need to ensure that the permit fully complies with the Clean Air Act's requirements. Community residents need a hearing to explain why they believe DNREC should strengthen the permit to assure compliance with all applicable requirements, which are designed to (among other things) protect public health.

DNREC should also hold a hearing because it is "in the best interest of the State" to do so. Commenters—which include groups whose members are affected by harmful air pollution from the Delaware City Refinery (including pollution emitted during SSM periods)—point out numerous ways in which the draft permit is unlawful. It is in the best interest of the State to fully comply with its obligations as a permitting agency under the Clean Air Act and as a State agency with additional health and environmental duties under Delaware law to hear from its residents how the permit should be revised to be made lawful, and to hear how air pollution from the refinery (including during SSM periods) affects those residents, demonstrating the need for additional protection.

We ask that DNREC schedule the hearing at a time that is accessible for the most concerned and affected local community residents, including people who work during DNREC's

usual business hours. We also request that the hearing be virtual given the ongoing coronavirus pandemic, and that it be presented in a format that will allow all participants to hear each other's statements. We request that , to ensure DNREC chooses a day, time, and virtual platform that will be accessible, you coordinate with Kenneth Kristl, Widener University School of Law, and Emma Cheuse, Earthjustice (see contact information at the end of this document).

## INITIAL COMMENTS

For all of the initial reasons discussed below, DNREC must revise the draft Title V permit for the refinery because the permit fails to satisfy substantive requirements of the Clean Air Act that are important to protect public health and well-being. In addition, because of the below significant comments and the additional comments that Commenters' will submit in connection with a public hearing, DNREC must withdraw from EPA review the permit that DNREC has sent to that agency for its 45-day review period.

### **I. DNREC MUST WITHDRAW ITS INITIAL PERMIT SUBMISSION TO EPA AND RESPOND TO COMMENTS BEFORE SUBMITTING A REVISED PERMIT TO EPA.**

DNREC'S public notice describes the permit at issue as a "draft/proposed" permit and states that the permit has been submitted to EPA for "concurrent processing." EPA's Title V regulations make clear that EPA's 45-day review period cannot run concurrent with the public comment period when (as here) significant comments are submitted on a draft permit as part of the public participation process:

If the permitting authority receives significant comment on the draft permit during the public participation process, but after the submission of the proposed permit to the Administrator, the Administrator will no longer consider the submitted proposed permit as a permit proposed to be issued under section 505 of the Act. In such instances, the permitting authority must make any revisions to the permit and permit record necessary to address such public comments, including preparation of a written response to comments (which must include a written response to all significant comments raised during the public participation process on the draft permit and recorded under 70.7(h)(5) of this part), and must submit the proposed permit and the supporting material required under 70.8(a)(1)(i) of this part [which include the response to comments] ... to the Administrator after the public comment period has closed. This later submitted permit will then be considered as a permit proposed to be issued under section 505 of the Act, and the Administrator's review period for the proposed permit will not begin until all required materials have been received by the EPA.

40 C.F.R. § 70.8(a)(1)(ii) (emphasis added). Thus, where a public hearing is requested pursuant to the public participation provision of § 70.7(h), or significant comments are provided in writing, DNREC may not move forward with EPA review without first addressing the written comments and comments from the hearing. EPA added: "The EPA expects that the permitting authority would withdraw the initial permit submission if significant comments are received during the public participation process on a draft permit that has been submitted for concurrent

review. If EPA later finds that a significant comment was received and the initial permit submission is not withdrawn, the permit submission will no longer be considered a proposed permit.” *Id.* at 6441 n.11 (emphasis added).

The below comments are plainly significant: they point out that the draft Title V permit includes unlawful provisions that would affect the public’s and EPA’s ability to enforce Delaware City Refining Company’s noncompliance with federally enforceable emission limits occurring during SSM periods—and also point out how the permit unlawfully relaxes federally enforceable limits during these periods. *See* 85 Fed. Reg. 6431, 6436 (Feb. 5, 2020) (“Significant comments ... include, but are not limited to, comments that concern whether the title V permit includes terms and conditions addressing federal applicable requirements ...”) (emphasis added). Thus, DNREC must withdraw the initial permit submission from EPA review and—before sending a new permit to EPA as a proposed permit—must consider these comments and the additional comments DNREC will receive during or in concert with the public hearing (or afterward within the time for written comment, under the applicable regulations), prepare a response to these comments and the additional comments that Commenters intend to submit, as well as revise the permit to correct problems identified and take into account the submitted comments. If DNREC fails to withdraw the draft permit from EPA’s review process, it will be in violation of the Title V regulations. We would appreciate DNREC’s prompt action to address this and respectfully request written confirmation from DNREC that it has done so at DNREC’s earliest convenience.

## **II. THE DRAFT PERMIT UNLAWFULLY GIVES DNREC DISCRETION TO EXCUSE NONCOMPLIANCE DURING PERIODS OF UNPLANNED SHUTDOWNS OF THE FCU, FCCU, OR THEIR CONTROLS.**

DNREC must remove all unlawful SSM and other compliance waiver provisions from the permit to assure compliance with the Act and applicable regulations. The draft Title V permit contains “director’s discretion” provisions that EPA has recognized are unlawful.<sup>18</sup> These provisions purport to allow DNREC to excuse noncompliance with multiple limits during periods of unplanned shutdown of the FCU or FCCU and during shutdown or bypass of their pollution controls. *See* Title V Permit Condition 3 – Table 1, Parts 2(da)(1)(i)(H), 2(e)(1)(i)(J). For example, the director’s discretion provision for the FCU provides in part:

This Permit does not authorize emissions exceeding the limits set forth in Condition 3 - Table 1.da.2 through da.10 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the

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<sup>18</sup> EPA has issued a “SSM SIP Call” requiring many states (including Delaware) to remedy unlawful provisions—including director’s discretion provisions—in their Clean Air Act State Implementation Plans (“SIPs”). This directive covers provisions authorizing otherwise unlawful excess emissions during periods of startup, shutdown, and malfunction (“SSM”). In the SIP Call, EPA defined a “director’s discretion provision” as “in general, a regulatory provision that authorizes a state regulatory official unilaterally to grant exemptions or variances from otherwise applicable emission limitations or control measures, or to excuse noncompliance with otherwise applicable emission limitations or control measures, which would be binding on the EPA and the public.” 80 Fed. Reg. 33,840, 33,842 (June 12, 2015).

FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Owner/Operator shall bear the burden of demonstrating to the Department's satisfaction that the Owner/Operator's continued operation of the FCU should not subject the Owner/Operator to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware "Regulations Governing the Control of Air Pollution."

*Id.* at Part 2(da)(1)(i)(H). The director's discretion provision for the FCCU is virtually identical, applying to the limits from "Condition 3 – Table 1.e.2 through e.9." *Id.* at Part 2(e)(1)(i)(J).

The limits from Parts 2(da)(2)-(10) and 2(e)(2)-(9) of Table 1 that DNREC is purportedly allowed to excuse noncompliance with include limits established through the following critical Clean Air Act programs and regulations:

- Prevention of Significant Deterioration ("PSD") and nonattainment New Source Review ("NSR") permitting
- Delaware's state implementation plan ("SIP")
- EPA-promulgated New Source Performance Standards ("NSPS") and
- National Emission Standards for Hazardous Air Pollutants ("NESHAP").

Although the Title V permit would seem to indicate that the overwhelming majority of these limits were established through NSR/PSD permits (with a few limits that are clearly SIP limits), some of these same limits attributed to NSR/PSD permits are also NESHAP and NSPS limits. For example, citing to a NSR/PSD permit, the permit limits CO emissions from the FCCU's wet gas scrubber to 500 ppmv dry as a 1-hour average.<sup>19</sup> But this same limit is also the limit that applies to FCCUs under the NESHAP and NSPS regulations.<sup>20</sup> Similarly, the FCCU's 7-day SO<sub>2</sub> limit attributed to a NSR/PSD permit (50 ppmvd)<sup>21</sup> is the same as one of the NSPS limits under 40 C.F.R. § 60.104(b).<sup>22</sup> In addition, the FCCU's PM limit of 1 lb/1,000 lb of coke burned is also a limit applicable to the FCCU under EPA's NESHAP and NSPS regulations.<sup>23</sup> And at least three of the limits for the FCU listed in the draft Title V permit as being NSR/PSD limits—the 50 ppmvd SO<sub>2</sub> limit with a rolling averaging period of 7 days, the 25 ppmvd SO<sub>2</sub> limit with a rolling annual averaging period, and the 500 ppm hourly CO limit—are the same as the NSPS Subpart Ja limits for FCUs from 40 C.F.R. § 60.102a(b).<sup>24</sup> These are just examples from a

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<sup>19</sup> *Id.* at Part 2(e)(5)(i)(A).

<sup>20</sup> *See* 40 C.F.R. §§ 63.1565(a)(1), 60.103(a), 60.105(e)(2).

<sup>21</sup> *See* Title V Permit Condition 3 – Table 1, Part 2(e)(3)(i)(A).

<sup>22</sup> 40 C.F.R. § 60.104(c) specifies that the averaging period for this limit is 7 days.

<sup>23</sup> *Compare* Title V Permit Condition 3 – Table 1, Part 2(e)(2a)(i)(B) *with* 40 C.F.R. Part 63, Subpart UUU, Table 1; §63.1564(a); § 60.102a(b)(1).

<sup>24</sup> *See* Title V Permit Condition 3 – Table 1, Part 2(da)(3)(i)(A), (5)(i)(A).

limited review of the permit, and there may be additional affected NSPS and NESHAP limits as well.

These director's discretion provisions are unlawful under the Clean Air Act for at least three reasons. First, they violate the Clean Air Act requirement that emission limits and standards apply continuously, not only during some periods of time. *See, e.g.*, 42 U.S.C. § 7602(k) (defining "emission limitation" and "emission standard" as a "requirement ... which limits the quantity, rate, or concentration of emissions of air pollutants *on a continuous basis*, including any requirement relating to the operation or maintenance of a source to assure *continuous emission reduction*, and any design, equipment, work practice or operational standard promulgated under this chapter." (emphasis added); *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008). Clean Air Act § 110(a)(2)(A) requires SIPs to include enforceable "emission limitations." 42 U.S.C. § 7410(a)(2)(A). Similarly, § 112(d) requires EPA to promulgate regulations establishing NESHAP "emission standards," 42 U.S.C. § 7412(d)(1)-(2). Section 7475(a)(1) requires PSD permits to set forth "emission limitations." And § 7503(a)(2) requires nonattainment NSR permits to require compliance with the "lowest achievable emission rate," which is defined as the rate of emissions which reflects the more stringent of (A) the most stringent "emission limitation" in any SIP, unless it is demonstrated that such limits are not achievable or (B) the most stringent "emission limitation" achieved in practice by the class or category of source in question. 42 U.S.C. § 7501(3).<sup>25</sup> Likewise, Clean Air Act § 111(b)(1)(B) requires EPA to establish NSPS "standards of performance," 42 U.S.C. § 7411(b)(1)(B), and § 7602(l) defines "standard of performance" as a "requirement of continuous emission reduction." (Emphasis added).

Contrary to the Clean Air Act's requirement that emission limits and standards apply continuously, the permit's director's discretion provisions purport to give DNREC discretion to allow exemptions to these SIP, NESHAP, NSPS, NSR, and PSD limits and standards—meaning that they would not apply on a continuous basis. This is plainly unlawful, as the D.C. Circuit has confirmed. *See Sierra Club v. EPA*, 551 F.3d 1019, 1027 (D.C. Cir. 2008). In *Sierra Club*, the court held that the requirement for "continuous" emission limits and standards means that "temporary, periodic, or limited systems of control" do not comply with the Act. *Id.* (quoting H.R. Rep. No. 95-294, at 92 (1977), *as reprinted in* 1977 U.S.C.C.A.N. 1077, 1170). Yet that is precisely what the director's discretion provisions allow on an *ad hoc* basis—temporary, periodic, or limited controls on emissions of air pollution. Congress gave states no authority "to relax emission standards on a temporal basis." *Id.* at 1028. EPA's 2015 SSM SIP Call also recognized that, in the context of SIPs, director's discretion provisions are unlawful for this reason—that they result in there not being continuous limits in place. *See* 80 Fed. Reg. at 33,927.

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<sup>25</sup> In addition, § 7502(c)(6), similar to the requirements from § 110(a)(2), requires nonattainment SIP provisions to include "enforceable emission limitations, and such other control measures, means or techniques ..., as well as schedules and timetables for compliance, as may be necessary or appropriate to provide for attainment of such standard in such area by the applicable attainment date specified in this part." (Emphasis added). Section 7502(c)(7) then reiterates that nonattainment SIP provisions "shall also meet the applicable provisions" from § 110(a)(2) of the Act—the Act's general requirements for SIP provisions. Among those requirements are the requirement that SIPs include enforceable emission limitations. *Id.* § 7410(a)(2)(A).

Particularly in the context of PSD, NSR, and SIP limits, the Act’s requirement for continuously enforceable emission limitations is vitally important for protecting public health, as EPA recognized in its 2015 SSM SIP call. *See* 80 Fed. Reg. at 33,901 (“Without an enforceable emission limitation which will be complied with at all times, there can be no assurance that ambient standards will be attained and maintained.”) (quoting H.R. No. 95–294, at 92). Indeed, SSM events in general and at this refinery can release huge amounts of pollution that could cause exceedances and violations of NAAQS. *See supra* at 4. This is especially problematic here, where Delaware is designated nonattainment for ozone and PM<sub>2.5</sub>. To prevent these deleterious outcomes and to serve the Act’s primary purpose—protecting public health—Congress required that emission standards apply continuously.

Second, these director’s discretion provisions are also unlawful under the Clean Air Act because they would purport to allow DNREC to alter—through *ad hoc* exemptions—the SIP, PSD, NSR, NESHAP, and NSPS limits in question through a process that is contrary to the Act’s process for establishing and revising these limits. None of the SIP, PSD, NSR, NESHAP, and NSPS limits applicable to the FCU and FCCU and in question here contain the director’s discretion provisions from the draft permit.

Further, Clean Air Act § 110(i) provides that revisions to SIP provisions may only take place through certain specified routes, including the formal SIP revision process. 42 U.S.C. § 7410(i). 40 C.F.R. § 51.105 is in keeping with that requirement and provides that SIP revisions will not be considered part of SIP until such revisions have been approved by EPA. But the director’s discretion provisions here do not require EPA-approved SIP revisions before excusing the refinery’s noncompliance. *See* 80 Fed. Reg. at 88,928 (finding, in the SSM SIP call, that director’s discretion provisions “functionally could allow *de facto* revisions of the approved emission limitations required by the SIP without complying with the process for SIP revisions required by the [Clean Air Act]”). To alter PSD or NSR limits on an *ad hoc* basis (assuming it were making a lawful change, which is not the case here), DNREC would have to comply with the same public participation requirements for establishing these limits in the first place every single time that it wished to exempt the refinery from compliance with the limits. *See* 40 C.F.R. §§ 51.161, 51.165(i), 51.166(q) (public participation requirements for PSD/NSR permits). It would also have to establish that the exemptions reflect Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) (which they do not) and would have to comply with the other requirements for establishing PSD and NSR limits, such as performing an air quality analysis. *See id.* at §§ 51.165-66; 42 U.S.C. §§ 7475, 7503 (Clean Air Act requirements for PSD and major NSR permits, respectively). This is not something that the permit currently requires.

As for NSPS and NESHAP limits, only EPA—not DNREC—can establish or revise these limits.<sup>26</sup> Clean Air Act § 112(1)(1) makes doubly clear that states cannot weaken NESHAP limits, such as through *ad hoc* exemptions: “Each State may develop and submit to the Administrator for approval a program for the implementation and enforcement ... of emission standards ... A program submitted by a State under this subsection may provide for partial or

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<sup>26</sup> *See* 42 U.S.C. §§ 7411(b)(1)(B) (requiring the “Administrator” to establish and, if appropriate every eight years, revise NSPS); § 7412(d)(1) (requiring the “Administrator” to promulgate NESHAP); § 7412(d)(6) (requiring the “Administrator” to revise as necessary NESHAP at least every 8 years); § 7602(a) (defining “Administrator” as “the Administrator of the Environmental Protection Agency”).

complete delegation of the Administrator’s authorities and responsibilities to implement and enforce emissions standards and prevention requirements but shall not include authority to set standards less stringent than those promulgated by the Administrator ...” 42 U.S.C. § 7412(l)(1) (emphasis added).

Contrary to all of these requirements, the draft permit’s director’s discretion provisions, on their face, would allow DNREC to alter SIP, PSD, NSR, NESHAP, and NSPS limits through an *ad hoc* process that does not fall into any of the allowed routes for establishing or revising these limits. The provisions are therefore unlawful and cannot be included in the permit.

Third, the draft permit’s director’s discretion provisions contravene the Clean Air Act by purporting to allow DNREC to remove the ability of the public and EPA to enforce the affected SIP, PSD, NSR, NESHAP, and NSPS emission limits. In particular, Congress required continuously applicable emission limitations to ensure the public would have meaningful access to the “remedy provided by [the Act’s citizen-suit provision] to assure compliance with emission limitations and other requirements of the Act.” H.R. Rep. No. 95-294, at 92 (1977), *as reprinted in* 1977 U.S.C.C.A.N. 1077, 1171. Yet the director’s discretion provisions, on their face at least, appear to attempt to give DNREC the ability to leave the surrounding communities without any ability to seek relief from the courts even when the refinery repeatedly releases massive amounts of pollution that exceed its normal emission limits. They also appear to attempt to undermine EPA’s ability to enforce the permit under § 7413.

Congress made clear that continuous emission limits must be enforceable by EPA and affected people in the community. The Clean Air Act expressly authorizes citizen suits over violations of “an emission standard or limitation under this chapter.” 42 U.S.C. § 7604(a)(1). It specifically defines “emission standard or limitation under this chapter” to include SIP, NSPS, and NESHAP limits (“a ... emission limitation, standard of performance or emission standard” “which is in effect under this chapter ... or under an applicable implementation plan”),<sup>27</sup> as well as PSD and NSR limits (“any condition or requirement of a permit under part C of subchapter I (relating to significant deterioration of air quality) or part D of subchapter I (relating to nonattainment)...”). *Id.* § 7604(f)(1), (3). As discussed above, Congress further defined the “terms ‘emission limitation’ and ‘emission standard’” to “mean a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis ...” *Id.* § 7602(k). Thus, read together, these provisions mean that citizens have the right to bring suits in federal court over violations of requirements that continuously limit emissions of air pollutants. *See Lopez v. Gonzalez*, 549 U.S. 47, 56 (2006) (“[O]ur interpretive regime reads whole sections of a statute together to fix on the meaning of any one of them...”); *Sierra Club v. EPA*, 551 F.3d at 1027 (reading definitions section of Clean Air Act, § 7602, together with other section). Because the draft permit’s director’s discretion provisions purport to give DNREC the authority to deprive the public of its ability to enforce continuous emission limits, they contravene the Act.

Similarly, DNREC may not issue a permit that includes provisions with enforcement discretion reserved to the director of DNREC, and thus attempt to undermine EPA’s ability to

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<sup>27</sup> Congress also defined “the term ‘applicable implementation plan’” to “mean[] the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 7410... and which implements the relevant requirements of this chapter.” *Id.* § 7602(q).

enforce the emission limits and standards in the permit. EPA has enforcement authority provided by § 113 that DNREC may not abrogate.

Finally, where a facility commits a violation of applicable Clean Air Act standards or requirements in the permit, it is up to a federal court, not DNREC, to determine whether a violation has occurred and issue a penalty, pursuant to § 7604 or 7413. DNREC may not lawfully limit a federal court's future ability to determine proper remedies for the violations at issue by attempting to provide advance discretion from DNREC to waive exceedances, as the provisions do. Even where EPA itself has attempted to waive penalties for certain violations in advance, the U.S. Court of Appeals for the D.C. Circuit held EPA itself could not do so. *NRDC v. EPA*, 749 F.3d 1055, 1063 (D.C. Cir. 2014).

In short, these director's discretion provisions are unlawful in regard to all federally applicable Clean Air Act requirements, and DNREC must remove them from the Title V permit to assure that those Clean Air Act requirements apply at all times.

### **III. THE DRAFT PERMIT UNLAWFULLY RELAXES FEDERALLY ENFORCEABLE LIMITS DURING PLANNED STARTUP AND SHUTDOWN OF THE FCU AND FCCU AND WHEN THE FCCU'S CO BOILER IS COMBUSTING ONLY REFINERY FUEL GAS.**

The draft Title V permit contains a combination of unlawful exemptions and alternate, higher limits that apply during planned startups and shutdowns of the FCU and FCCU instead of limits normally applicable to these units. *See* Title V Permit Condition 3 – Table 1, Parts 2(da)(1)(i)(G), 2(e)(1)(i)(H). In addition, the FCCU is exempted from having to comply with certain limits when its CO boiler is combusting only refinery fuel gas. *See id.* Part 2(e)(1)(i)(H).

For example, the FCCU, during planned startups and shutdowns, is only required to meet a 500 lb/hr limit for PM instead of its normal limit of 1 lb/1,000 lb of coke burned. *Compare id.* at Part 2(e)(1)(i)(H)(2) *with id.* at Part 2(e)(2a)(i)(B). If the FCCU emitted PM at this same rate every hour of the year, its annual emissions would be 2,190 tons/year—almost 10 times its annual limit of 203 tons/year. *See id.* at Part 2(e)(2a)(i)(B). And the draft permit allows the FCCU—instead of complying with its normal concentration limits with a 7-day and 365-day rolling averaging periods—to emit SO<sub>2</sub> during these planned periods up to 165 lbs/hr, which is more than double the average hourly rate that the FCCU could emit at to meet its annual limit of 352 tons/year. *Compare id.* at Part 2(e)(1)(i)(H)(3) *with id.* at Part 2(e)(3)(i)(A).<sup>28</sup> And during planned startups and shutdowns, the FCU—instead of complying with its normal limits for CO, which include concentration limits with an hourly and rolling 365-day averaging periods (*id.* at Part 2(da)(5)(i)(A))—is only required to meet a 415 lb/hr limit for CO. *Id.* at Part 2(da)(1)(i)(G)(6). If the FCU emitted CO at this same rate every hour of the year, its annual

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<sup>28</sup> Confusingly, even though the permit provides alternate limits for PM and SO<sub>2</sub> during planned startup and shutdown, it does not list the FCCU's normal PM and SO<sub>2</sub> limits (listed at Parts 2(e)(2a)-(2b) and 2(e)(3)) among those affected by the alternate limits and exemptions: the permit provides that the limits in “Condition 3 – Table 1.e.4 through e.9 below, with the exception of e.7, shall not apply during periods when the FCCU COB is combusting refinery fuel gas only and during periods of planned shut downs and planned start ups of the FCCU...” *Id.* at Part 2(e)(1)(i)(H).

emissions would be 1,817.7 tons/year—over two and a half times its annual limit of 694.4 tons/year. *See id.* at Part 2(da)(5)(i)(A).

The permit provides that, during planned startups and shutdowns, the FCU does not have to comply with any limit at all for NOx, lead, or hazardous air pollutants: the permit’s planned startup and shutdown provision for the FCU does not list any alternate limits for these pollutants (all of which are limited during normal operations, under Parts 2(da)(4), (9), and (10) of the permit), and the permit specifically states that the limits in “Condition 3 – Table 1.da.2 through da.10 below shall not apply during periods of planned startup and planed shut downs of the FCU ...” *Id.* at Part 2(da)(1)(i)(G) (emphasis added). Likewise, the permit provides that, during planned startups and shutdowns and when the FCCU CO boiler is combusting only refinery fuel gas, the FCCU does not have to comply with any limit at all for NOx, CO, lead, or hazardous air pollutants: the permit’s planned startup and shutdown provision for the FCCU does not list any alternate limits for these pollutants (all of which are limited during normal operations, under Parts 2(e)(4), (5), (9), and (10) of the permit), and the permit specifically provides that the limits in “Condition 3 – Table 1.e.4 through e.9 below, with the exception of e.7, shall not apply during periods when the FCCU COB is combusting refinery fuel gas only and during periods of planned shut downs and planned start ups of the FCCU....” *Id.* at Part 2(e)(1)(i)(H) (emphasis added).

Further, the permit appears to exempt emissions from the FCU and FCCU during planned startup and shutdown (and when the FCCU’s CO boiler is only combusting refinery fuel gas) from counting toward compliance with these units’ annual limits for various pollutants, since several of the limits included in “Condition 3 – Table 1.da.2 through da.10” and “Table 1.e.4 through e.9 below, with the exception of e.7” (all of which “shall not apply” during these periods) are annual limits.

Planned startups and shutdowns of the FCU are allowed to last up to 116 hours (or almost five full days), and planned startups and shutdowns of the FCCU are allowed to last up to 80 hours (or more than three full days). *Id.* at Parts 2(da)(1)(i)(G), 2(e)(1)(i)(H) .

The limits affected by these exemptions and inflated alternate limits are a combination of SIP, PSD/NSR, NESHAP, and NSPS limits. *See id.* at Parts 2(da)(2)-(9), 2(e)(2)-(9) (with the exception of (e)(7)); *supra* at 10-11. The exemptions to these various limits for planned startups and shutdowns and periods when the FCCU’s CO boiler is only combusting refinery fuel gas are plainly unlawful, for all of the same reasons that the director’s discretion provisions are unlawful: they violate the Clean Air Act requirement that emission limits and standards apply continuously; they purport to alter at least SIP, NESHAP, and NSPS limits through a process that is contrary to the required process for establishing and revising these limits;<sup>29</sup> and they attempt to remove the ability of the public and EPA to enforce, and for a court to apply penalties, for the limits applicable to these units during normal operations. *See supra* at 11-14.

Apart from the exemptions, the alternate, inflated limits during planned startup and shutdown are also unlawful because they purport to alter at least SIP, NESHAP, and NSPS limits through a process that is contrary to the required process for establishing and revising these

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<sup>29</sup> The same argument would apply for the PSD/NSR limits if DNREC did not establish the exemptions through the required process (including the required public participation) for establishing PSD/NSR limits in the first place.

limits—and because they remove the ability of the public and EPA to enforce the limits applicable to these units during normal operations. *See supra* at 12-14.

To the extent the alternate limits inflate (rather than exempt noncompliance with) NSR/PSD limits, these inflated limits may also be unlawful. EPA has “consistently” stated that major NSR/PSD limits must apply at all times and that PSD/NSR permits cannot contain blanket exemptions to those limits for SSM periods. *See Order Granting in Part and Denying in Part Petition for Objection to Permit, In the Matter of Southwestern Electric Power Co., H.W. Pirkey Power Plant*, Petition No. VI-2014-01 (“Pirkey Order”) (Feb. 3, 2016) at 8 (citing to previous Title V orders and EPA Environmental Appeals Board (EAB) decisions).<sup>30</sup> While EPA has stated that PSD/NSR permits may contain alternative limits that apply during startup and shutdown when the permitting authority determines that compliance with a primary PSD/NSR limit is infeasible during those periods, such alternative limits must be justified as BACT/LAER for the startup/shutdown periods to which they apply. *Id.* at 8, 12 (citing previous Title V orders and EAP decisions). *See also* 42 U.S.C. §§ 7475(a)(4), 7503(a)(2) (the Clean Air Act’s BACT and LAER requirements, respectively).

In at least one letter to Texas, EPA has made clear that states cannot replace or revise existing NSR/PSD limits without complying with the major NSR/PSD required procedures used to establish the original limits.<sup>31</sup> *See also* 42 U.S.C. §§ 7475, 7503 (Clean Air Act requirements for PSD and major NSR permits, respectively). Thus, to revise the major NSR/PSD limits applicable to normal operations and create new alternate limits for periods of planned startup and shutdown, DNREC would need to (among other things): analyze whether—and ensure that—the alternate limits for these startup and shutdown periods meet BACT or LAER (depending on the limit at issue); analyze air quality impacts resulting from the relaxed limits for startup and shutdown periods; ensure that the public participation requirements for establishing major NSR/PSD limits are complied with; and offset any emissions increases resulting from relaxing major NSR limits. Here, commenters cannot determine whether DNREC followed these requirements in establishing the alternate planned startup and shutdown limits that apply instead of the refinery’s PSD/NSR limits that apply during normal operations.

In sum, DNREC must remove the planned startup and shutdown provisions or the permit will violate the Act.

#### **IV. THE DRAFT PERMIT INCLUDES AN UNLAWFUL AFFIRMATIVE DEFENSE TO LIABILITY FOR EXCEEDANCES OF “TECHNOLOGY-BASED” LIMITS DURING EMERGENCIES AND MALFUNCTIONS.**

The draft Title V permit also contains an unlawful affirmative defense to liability for noncompliance with “technology-based” limits caused by malfunctions and emergencies. *See*

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<sup>30</sup> Relatedly, EPA has objected to at least one Title V permit where Texas attempted to undermine a SIP limit that applies at all times through SSM provisions established through a NSR permit. Pirkey Order at 10-12 (provisions appeared to conflict with, and thus rendered unclear, applicability of SIP limit for particulate matter).

<sup>31</sup> Ex. 6, Letter from Jeff Robinson, Air Permits Section, U.S. EPA Region VI, to Richard Hyde, P.E., Air Permits Division, TCEQ, regarding Permitting of MSS Emissions at Major Stationary Sources, May 21, 2008.

Title V Permit Condition 2(b)(5)-(6). *See also* Title V Permit Conditions 2(e)(4)-(5) (defining “emergency” and “malfunction”), 3(b)(2)(iii), 3(c)(2)(ii)(A) (recordkeeping and reporting requirements for the affirmative defense). The affirmative defense is also found in Delaware’s Title V rules at 7 Del. Admin. Code 1130 § 6.7. This regulatory provision is not part of Delaware’s SIP. *See* 40 C.F.R. § 52.420.

The affirmative defense cannot lawfully be included in this Title V permit. Affirmative defenses violate § 7604 and 7613 and thus are unlawful under the Clean Air Act, as the U.S. Court of Appeals for the D.C. Circuit confirmed in *Natural Resources Defense Council v. EPA*, 749 F.3d 1055, 1063 (D.C. Cir. 2014). The D.C. Circuit explained that the Act’s “citizen suit” provision, 42 U.S.C. § 7604(a), “creates a private right of action” and, “as the Supreme Court has explained, ‘the Judiciary, not any executive agency, determines ‘the scope’—*including the available remedies*—of judicial power vested by’ statutes establishing private rights of action.” *Id.* at 1063 (emphasis in original; quoting *City of Arlington v. FCC*, 133 S. Ct. 1863, 1871 n.3 (2013)). EPA recognized the same in the SSM SIP Call. 80 Fed. Reg. at 33,929. EPA also recognized the same in 2016 in proposing to require states to remove affirmative defenses from their Title V rules. 81 Fed. Reg. 38,645, 38,650-51. There, EPA also properly found that, to the extent the affirmative defense from EPA’s Part 70 regulations qualifies as an exemption, it would run contrary to the requirement that emission limits apply continuously. *Id.* The same applies to the affirmative defense at issue here.

It is unclear why DNREC’s regulations contain an illegal affirmative defense, as it would be illegal for EPA to approve the defense during its review of the state regulations. Even if the affirmative defense in DNREC’s regulations were previously approved by EPA in violation of the Act, it still must be removed from the draft permit for several reasons. First, it is unlawful for the reasons explained in the preceding paragraph. Second, the affirmative defense in the draft permit and DNREC’s rules is unlawfully more lax than EPA’s Title V regulations, which only contain an affirmative defense for emergencies—not malfunctions. *See* 40 C.F.R. § 70.6(g). *See also* Operating Permits Program and Federal Operating Permits Program, Proposed Rule, 60 Fed. Reg. 45,530, 45,558 (Aug. 31, 1995) (state permitting agencies “may not adopt an emergency [affirmative] defense less stringent than that set forth at section 70.6(g)...”). In addition, Title V of the Clean Air Act contains no affirmative defense, and EPA’s regulatory provision is unlawful. *See, e.g., NRDC v. EPA*, 729 F.3d. Therefore, DNREC may not replicate it.

The affirmative defense is also unlawful because it could, on its face, be read to impermissibly revise EPA’s NSPS and NESHAP regulations. The “technology-based” limits subject to the defense presumably include NSR and PSD limits, but, in an enforcement proceeding, Delaware City Refining could potentially argue that NSPS and NESHAP limits are also subject to the affirmative defense. For the same reasons as discussed above in the context of director’s discretion provisions, *see supra* at 12-13, DNREC cannot revise EPA-established NSPS and NESHAP limits by adding an affirmative defense that does not otherwise appear in those regulations. At the very least, DNREC must revise the permit to explicitly state that the affirmative defense does not apply to any NSPS and NESHAP provisions that may be applicable to the refinery—including the requirements from 40 C.F.R. Part 63, Subparts CC and UUU.

Thank you for your time and consideration of these comments and this hearing request.

Sincerely,

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS, TX 75202-2733

MAY 21 2008

Mr. Richard Hyde, P.E.  
Director  
Air Permits Division  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

Dear Mr. Hyde:

Since March 2007, we have been discussing with your staff the process for addressing emissions from maintenance, start-up, and shutdown (MSS) activities in new source permits for major sources. My staff has reviewed the Texas Commission on Environmental Quality (TCEQ) draft model permit for MSS emissions e-mailed to us on February 11, 2008. We appreciate the opportunity to provide comments on the draft model permit.

The TCEQ's initiative to address MSS emissions through permits at major stationary sources is related to changes in the State's Chapter 101 Excess Emissions rule, which establishes an affirmative defense for excess emissions during MSS, but then provides a schedule for phasing out the use of the affirmative defense for excess emissions from planned MSS activities. The U.S. Environmental Protection Agency (EPA) has not yet taken rulemaking action on this State Implementation Plan (SIP) revision. The EPA understands that these sources have combinations of Federal major and minor New Source Review permits, as well as State permits that will need to be amended. Reconciliations to correct terms and conditions in Prevention of Significant Deterioration/Nonattainment New Source Review permits, including adding or revising requirements for MSS activities, should undergo the same process as the original Federal Permit. This process would include a Best Available Control Technology (BACT) and/or Lowest Achievable Control Technology (LAER) review, an air quality impact analyses, and public participation requirements for all sources.

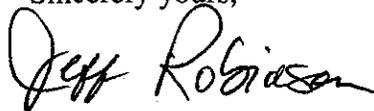
The EPA is concerned that the model permit may authorize increased emission limits for maintenance of control devices that occurs during normal process operations. The EPA's long-standing guidance states that maintenance for pollution control devices is a predictable event that can be scheduled at the discretion of the facility to coincide with maintenance of process equipment. The Texas Commission on Environmental Quality (TCEQ) should explicitly state that this permit does not authorize excess

emissions that occur as a result of maintenance activities of these control devices that occurs during normal operations. Additionally, we are concerned that the draft permit might be construed to allow sources to address MSS periods in a manner that is inconsistent with Federal rules and regulations such as New Source Performance Standard Subpart J, applicable consent decrees, current permit conditions, and the approved SIP. The MSS permit should state that compliance with the most stringent applicable requirement is required. The new source permit process may only be used to address MSS from activities permitted in the original new source permit. Moreover, terms in the permit cannot authorize emissions that are prohibited by Federal requirements, including any requirements in the approved SIP. As noted above, any modification of compliance obligations in current permits for periods of MSS may occur only by reopening these permits and providing public participation consistent with the public participation requirements for the initial permit.

Enclosed are our detailed comments. These comments were developed jointly with EPA's Office of Air Quality and Planning Standards, the Office of Compliance Assurance and Enforcement, the Office of General Counsel, and other EPA Regions. Please note that while we have carefully considered the draft model permit and consulted with other EPA offices, it is difficult to review the model permit in the abstract, without consideration of source-specific information. As we indicate in the body of our comments, the ultimate determination of emission limits and requirements for individual sources will occur on a case-by-case basis to evaluate applicability issues, BACT, LAER, air quality impacts and compliance monitoring and recordkeeping for the sources. Thus, we may identify additional issues with the model permit as we review the analyses for individual sources.

We look forward to continuing to work with TCEQ to resolve these issues. Should you have any questions regarding our comments, please feel free to contact me or you may contact Bonnie Braganza of my staff at (214) 665-7340.

Sincerely yours,



Jeff Robinson  
Chief  
Air Permits Section

Enclosure

## ENCLOSURE

### I. MSS emissions must be addressed through the SIP-approved new source permitting program

The EPA's long-standing interpretation of the Clean Air Act (CAA) and Parts 51 and 52 requires a source subject to New Source Review (NSR) to evaluate its maximum capacity to emit a pollutant under its physical and operational design. EPA has stated that MSS emissions are part of normal operation of a source and should be accounted for in planning, design, and implementation of operating procedures for process and control equipment.<sup>1</sup> As such, MSS emissions should have been included in Potential to Emit (PTE) and subject to all PSD and NNSR requirements, including public participation, BACT, and air quality analysis, at the time of issuance of the original permit. TCEQ's action to reconcile PSD and NNSR permits should demonstrate that all program requirements are met.<sup>2</sup> MSS activities must be authorized in permits issued under the Federally approved SIP

Emission increases resulting from maintenance activities should be minimal because those events can be scheduled during process unit downtime. Maintenance of control devices during process operations which would result in increased emissions should be prohibited unless redundant control devices are operational.

The model permit indicates TCEQ may authorize MSS emissions by this site-wide permit without reopening existing permits. As a preliminary matter, the only MSS emissions that can be addressed through this permit are from units that have obtained or are obtaining a new source permit. A unit cannot obtain an MSS permit allowing emissions but be "grandfathered" from new source program requirements in other respects (e.g., no Federal BACT or LAER, etc...). Furthermore, EPA regards the inclusion of MSS emissions related to any SIP approved nonattainment New Source Review (NNSR) or Prevention of Significant Deterioration (PSD) permit program as a reopening of the original NSR permit to correct the potential to emit (PTE) assumption. TCEQ should reopen and correct the PTE and other terms and conditions in existing permits that will conflict with this permit.

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<sup>1</sup>See, e.g., 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) ("Rasnic Memo");

See 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) (referred to hereafter as "1983 Excess Emissions Policy").

<sup>2</sup>See, Memorandum from Gary McCutchen, New Source Review Section Chief and Michael Trutna, Air Toxics Section Chief to J. David Sullivan, ALO Enforcement Section, Region VI, Request for Determination on Best Available Control Technology Issues - Ogden Martin Tulsa Municipal Waste Incinerator Facility, Nov. 19, 1987.

## A. BACT

1. Secondary BACT or LAER emission limits or an increase in existing BACT or LAER emission limitations for MSS activities should be considered only after the State has made an on-the-record determination that compliance with existing emission limitations during periods of MSS is infeasible.<sup>3</sup> Allowing an increase in allowable emissions or adding secondary emission limitations without this demonstration is inconsistent with the definition of BACT and LAER. Note that conditions in other existing NSR permits may not be superseded without reopening and correcting terms and conditions in the relevant permit.
2. Special Condition 12 should be restated to eliminate the exemption for combustion units from Federally enforceable emission limits or BACT limits required by the CAA (Federal BACT). The condition should provide for the development of an alternative case by case Federal BACT limitation for MSS periods. The EPA has noted that several permit applicants indicate using a TCEQ Tier approach of BACT. This approach should be substantially equivalent to the Federal guidance on the top/down BACT approach and be a case by case analysis. The duration for startup/shutdown in this Special Condition 12 should be based on BACT. EPA recognizes that TCEQ has attempted to provide thresholds for the durations for startup and shutdown activities. However, Federal BACT is based on a case by case analysis based on the specific units that vary in size, age and control devices, and therefore should not contain generalized BACT limits.
3. BACT for the MSS activities should have numerical emission limits and/or specific work practice standards that can be effectively monitored and recorded. It is not clear that all the emission units identified in the Maximum Allowable Emission Rates Table (MAERT) will have short term and annual limits.

## B. Public Participation

EPA would like to emphasize our concern regarding public participation in the permitting of MSS emissions. Texas' actions to reconcile PSD and NNSR permits at this time must ensure that all permitting requirements in the original authorization, including public participation, are met. EPA guidance and policy requires 30-day notice and comment on a draft permit when a PSD or NNSR permit is re-opened. EPA is aware that all the permit applications were public noticed. However in developing the draft permits, several revisions and updates were provided to TCEQ, such that the rationale for terms and conditions in some draft permits may not represent the original public noticed permit applications. Additionally, we understand that the modeling for the increased emission limits was requested by TCEQ in February 2008 and is still not complete, which means that the public has not had an opportunity to comment on the modeling. The EPA questions whether this process meets the SIP public participation requirements for major or minor NSR modifications/revisions.

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<sup>3</sup> See, *In re: Tallmadge Generating Station, PSD Appeal No. 02-12*, (EAB, May 22, 2003) and *In re: Rockgen Energy Center, PSD Appeal No. 99-1*, (EAB, August 25, 1999).

Therefore, these draft permits should have a 30-day public notice and comment period.

Various environmental organizations have informed EPA that some permit applications claimed emission data as Confidential Business Information (CBI). Sections 110 and 114(c) of the Clean Air Act (CAA) require emission data to be made available to the public, even if it otherwise qualifies as trade secret information.<sup>4</sup> EPA has determined that emission data does not qualify as confidential if it meets the definition under 40 CFR 2.301(a)(2)(I) for information necessary to determine the identity, amount, frequency, concentration, or other characteristics of any emission which has been emitted by the source or information necessary to determine the identity, amount, frequency, concentration, or other characteristics of the emission which, under an applicable standard or limitation, the source was authorized to emit. We note that the Office of the Attorney General of Texas also recently reviewed this requirement.<sup>5</sup> EPA recommends that TCEQ review permit applications to determine whether the CBI claims are allowed under State and Federal law, and therefore whether the permit application is administratively complete.

C. Air Quality Analyses

The EPA will provide comments on the modeling protocol for MSS emissions received via email on February 20, 2008, at a later date. EPA is requesting the modeling data from the facilities or TCEQ for our records. TCEQ should consider emissions from background sources in the modeling to ensure that these permits do not interfere with attainment and maintenance of the NAAQS or PSD increments.

D. Houston/Galveston/Brazoria (HGB) area NSR applicability thresholds and offset ratios and Title V applicability

The EPA has proposed to grant the State's request to reclassify the HGB area from moderate to severe nonattainment for the 8-hour ozone standard. However, even prior to the time the area is reclassified to severe for the 8-hour standard, permitting for sources in the HGB area should be consistent with the Non-attainment new source review (NSR) and Title V based on the 1-hour ozone nonattainment classification of severe for the area.

In *South Coast Air Quality Management District (SCAQMD) v. EPA*, 472 F.3d. 882 (D.C.Cir. 2006), the Court of Appeals reviewing EPA's rule for implementing the 8-hour ozone standard decided that the EPA had improperly determined that areas designated as non-attainment under the 1-hour ozone NAAQS would no longer be subject to 1-hour NSR requirements. The effect of the court's ruling is to restore the applicability of the

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<sup>4</sup> See Notice of Policy on Public Emission Data within the meaning of Sections 110 and 114(c) of the Clean Air Act (CAA), 56 FR 7042-01, February 21, 1991.

<sup>5</sup> See letter from Heather Pendleton Ross, Assistant Attorney General, Office of the Attorney General of Texas to Mr. Robert Martinez, Director of Environmental Law Division, Texas Commission on Environmental Quality, dated July 30, 2007, reference number OR2007-9631.

more stringent NSR thresholds and emission offsets that applied under the Act based on an area's 1-hour ozone classification.

### Recordkeeping

Recordkeeping requirements must be sufficient to determine whether a facility is operating in normal, startup, shutdown, and turnaround or maintenance mode to ensure enforceability of the permit. In other words, the owner or operator must identify which emission limitation or other requirements are applicable at all times. We recommend that TCEQ revise the recordkeeping requirements to ensure that records are required to document which mode of operation is current before the startup, shutdown, turnaround or maintenance activity begins. The recordkeeping should state the start and end time of the activity, not just the duration. The estimated quantity of each pollutant should be expressed in terms of short-term limitations in the permit. Exceedances of the short-term emission limitation must be documented and will be considered a violation of this permit.

## II. Practical Enforceability

- A. Permitting of MSS emissions should be incorporated into a permit issued under a SIP-approved rule. We are aware that many of these facilities have flexible permits that are not SIP-approved permits. For Federally enforceable permit terms, TCEQ may only use the approved SIP rules for permitting of MSS. Where MSS emissions are incorporated into a flexible permit, the source has an authorization for those emissions under State law. However, the source has no Federal authorization for MSS emissions under the SIP. Therefore, the source should consider MSS emissions as unauthorized under the SIP and subject to all reporting requirements, including Federal Operating Permit (FOP) deviation reporting and compliance certification. The flexible permit should be incorporated into the FOP as a State-only requirement.

These exemptions from the Maximum Allowable Emission Rate Table (MAERT) limits for periods of startup, shutdown, maintenance or malfunction are not authorized by EPA because they would allow for circumvention of Federal CAA requirements. The exemption is also inconsistent with the language of the model MSS permit. EPA believes, at a minimum, underlying permits with such exemptions must be reopened to remove the provision and other terms or conditions that are inconsistent with the MSS permit. We also request that TCEQ include a statement in all permits issued under the SIP that when there are multiple Federal or SIP requirements that apply to an emission source during MSS periods, the most stringent requirement applies and that an exceedance of this applicable emission limitation is a violation which may be subject to enforcement action.

- B. The EPA has concerns regarding the enforceability of the MSS emission limits where an older existing permit at a facility may contain an exemption from compliance with emission limitations during periods of upset, startup, shutdown or maintenance activities. We believe such exemption language is inconsistent with the model MSS permit. EPA recommends that underlying permits with such exemptions be reopened to remove the

provision. Alternatively, please provide a method to ensure that exceedances of permit emission limitations during periods of startup, shutdown, maintenance, and upsets can be enforced as violations of the SIP. We also request that TCEQ include a statement in the MSS permits that when there are multiple Federal or SIP requirements that apply to an emission source during MSS periods, the most stringent requirement applies and that an exceedance of this applicable emission limitation is a violation which may be subject to enforcement action.

- C. Special Condition 1 states "Startup and shutdown emissions due to the activities identified in Special Condition 2 are authorized from facilities and emission points in other construction permits at the site provided the facility and emissions are compliant with the respective MAERT and special conditions, or Special Condition 12 of this permit." EPA is not clear how this condition can be practically enforceable. The MSS permit cannot alter or supersede terms and conditions in an existing permit without reopening and revising the existing permit. Since TCEQ is undertaking this effort because planned MSS emissions were not specifically subject to specific limits in existing permits, the MSS permitting actions should address all units that have MSS activities and emissions from the site.
- D. Please ensure that the applicable leak detection program for the site is addressed in this permit.

### III. Permits by Rule (PBR)

We also are concerned that these sources can use the Permit by Rule (PBR) to amend the MSS emissions in these permits. The Permit by Rule should only be used for small minor sources (PTE less than 100TPY/250TPY) and is not a vehicle for major sources to supplement emission limits or conditions in a Federally enforceable permit. EPA has consistently expressed concerns about PBRs that authorize a category of emissions, such as MSS, or that modify an existing NSR permit.<sup>6</sup> These PBRs are inconsistent with the approved SIP and may serve as a circumvention of CAA requirements. At a minimum, condition 11 should be removed from the model permit.

### IV. Comments on Special Conditions of the model permit.

- A. The model permit should contain the provision that MSS activities not listed in the permit are not authorized. Special Condition 2 refers to MSS activities in the permit application. In most cases the permit applications were revised extensively, therefore EPA believes that references to activities in a permit application are not practically enforceable unless

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<sup>6</sup> Letter dated November 16, 2007 to Mr. Richard Hyde regarding Comments on Proposed Amendments to Chapter 106, 116 for Maintenance Startup and Shutdown (MSS), Chapter 106 Subchapter K.

Letter dated March 30, 2006 to Mr. Steve Hagle regarding comments on Proposed Rule Revisions to 30 Texas Administrative Code Chapter 106 and 116 and to the State Implementation Plan B Rule Project Number 2005-016-106-PR;

TCEQ provides a cross-walk and rationale for the differences between the permit and permit application. Please explain what type of exceptions TCEQ expects to see in Special Condition 10 regarding a planned process unit startup.

- B. Special Condition 3 provides the process for degassing, emptying and depressurizing of process units and facilities. This condition should require a case by case assessment of the types and quantities of air pollutants. TCEQ should provide the rationale for the conclusion that venting to the atmosphere of pollutants below 0.5 psi and 50 lbs has a negligible air quality impact and is consistent with other Federal requirements and standards. The permit should also indicate monitoring requirements for determining when the condition of 50 lbs is reached.
- C. Special Condition 7 appears to have a typographical error and should read "Special Condition 6.B (i) through 6.B(v)"
- D. Special Condition 9 requires frac or temporary tanks that are used to support MSS and that are exposed to the sun to be white or aluminum effective May 1, 2013. If the emissions are minimized by these requirements, this should be considered BACT at the time of permit issuance. Please remove the effective date requirement of May 1, 2013 in this condition.
- E. It is not clear how TCEQ will apply Special Condition 12 universally to all combustion sources without referring to the current existing limits, units and permits. EPA recommends that this permit identify the existing limit for each combustion unit at the site and then identify the secondary (MSS) BACT limit or work practice standard to make this practically enforceable.
- F. Please clarify if Special Condition 13 only applies to control devices used during periods of MSS. This permit should not supersede any previous Federal conditions in current permits, unless a case by case rationale is provided and the underlying permit is reopened. EPA believes that BACT should consider having redundant control devices.
- G. For the control devices in Specific Condition 13, the method for monitoring compliance should be specified for the Internal Combustion engines. Please clarify if these are the only required control devices to be used during MSS activities and if this list will be updated as new technology to control these emissions are developed.
- H. Special Condition 14 refers to capture systems for flare control devices. The monitoring condition in 14A should be performed during an MSS activity to determine compliance with the emission rates, not on a monthly or annual basis. Special Condition 14 states "A deviation shall be reported if the monitoring or inspections indicate bypass of the control device." However this condition is allowing the bypass of a control device. Please clarify the language. The permit must not provide for automatic exemption to allow bypass of an emission control device.

V. General Comments:

- A. Please provide definitions for startup, shutdown and maintenance activities. It is possible that startup, shutdown and maintenance are specific to the source and therefore these definitions may need to be included in each permit. As we have discussed earlier, EPA's guidance states that maintenance activities are a planned and predictable event that can be scheduled at the discretion of the operator to coincide with maintenance of production equipment. TCEQ's BACT evaluation for MSS activities must eliminate or minimize periods during which production equipment operates without control devices.
- B. Attachment A to the permit application was missing. That Attachment identifies a list of activities with low emissions that are performed numerous times each year. It appears that these activities will be exempt from emission monitoring. Similarly, the draft you provided us did not include Attachment B to the permit application, which identifies maintenance activities involving equipment/facilities such as valves, pumps, piping, and heat exchangers. It is expected that these attachments will be site specific. Therefore our comments are limited to information provided in the model permit and additional comments will be provided at the time EPA reviews the site specific permits. Please note that there can be no exemption for MSS activities as indicated in the Special Conditions of the model permit.
- C. The specific conditions related to the MAERT and Facility List table are not clear, since there are no emission estimates associated with the emission units. Each emission unit should have an applicable short term emission limit. EPA understands that these provisions may be clarified when the source specific permit is reviewed and we may provide additional comments at that time.
- D. The permit does not contain monitoring for the special conditions in this permit with the exceptions of some control devices that are listed in the permit. Monitoring and recordkeeping are required to determine compliance with permit terms and conditions.
- E. EPA is also concerned that there are no PM considerations for catalyst loading activities that happen frequently during major unit turnarounds. BACT for these activities should be considered using control devices such as filters baghouses etc.
- F. Please clarify how the MSS emissions are included in this permit on an annual and short term basis for units that have a turnaround frequency of less than a year.
- G. There are references in the permit to using "good engineering practice" to reduce emissions such as Specific Condition 6 B (ii). BACT in the permit should be specific with respect to emission limits, and work practice standards should only be used when numerical emission limits are infeasible. All BACT terms and conditions should require monitoring and recordkeeping sufficient to ensure compliance. Monitoring should be done by approved EPA methods or other approved methods that are replicable under these operating conditions.

**Violation List for:**

**Valero Petroleum Refinery - Delaware City**



**Street Address:** Delaware City Refinery, Delaware City, DE 19706 US

**Type:** Chemical Plant

Violation Date	Nature of Violation	Program
1/14/2019	<p>FCU COB tripped offline resulting in unpermitted release of CO, HCY, H2S, NH3 &amp; SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant</p> <p>---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300oF for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Conditions Applicable to Multiple Pollutants: Operational Limitations: This Permit does not authorize emissions exceeding the limits set forth in Condition 3 - Table 1.da.2 through da.10 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Owner/Operator shall bear the burden of demonstrating to the Department's satisfaction that the Owner/Operator's continued operation of the FCU should not subject the Owner/Operator to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware "Regulations Governing the Control of Air Pollution." Such demonstration must at a minimum be supported by sufficient documentation and emissions data including all relevant emissions calculations, formulas, and any assumptions made thereof. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Carbon Monoxide (CO): Emission Standards: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB.</p>	Air Program
1/14/2019	<p>During outage of FCU COB, bypass of the WGS train resulted in release of air contaminants to the atmosphere. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Conditions Applicable to Multiple Pollutants: Operational Limitations: The Belco prescrubber, the amine-based Cansolv regenerative WGS, the caustic polishing scrubber and SNCR system shall be operating properly at all times when the FCU is operating.</p>	Air Program
1/14/2019	<p>During FCU COB outage, opacity exceedances occurred. ---- No person shall cause or allow the emission of visible air contaminants or smoke from a stationary or mobile source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than three minutes in any one hour or more than 15 minutes in any 24 hour period. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Visible Emissions: The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.</p>	Air Program
11/14/2018	<p>Flaring event for 24 minutes on 11/14/18 due to high pressure in FCCU Gas Plant Depropanizer Tower 24-C-3 resulted in the unpermitted release of 598 lbs SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant</p>	Air Program

Violation Date	Nature of Violation	Program
9/4/2018	<p>Violations associated with continued operation of the FCU during FCU COB outage ---- In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300oF for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Conditions Applicable to Multiple Pollutants: Operational Limitations: This Permit does not authorize emissions exceeding the limits set forth in Condition 3 - Table 1.da.2 through da.10 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Owner/Operator shall bear the burden of demonstrating to the Department's satisfaction that the Owner/Operator's continued operation of the FCU should not subject the Owner/Operator to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware "Regulations Governing the Control of Air Pollution." Such demonstration must at a minimum be supported by sufficient documentation and emissions data including all relevant emissions calculations, formulas, and any assumptions made thereof. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Conditions Applicable to Multiple Pollutants: Operational Limitations: The Belco pre-scrubber, the amine-based Cansolv regenerative WGS, the caustic polishing scrubber and SNCR system shall be operating properly at all times when the FCU is operating. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Carbon Monoxide (CO): Emission Standards: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB.</p>	Air Program
9/4/2018	<p>unpermitted release of CO, SO2, NH3, H2S and HCY to the atmosphere ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.</p>	Air Program
9/4/2018	<p>FCU COB outage resulted in opacity violations ---- No person shall cause or allow the emission of visible air contaminants or smoke from a stationary or mobile source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than three minutes in any one hour or more than 15 minutes in any 24 hour period. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Visible Emissions: The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.</p>	Air Program
8/22/2018	<p>exceeded hourly CO limit when FCCU COB tripped offline ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Carbon Monoxide (CO): Emission Standard: CO emissions from the FCCU WGS+ shall not exceed 500 ppmv dry as a 1-hour average, and 3,085 TPY.</p>	Air Program
8/22/2018	<p>Failed to burn CO at required temp before emitting. ---- In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300oF for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique. ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Carbon Monoxide (CO): Emission Standard: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCCU COB, or combusted in the FCCU regenerator when operating in full burn mode.</p>	Air Program

Violation Date	Nature of Violation	Program
7/4/2018	Two flaring events over 2 days resulted in the unpermitted release of 475 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/19/2018	Flaring resulted in the unpermitted release of 140 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/1/2018	Failed stack test November 20-22, 2017 for unit 25-H-402 resulted and will continue to result in exceedance of rolling 12-month emission limit for PM10 from February 2018 through September 2018. ---- Emission Unit No. 25: Reformer and Reformulated Gasoline 2000 Project (RFG 2K Project): Cracked Naphtha Hydrotreater (CNHT) Unit, Butamer Unit and Cooling Tower (Emission points 25-1 and 25-2): Particulate Matter: Emission Standards: PM10 emissions shall not exceed the following: For 25-H-402: 1.7 TPY on a rolling twelve month basis	Air Program
1/9/2018	Flaring resulted in the unpermitted release of 180 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/19/2017	Stack tests conducted 12/19/17 - 12/21/17, and again from 2/21/18 - 3/6/18, showed baghouses at coke storage and handling complex exceeded permitted PM emissions limits. ---- Emission Unit No. 22: Petroleum Coke Storage and Handling Complex: Emission Point 22-1: Particulate Matter (PM): Emission Limitations: PM emissions from the following baghouses shall not exceed 0.014 grains/scf1: Emission Pt: PS-01A Conveyor A, BH-1; PS-02A Conveyor B, BH-2; PS-03A Conveyor C, BH-3; PS-04A Conveyor D, BH-4; PS-05 Railcar Loading, BH-5	Air Program
12/19/2017	Stack tests in December 2017 showed PM emissions from Baghouse 4 exceeded the permitted limit, retesting in February/March 2018 showed improvement, enough for Baghouse 4 to no longer be in violation of this permit condition, however still in violation of the other one noted in violation #0429 ---- Emission Unit No. 22: Petroleum Coke Storage and Handling Complex: Emission Point 22-1: Particulate Matter (PM): Emission Limitations: PM emissions shall not exceed 0.2 grain/dscf from any baghouse exhaust.	Air Program
12/1/2017	Failed stack test November 20-22, 2017 for unit 25-H-401 resulted and will continue to result in exceedance of rolling 12-month emission limit for PM10 from December 2017 through December 2018. ---- Emission Unit No. 25: Reformer and Reformulated Gasoline 2000 Project (RFG 2K Project): Cracked Naphtha Hydrotreater (CNHT) Unit, Butamer Unit and Cooling Tower (Emission points 25-1 and 25-2): Particulate Matter: Emission Standards: PM10 emissions shall not exceed the following: For 25-H-401: 2.4 TPY on a rolling twelve month basis	Air Program
10/16/2017	Flaring episode resulted in the unpermitted release of 2,500 lbs. SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/21/2017	Co. did not provide required notification for planned shutdown of FCU. ---- Emissions units 21, 22, 23 and 28 have specific emissions limitations applicable during periods of planned start up and shut down. The owner and/or operator shall submit a notification of no less than 24 hours prior to implementing such planned start up or shut down to the Environmental Emergency Notification and Complaint number (800) 662-8802 or faxed to (302) 739-2466.	Air Program
7/25/2017	Flaring episode resulted in unpermitted release of 150 lbs SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/29/2017	Conducted barge loading of straight run naphtha without use of marine vapor recovery system (MVRS). ---- Vapor tightness of marine vessels. The owner or operator of a source with throughput of 10 M barrels or 200 M barrels shall limit marine tank vessel loading operations to those vessels that are vapor-tight and to those vessels that are connected to the vapor collection system, except for those commodities exempted under §63.560(d). ---- RACT standard for sources with throughput of 10 M or 200 M barrels, except the VMT source. The owner or operator of a source with throughput of 10 M barrels or 200 M barrels, except the VMT source, shall reduce captured VOC emissions from marine tank vessel loading operations by 98 weight-percent when using a combustion device or reduce captured VOC emissions by 95 weight-percent when using a recovery device, as determined using methods in §63.565(d) and (l). ---- Reduce total VOC emissions by 98 weight-percent using a combustion device. If a boiler	Air Program
4/12/2017	Unpermitted release of 360 lbs. SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
3/15/2017	Unpermitted release of 350 lbs. SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/10/2017	Unpermitted release of 230 lbs. SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/8/2017	Unpermitted release of 200 lbs. SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/30/2016	Late inspection of tank 261-TF-500 ---- To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section. Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in §63.100 of subpart F of this part and at least once per year thereafter. ---- Emission Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double and Single Seals Subject to 7 DE Admin. Code 1124, Section 30 and 40 CFR Part 63, Subpart CC: Volatile Organic Compounds (VOC): Monitoring/Testing: In addition to the requirements of Conditions 3(b)(1)(ii) of this permit, the Company shall: The Owner/Operator shall comply with the Monitoring/Testing requirements of Condition 3 – Table 1(fb)(iv) : The Company shall determine the gap areas and maximum gap widths between the secondary seal and the storage vessel wall at least once every year.	Air Program
11/21/2016	Late inspection of tank 001-TF-200. ---- To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section. Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in §63.100 of subpart F of this part and at least once per year thereafter. ---- Emission Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double and Singl	Air Program
11/9/2016	Flaring incident lasting a total of 24 minutes resulted in the unpermitted release of 581 lbs. of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/21/2016	Flaring incident lasting 13 minutes resulted in the unpermitted release of 191 lbs. of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/23/2016	Tear of Tank 224-TF-112 discovered 8/8/16 and not repaired until 10/4/16, 12 days past 45 day deadline. ---- To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section. The primary seal shall meet the additional requirements specified in paragraphs (b)(5)(i) and (b)(5)(ii) of this section. extend a minimum vertical distance of 61 centimeters above the stored liquid surface. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope. ---- To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section. The secondary seal shall meet the additional requirements specified in paragraphs (b)(6)(i) and (b)(6)(ii) of	Air Program

Violation Date	Nature of Violation	Program
8/25/2016	FCU COB outage and consequent bypassing of the WGS train, when DCRC continued to operate the FCU, resulted in unpermitted release of 21,800 lbs of SO <sub>2</sub> ; 3,180 lbs of NH <sub>3</sub> ; 7,900 lbs of H <sub>2</sub> S; 375 lbs of HCN and 236,200 lbs of CO. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22	Air Program
8/8/2016	FCU COB outage and consequent bypassing of the WGS train, when DCRC continued to operate the FCU, resulted in unpermitted release of 3,100 lbs of SO <sub>2</sub> ; 950 lbs of NH <sub>3</sub> ; 2,350 lbs of H <sub>2</sub> S; 110 lbs of HCN and 70,400 lbs of CO. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1	Air Program
7/14/2016	Flaring incident lasting 81 minutes resulted in the unpermitted release of 5,050 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/7/2016	Late inspection of tank 048-TF-112 ---- To demonstrate compliance with §63.119(c) of this subpart (storage vessel equipped with an external floating roof), the owner or operator shall comply with the requirements specified in paragraphs (b)(1) through (b)(10) of this section. Except as provided in paragraph (b)(7) of this section, the owner or operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the frequency specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. For an external floating roof vessel equipped with primary and secondary seals, measurements of gaps between the vessel wall and the secondary seal shall be performed by the compliance date specified in §63.100 of subpart F of this part and at least once per year thereafter. ---- Emission Unit 40: Refinery Tank Farm Units With External Floating Roofs with Double and Single	Air Program
6/28/2016	Flaring as a result of an upset condition at coker main fractionator resulted in the unpermitted release of 27,326.5 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
5/22/2016	Late inspection of tank 471-TF-28 ---- Emissions Unit 40: Refinery Tank Farm Units With Fixed Roofs Subject to Regulation 1124, Section 31 and 40 CFR Part 63, Subpart CC: Volatile Organic Compounds (VOC): Monitoring/Testing: For tanks equipped with a double seal system: Perform a complete inspection of any cover and double seal whenever the tank is emptied for non-operational reasons or at least every 5 years, whichever is more frequent.	Air Program
4/20/2016	Leak developed from a cracked weld at an outlet line of the hydrocracker unit. To stop the leak, the unit was depressurized to the flare. Resulted in the unpermitted release of 9,832.8 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/11/2016	Three separate flaring events resulted in the unpermitted release of a total of 693.9 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/22/2016	As a result of power outage to the Sulfur Recovery Area, flaring resulted in the unpermitted release of 582.0 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
2/18/2016	During turnaround activities of the FCU, sporadic flaring resulted in the unpermitted release of 178.2 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/30/2016	Boilers' main stack opacity greater than 20% for more than 3 minutes during a 1 hour period. ---- No person shall cause or allow the emission of visible air contaminants or smoke from a stationary or mobile source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than three minutes in any one hour or more than 15 minutes in any 24 hour period. ---- Emission Unit 80: Boiler 80-1 (618 mmBtu/hr, Boiler 80-2 (716 mmBtu/hr), Boiler 80-3 (618 mmBtu/hr), Boiler 80-4 (737 mmBtu/hr), (Emission Point 80-1): Visible Emissions: Emission Standard: The Owner/Operator shall not cause or allow the emission of visible air contaminants from this unit in excess of 20% opacity for an aggregate of more than 3 minutes in any 1 hour period, or more than 15 minutes in any 24 hour period.	Air Program
1/30/2016	Crude Heater NOx emissions exceeded limit for 15 hours. ---- The owner or operator of any industrial boiler or process heater identified in Section 2.2.1 of this regulation shall meet the applicable NOx emission limitation identified in the following sections: Except as provided for in 2.3.2 of this regulation, the owner or operator of any industrial boiler or process heater identified in Section 2.2.1 of this regulation shall not operate except in compliance with the applicable NOx emission limitation identified in the following sections: For any unit not covered by 2.3.1.1, 2.3.1.2, or 2.3.1.3, or 2.3.1.4, 0.04 lb/mmBTU, on a 24-hour rolling average basis. ---- Emission Unit No. 21: Crude Unit; Crude Unit Atmospheric Tower Heater 21-H-701, and Crude Unit Vacuum tower Heater 21-H-2. Emission Point 21-1: Nitrogen oxides (NOX): Emission Standard: For 21-H-701 and 21-H-2 combined: NOX emissions shall not exceed 0.04 lb/mmBtu on a 3-hour rolling average and 20 lb/hour on a 24-hour rolli	Air Program
1/29/2016	FCCU CO stack emissions exceeded limit hourly. ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Carbon Monoxide (CO): Emission Standard: CO emissions from the FCCU WGS+ shall not exceed 500 ppmv dry as a 1-hour average, and 3,085 TPY.	Air Program
1/26/2016	FCU Bypass stack opacity exceeded limit. ---- No person shall cause or allow the emission of visible air contaminants or smoke from a stationary or mobile source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than three minutes in any one hour or more than 15 minutes in any 24 hour period. ---- Facility Wide Requirements for all emission units listed in Condition 1 of this permit and any insignificant activity listed in 7 DE Admin. Code 1130, Appendix A operated by the Owner/Operator or included in the permit application: Visible Emissions Standard: The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.	Air Program
1/25/2016	SRU I pit pressure went positive for 4 minutes between 1017 hours and 1025 hours. ---- Emission Unit No. 28: Sulfur Recovery Area (SRA); Claus Units I and II; Sulfur Pits and Shell Claus Offgas Treatment (SCOT) Units I and II. (Emission points 28-1 and 28-2): Conditions Applicable to Multiple Pollutants: Operational Limitations: The steam eductor system shall be operating properly at all times when molten sulfur is stored in the sulfur pits. ---- Emission Unit No. 28: Sulfur Recovery Area (SRA); Claus Units I and II; Sulfur Pits and Shell Claus Offgas Treatment (SCOT) Units I and II. (Emission points 28-1 and 28-2): Conditions Applicable to Multiple Pollutants: Operational Limitations: Only desulfurized refinery fuel gas (RFG) and/or natural gas may be fired in the SCOT I and SCOT II units. The hydrogen sulfide content in the RFG combusted in the SCOT incinerators shall not exceed 0.10 grain/dscf on a 3 hour rolling average.	Air Program
1/23/2016	SRU II stack SO2 emissions exceeded limit for 12 hours. ---- Emission Unit No. 28: Sulfur Recovery Area (SRA); Claus Units I and II; Sulfur Pits and Shell Claus Offgas Treatment (SCOT) Units I and II. (Emission points 28-1 and 28-2): Sulfur dioxide (SO2): Emission Standard: SO2 emissions shall not exceed 0.025 percent by volume (250 ppm) in each SCOT stack at zero percent oxygen on a dry basis on a twelve hour rolling average basis, except during startup or shutdown conditions, 122 lb/hour calculated on a 24 hour rolling average basis and 535 TPY combined from both SCOT stacks. During startup and shutdown conditions, the SO2 emission limits listed in the Operational Limitation shall apply in lieu of the 250 ppm and 122 lb/hour limits.	Air Program
1/23/2016	3-hour rolling average temperature of 32-H-101 fell below limit for intermittent periods from 1/23/16 - 2/4/16 ---- The owner or operator of each storage vessel with a design storage capacity greater than or equal to 38 cubic meters (10,000 gallons) to which this subpart applies shall comply with the requirements in paragraph (d) of this section and with the requirements either in paragraph (a), (b), or (c) of this section, or equivalent as provided in §61.273. The storage vessel shall be equipped with a closed vent system and a control device. The control device shall be designed and operated to reduce inlet benzene emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements of 40 CFR 60.18. ---- Emission Unit 32: Benzene Emissions From Benzene Storage Tanks 331-TC-1, 332-TC-1, 570-TC-10; and the Benzene Transfer Facility at the Tetra Unit; and the Transfer Rack (Emission Point 32-1	Air Program

Violation Date	Nature of Violation	Program
1/23/2016	Visible emissions from flares over two day period 1/23/16-1/24/16 ---- Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. ---- Emission Unit No. 45: Refinery Utilities, North & South Flares and Gas Recovery System; Spent Caustic Stripper (Emission points 45-1 and 45-2): Flares: Operational Limitations: Except as provided in D above, operation of the flare shall be smokeless. ---- Emission Unit No. 45: Refinery Utilities, North & South Flares and Gas Recovery System; Spent Caustic Stripper (Emission points 45-1 and 45-2): Flares: Operational Limitations: The flares shall be designed for and operated with no visible emissions as determined by methods specified in paragraph (f) of 40 CFR 60.18 except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.	Air Program
1/23/2016	Did not have at least one flare recovery compressor operational for a duration of 199 hours from 1/23/16-2/3/16 ---- Emission Unit No. 45: Refinery Utilities, North & South Flares and Gas Recovery System; Spent Caustic Stripper (Emission points 45-1 and 45-2): Flares: Operational Limitations: At least one flare recovery compressor shall be operational at all times, except during periods of malfunction as defined in Condition 2(e)(5).	Air Program
1/23/2016	Unpermitted release of 211,567 lbs SO <sub>2</sub> ; 1,104 lbs H <sub>2</sub> s between 1/23/16-2/3/16 ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/23/2016	Operated WWTP VCU when WWTP VCU temperature dropped below minimum operating temp for 10 hours. ---- For each closed-vent system and control device used to comply with standards in accordance with §§61.343 through 61.348 of this subpart, the owner or operator shall properly design, install, operate, and maintain the closed-vent system and control device in accordance with the following requirements: The control device shall be designed and operated in accordance with the following conditions: Reduce the organic emissions vented to it by 95 weight percent or greater; Achieve a total organic compound concentration of 20 ppmv (as the sum of the concentrations for individual compounds using Method 18) on a dry basis corrected to 3 percent oxygen; or Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760 °C (1,400 °F). If a boiler or process heater issued as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heat	Air Program
1/23/2016	Delta-p for coker pre-scrubber fell below minimum delta-p & minimum discharge pressure for coker pre-scrubber recirculation pumps fell below minimum for greater than 3 minutes in any 1 hour period. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Compliance Assurance Monitoring Plan for Particulate Matter: Operational Limitations: Indicator Ranges: or the primary indicator: Minimum delta-P of 6 inches of water column for no more than 3 minutes in any 1 hour or more than 15 minutes in any 24-hour period.	Air Program
1/23/2016	FCU Stack visible emissions exceeded 20% opacity for more than 15 minutes in a 24-hour period. ---- No person shall cause or allow the emission of visible air contaminants or smoke from a stationary or mobile source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than three minutes in any one hour or more than 15 minutes in any 24 hour period. ---- Emission Unit No. 22: Visible Emissions: Emission Standards: The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.	Air Program
1/23/2016	FCU COB temperature fell below limit for 2 minutes. ---- In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300oF for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique. ---- Emission Unit No. 22: Carbon Monoxide (CO): Emission Standards: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB.	Air Program
1/23/2016	FCU NOx emissions exceeded 7-day rolling average basis limit 1/23/16-1/30/16. ---- Emission Unit No. 22: Fluid Coking Unit (FCU): FCU, Wet Gas Scrubber (WGS), and Selective Non-Catalytic Reduction System (SNCR) (Emission point/s 22-2 or 22-3), FCU Start Up Heater 22-H-1 (Emission point/s 22-2 or 22-3), FCU Selas Steam Superheater 22-H-2 (Emission point 22-4), FCU Carbon Monoxide Boiler 22-H-3 (Emission point 22-2) and FCU Back Up Incinerator 22-H-4 (Emission point 22-3): Nitrogen Oxides (NOX): Emission Standard: NOX emissions shall not exceed the following: 152.0 ppmvd @ 0 % oxygen on a 7-day rolling average basis.	Air Program

Violation Date	Nature of Violation	Program
1/23/2016	Delta-p for FCCU pre-scrubber fell below minimum delta-p & minimum discharge pressure for FCCU pre-scrubber recirculation pumps fell below limit. ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Compliance Assurance Monitoring Plan for Particulate Matter: Operational Limitations: Indicator Ranges: For the primary indicator: Minimum delta-P of 6 inches of water column for no more than 3 minutes in any 1 hour or more than 15 minutes in any 24-hour period.	Air Program
1/23/2016	FCCU COB temperature fell below limit for 2 minutes. ---- In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300oF for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique. ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Carbon Monoxide (CO): Emission Standard: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCCU COB, or combusted in the FCCU regenerator when operating in full burn mode.	Air Program
1/23/2016	FCCU CO stack emissions exceeded hourly average limit for 2 hours. ---- Emission Unit No. 23: Fluid Catalytic Cracking Unit (FCCU); FCCU Reactor, Catalyst Regenerator, Start up Heaters 23-H-1 A and B, Carbon Monoxide Boiler, 23-H-3, and Wet Gas Scrubber System (WGS) (emission point 23-1); Carbon Monoxide (CO): Emission Standard: CO emissions from the FCCU WGS+ shall not exceed 500 ppmv dry as a 1-hour average, and 3,085 TPY.	Air Program
1/23/2016	Odor violation. ---- No person shall cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution. ---- Facility Wide Requirements for all emission units listed in Condition 1 of this permit and any insignificant activity listed in 7 DE Admin. Code 1130, Appendix A operated by the Owner/Operator or included in the permit application: Odor – State Enforceable Only: The Owner/Operator shall not cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution.	Air Program
12/7/2015	Feeder 36 faulted to ground causing the 13.8 kV bus to trip. Bus 14 feeds switchgear 14 which resulted in CCR hydrogen compressors 42-K-2s, 42-K-8s and 42-K-9s to shutdown. Unpermitted release of 417 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/29/2015	Pressure built up in the product separator 29-D-16 of Train 4 during start up operations following unit turnaround. Unpermitted release of 118 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/14/2015	Pressure built up in FCCU fractionator overhead receiver 23-D-5 during start up of the FCCU. Unpermitted release of 188 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/28/2015	Unpermitted release of H2S, Propane & Propylene from FCCU fractionator vent. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
8/21/2015	Unpermitted emissions of SO2 resulting from flaring caused by FCCU operational upset and subsequent fire at FCCU compressor deck and loss of containment of the 24-K-1 wet gas compressor. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
8/2/2015	DGA upset caused 3,070 lbs excess SO2 emissions from all affected refinery fuel gas combustion devices. ---- "No owner or operator subject to the provisions of this subpart shall burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 gr/dscf)."	Air Program

Violation Date	Nature of Violation	Program
8/2/2015	Exceeded H2S concentration in RFG for numerous units: Applicable permit conditions broken down by Permit Part. Permit Part 1: ---- Emissions Unit 36: Hydrocracker Unit, Process Heaters 36-H-1, 36-H-2 and 36-H-3; Emission Points 36-1 and 36-2.: Sulfur Dioxide (SO2):. Emission Standard: Operational Limitation:The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that contains more H2S in excess of 0.1 grain/DSCF on a three hour rolling average. ---- Emissions Unit 34: Olefins Plant and Process Heater 134-H-101; Emission Point 34-1.: Sulfur Dioxide (SO2). Emission Standards: Operational Limitation: The Owner/Operator shall not burn in any fuel gas combustion device any fuel gas that contains H2S in excess of 0.1 grain/DSCF on a three hour rolling average. ---- Emission Unit 33: Selective Hydrogenation Unit and Process Heaters 33-H-1 and 33-H-2; Emissions Points 33-1 and 33-2: Sulfur Dioxide (SO2):. Emission Standard: Operational Limitation: The Owner/Operator sh	Air Program
8/2/2015	Exceeded H2S concentration in RFG for numerous units: Applicable permit conditions broken down by Permit Part. Permit Part 2: ---- Emission Unit No. 42: Continuous Catalyst Regenerator (CCR) Reformer, Reformer Charge Heater and Reboiler Heater (Emission points 42-1 and 42-2): Conditions applicable to Multiple Pollutants:Operational Limitations:The hydrogen sulfide (H2S) content in the desulfurized RFG shall not exceed 162 ppmvd (0.10 gr/dscf) on a 3 hour rolling average basis. ---- Emission Unit No. 37: Steam Methane Reformer Hydrogen Plant, Heaters 37-H-1 A/B; (Emission points 37-1A and 37-1B): Conditions applicable to Multiple Pollutants:Operational Limitation: The hydrogen sulfide (H2S) content in the desulfurized RFG shall not exceed 162 ppmv(d) (0.10 gr/dscf) on a three (3) hour rolling average basis. ---- Emission Unit No. 28: Sulfur Recovery Area (SRA); Claus Units I and II; Sulfur Pits and Shell Claus Offgas Treatment (SCOT) Units I and II. (Emission points 28-1 and 28-2):	Air Program
8/2/2015	Exceeded H2S concentration in RFG for numerous units: Applicable permit conditions broken down by Permit Part. Permit Part 3: ---- Combined Limits: The following permit conditions are applicable to multiple emission units as noted below: Sulfur Dioxide (SO2): Operational Limitations: Comply with "Conditions Applicable to Multiple Pollutants" in Part 3, Condition 3 - Table 1.a.2. ---- Emission Unit 80: Boiler 80-1 (618 mmBtu/hr), Boiler 80-2 (716 mmBtu/hr), Boiler 80-3 (618 mmBtu/hr), Boiler 80-4 (737 mmBtu/hr), (Emission Point 80-1): Conditions Applicable to Multiple Pollutants:Operational Limitations: Only desulfurized refinery fuel gas (RFG) or natural gas may be fired in Boilers 80-1, 80-2 and 80-4. Only desulfurized RFG, natural gas or syngas may be fired in Boiler 80-3.	Air Program
7/22/2015	Loss of power to Butamer unit resulted in increased pressure in Deisobutanizer column 44-C-101. Unpermitted release of 197 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/25/2015	FCU COB outage due to crack developing at C channel seam resulting in unpermitted release of air contaminants. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- All structural and mechanical components shall be maintained in proper operating condition. ---- At all times, including periods of startup, shutdown, and malfunction, the Company shall, to the extent practicable, maintain and operate the facility including all associated air pollution control equip	Air Program
4/25/2015	FCU COB outage with bypass of WGS train resulted in excess SO2 emissions. ---- All structural and mechanical components shall be maintained in proper operating condition. ---- At all times, including periods of startup, shutdown, and malfunction, the Company shall, to the extent practicable, maintain and operate the facility including all associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. ---- The Belco pre-scrubber, the amine-based Cansolv regenerative WGS, the caustic polishing scrubber and SNCR system shall be operating properly at all times when the FCU is operating. ---- SO2 emissions shall not exceed 25 ppmvd @ 0% O2 on a rolling 365 day average, 50 ppmvd @ 0% O2 on a rolling 7 day average, and 182.3 TPY ---- This Permit does not authorize emissions exceeding the limits set forth in Condition 2 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or by	Air Program

Violation Date	Nature of Violation	Program
4/13/2015	FCU COB outage resulted in excess SO2 and CO emissions ---- This Permit does not authorize emissions exceeding the limits set forth in Condition 2 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Company shall bear the burden of demonstrating to the Department's satisfaction that the Company's continued operation of the FCU should not subject the Company to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware Regulations. Such demonstration must at a minimum be supported by sufficient documentation and emissions data including all relevant emissions calculations, formulas, and any assumptions made thereof.	Air Program
4/7/2015	Loss of power to the CCR feed pumps and 42-K-2; 42-K-8 & 42-K-9 compressors. Unpermitted release of 436 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/14/2015	42-K-2B compressor on the CCR unloaded due to a faulty relay. Unpermitted release of 156 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/22/2015	Leaking pipe resulted in the unpermitted release of 5,700 lbs H2S, 140 lbs 1,3-Butadiene, 11,200 lbs methane, 9,100 lbs ethane, 6,900 lbs propane and 4,100 lbs propylene for a duration of 5.4 hours. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
2/11/2015	Operators were in the process of returning the CCR PSA from 5 beds to 10. Flaring began when a PSV in the CCR PSA system lifted. Unpermitted release of 364 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/7/2015	Pressure rise in the poly combined feed surge drum (26-D-1). Unpermitted release of 115 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/31/2014	FCCU lost feed due to a dropped gate on an air supply valve resulting in an increase in the low line pressure. Unpermitted release of 151 lbs of SO2. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/24/2014	Failed to supplement TV permit application pursuant to RGGI permits issued 12/23/13. ---- Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit. ---- The owner or operator shall submit a complete supplement to the Title V permit application pursuant to 7 DE Admin. Code 1130, Section 5(b) within 12 months of the date of issuance of this permit. The application shall address all applicable requirements including those of 40 CFR Part 64 (Compliance Assurance Monitoring) if applicable. ---- The owner or operator shall submit a complete supplement to the Title V permit a	Air Program
12/11/2014	Leaking valve flange resulted in the unpermitted release of 5,998 lbs of SO2 during a 1.8 hour period. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program

Violation Date	Nature of Violation	Program
11/19/2014	PSV (26-PSV-907) on depropanizer tower 26-C-1 lifted during backwashing operations of overhead condensers. Unpermitted release of 339 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/10/2014	Pressure increase in the overhead accumulator drum 25-D-3 for the deheptanizer column 25-C-2. Unpermitted release of 205 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/19/2014	Flaring when fault occurred on Delmarva Power 138 kV transmission line which feeds Reybold substation & ultimately the refinery. Unpermitted release of 242 lbs of SO <sub>2</sub> . ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/15/2014	Flaring when feeder #17, which feeds crude unit 480 V bus, tripped and resulted in loss of power to a DCS cabinet which subsequently shutdown process equip at crude unit. Flare gas compressor control valves moved to fail safe op mode after losing control signal & both flare gas recovery compressors (21-K-1 & 21-K-3) sent into full recycle. Unpermitted release of 2,497 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/25/2014	Flaring due to reactor section of C4 SHU being returned to service following a maintenance turnaround. Unpermitted release of 148 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/22/2014	Recently serviced PSV on the CCR PSA system may have lifted prematurely. Unpermitted release of 407 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/17/2014	Flare recovery header pressure rose above 19.5 inches water column when water from crude desalters carried over to gasoline column 21-C-1 causing increased pressure in the column. Unpermitted release of 196 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/28/2014	Compressor 42-K8B tripped offline due to an electrical short in its motor. Unpermitted release of 567 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/14/2014	PSV for hydrocracker debutanizer tower 36-C-1 lifted due to freeze up in the overhead piping to condenser 36-E-10. Unpermitted release of 934 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/12/2014	Interruption of power due to electrical fault that tripped several breakers in isolating the fault. Affected several refinery & utility units including SRUs and the amine regeneration units of the FCU & FCCU. Unpermitted release of 187,000 lbs SO <sub>2</sub> ; 1,230 lbs H <sub>2</sub> S; 16,500 lbs of CO; 26 lbs of HCN; & 221 lbs of NH <sub>3</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/5/2014	PSV at Stratco Alky unit lifted to flare recovery header due to a cooling water inlet valve to the refrigeration condensers 27-E-104 A/B failing mechanically. Unpermitted release of 276 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/7/2014	Frozen level indicator created false level indication which resulted in hydrocarbons being released by Poly water wash column 26-C-3 to the FCCU quench drum (24-D-13) which caused flare recovery header pressure to rise above 19.5 inches water column. Unpermitted release of 891 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
1/3/2014	Cold weather caused instrumentation problems which in turn caused flare gas recovery compressors 21-K-1 and 21-K-3 to trip offline. Unpermitted release of 1,656 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/30/2013	FCCU wet gas compressor 24-K-1 shutdown due to failure of UPS system for compressors. Unpermitted release of 1,001 lbs of SO <sub>2</sub> ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/23/2013	FCU COB outage on 11/23/13 resulted in unauthorized emissions between 11:58am to 2:23pm (57,000 lbs CO; 1,930 lbs H <sub>2</sub> S; 779 lbs NH <sub>3</sub> ; 92 lbs HCN; 15,000 lbs SO <sub>2</sub> ) ---- This Permit does not authorize emissions exceeding the limits set forth in Condition 2 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Company shall bear the burden of demonstrating to the Department's satisfaction that the Company's continued operation of the FCU should not subject the Company to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware Regulations. Such demonstration must at a minimum be supported by sufficient documentation and em	Air Program
11/16/2013	Flaring when safety instrumentation system for coker fractionator overhead accumulator drum (22-D-7) indicated high liquid level. Unpermitted release of 266 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/3/2013	N flare drum water seal level problem. Unpermitted release of 2,829 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/4/2013	Intermittent flaring as pressure relief valves on coker fractionator lifted relieving pressure to flare system. Unpermitted release of 109.4 lbs of SO <sub>2</sub> . ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/28/2013	FCU COB outage resulted in unauthorized emissions from 9:00am to 2:10pm (137,000 lbs CO; 4,580 lbs H <sub>2</sub> S; 1,850 lbs NH <sub>3</sub> ; 217 lbs HCN; 31,000 lbs SO <sub>2</sub> ) ---- This Permit does not authorize emissions exceeding the limits set forth in Condition 2 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Company shall bear the burden of demonstrating to the Department's satisfaction that the Company's continued operation of the FCU should not subject the Company to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to the facility under the State of Delaware Regulations. Such demonstration must at a minimum be supported by sufficient documentation and emissions data	Air Program
6/11/2013	FCU COB firebox temp fell below 1300 degrees resulting in excess/unauthorized emissions until successful startup of the Backup Incinerator (BUI). ---- Emission Limitations: Carbon Monoxide (CO) Emissions: The Company shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB. ---- Emission Limitations: Ammonia (NH <sub>3</sub> ) Emissions: NH <sub>3</sub> : 2.3 lb/hour and 10.2 TPY; ---- Emission Limitations: Carbon Monoxide (CO) Emissions: CO: 500 ppmvd @ 0% O <sub>2</sub> on an hourly average, 200 ppmvd @ 0% O <sub>2</sub> on a rolling 365-day average, and 694.4 TPY.	Air Program
6/11/2013	FCU COB outage caused excess/unauthorized SO <sub>2</sub> emissions. The BUI does not control SO <sub>2</sub> emissions so these emissions continued until the FCU COB was repaired. ---- SO <sub>2</sub> emissions shall not exceed 25 ppmvd @ 0% O <sub>2</sub> on a rolling 365 day average, 50 ppmvd @ 0% O <sub>2</sub> on a rolling 7 day average, and 182.3 TPY ---- This Permit does not authorize emissions exceeding the limits set forth in Condition 2 including emissions during periods of any unplanned shutdown of the FCU, or any unplanned shutdown or bypass of the FCU COB or the Belco prescrubber or WGS. Instead, in the event of any unplanned shutdown of the FCU or any unplanned shutdown or bypass of the FCU COB or Belco prescrubber or the WGS, the Company shall bear the burden of demonstrating to the Department's satisfaction that the Company's continued operation of the FCU should not subject the Company to an enforcement action for noncompliance with emission limitations or operating standards included in this Permit or otherwise applicable to	Air Program

Violation Date	Nature of Violation	Program
5/7/2013	Unpermitted release of 286 lbs SO2 to the atmosphere from the flare as a result of 2 separate incidents on the same day. The first, during trip testing of refinery power transformer equipment, a power plant tech unintentionally opened an incorrect disconnect switch that caused several CCR compressor motors to shutdown. Flaring occurred for .6 hrs. The 2nd happened as a result of 21-PSV-1088A leaking to the flare header, flaring occurred for 2.6 hrs. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/24/2013	Unpermitted release of 266 lbs of SO2 to the atmosphere from the flare as a result of 21-K-1 being taken off line on 4/22/13 for planned maintenance, the backup flare gas compressor, 21-K-3, was able to cope the the gas load but sporadic flaring occurred until rate cuts were implemented. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/18/2013	Unpermitted release of 334 lbs SO2 to the atmosphere from the flare as a result of cutting the CCR feed rate in response to a leak on the Hydrodesulfurizer Train #1, that in turn resulted in the drawing down of the level in 42-D-4 below the desired 12% which allowed some hydrogen to be vented to the flare. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/8/2013	Unpermitted release of 713 lbs SO2 to the atmosphere from the flare when during operational changes to bring down Desulfurizer Train 2 & the CCR Depropanizer 42-C-1 in response to unplanned shutdown of Train 2 due to flange fire & piping leak at the CCR Depropanizer. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/9/2013	Unpermitted release of 433 lbs of SO2 to the atmosphere from the flare during restart of 27-C-2, when the same frozen moisture situation that occurred during the 3/2/13 release, occurred again. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/2/2013	Unpermitted release of 432 lbs of SO2 to the atmosphere from the flare as a result of pressure increase that was attributed to frozen moisture accumulating on a low point in the line during the process of depressurizing 27-C-2 for maintenance activity. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/18/2013	Unpermitted release of 693 lbs of SO2 to the atmosphere from the flare as a result of problems encountered during attempts to unplug water intake screens. Loss of cooling and loss of vacuum on the 21-C-4 vacuum column in turn overloaded flare system. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/22/2013	Unpermitted release of 248 lbs of SO2 to the atmosphere via flaring as a result of 21-PSV-1088A leaking to the flare.---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/16/2013	For the FCU bypass stack, during the FCU COB outage from 1/16/13 to 1/28/13 resulted in the unpermitted release of 527,000 lbs of SO2 ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/16/2013	the FCU COB outage from 1/16/13 to 1/28/13 resulted in excess CO, NH3, HCN & H2S emissions on 1/16/13 ---- Emission Limitations: Ammonia (NH3) Emissions: NH3: 2.3 lb/hour and 10.2 TPY; ---- Emission Limitations: Carbon Monoxide (CO) Emissions: The Company shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB. ---- Emission Limitations: Carbon Monoxide (CO) Emissions: CO: 500 ppmvd @ 0% O2 on an hourly average, 200 ppmvd @ 0% O2 on a rolling 365-day average, and 694.4 TPY.	Air Program
11/17/2012	Flare header pressure exceeded 19.5 inches of water due to 21-PSV1088A leaking to the flare header. Operators isolated the PSV which stopped the flaring that lasted 2.6 hours and resulted in the unpermitted release of 318 lbs SO2 into the atmosphere from the flare ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
10/30/2012	Flare header pressure exceeded 19.5 inches of water due to a high level in the FCU weathering drum 22-D-123. Operators lowered the drum level to stop flaring which lasted 2.1 hrs resulting in the unpermitted release of 295 lbs SO2 to the atmosphere from the flare ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/28/2012	Flare header pressure exceeded 19.5 inches of water due to a tide flop in the DE River. Intermittent flaring for a total duration of 1 hr resulted in the unpermitted release of 190 lbs SO2 to the atmosphere from the flare ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/26/2012	FCU WGC 22-K-302B had drop in rpm and when 22-K-302A tripped due to high liquid level in suction drum 22-D-7. Flaring ended when flare header pressure fell below 19.5 inches of water. Flaring lasted 1.2 hrs and resulted in the unpermitted release of 3,556 lbs SO2 to the atmosphere from the flare ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/6/2012	Flare header pressure exceeded 19.5 inches of water. Recontact compressor 42-K-2B had tripped. Started backup compressor 42-K-2C to end flaring that lasted for .5 hrs resulting in the unpermitted release of 425 lbs of SO2 to the atmosphere from the flare. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/10/2012	Flare header pressure exceeded 19.5 inches of water. PSV-5A, 2nd stage PSV for recontact compressor 42-K-2A leaking to flare header. Started backup compressor 42-K-2B to stop flaring that lasted 1.9 hrs and resulted in the unpermitted release of 137 lbs of SO2 to the atmosphere from the flare. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/9/2012	CCR recontact compressor 42-K-2B tripped, backup 42-K-2C started to end the flaring that lasted for a total of .1 hr resulting in unpermitted release of 178 lbs of SO2 to the atmosphere from the flare. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/5/2012	3 separate flaring events resulted in the unpermitted release of 241 lbs of SO2 from the flare ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
5/7/2012	Flare Gas Recovery Compressor 21-k-1 taken offline for maintenance which caused flaring resulting in the unpermitted release of 3,018 lbs. of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/25/2012	Hydrogen compressors 42-K-2B and C tripped offline at the CCR causing excess hydrogen being sent to the flare header resulting in the unpermitted release of 397 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/4/2012	Hydrogen compressor 42-K-2C tripped offline at the Continuous Catalyst Regenerator Reformer (CCR) unit causing excess hydrogen being sent to the flare header resulting in the unpermitted release of 137 lbs of SO2 to the atmosphere.. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/13/2012	During routine maintenance on the FCCU, both FCCU WGC tripped offline. Flaring occurred resulting in the unpermitted release of 28,252 lbs. of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
2/12/2012	FCU COB & FCU WGC tripped and flaring occurred resulting in the unpermitted release of total of 222,448 lbs. of CO; 69,044 lbs. of SO <sub>2</sub> ; 6,746 lbs. of H <sub>2</sub> S; 2,658 lbs. of NH <sub>3</sub> & 313 lbs. of HCN to the atmosphere. In addition CO concentration based emission standard was exceeded, furnace temperature fell below permit requirement and opacity exceedance occurred. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Emission Unit No. 22: Carbon Monoxide (CO): Emission Standards: The Owner/Operator shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300° F for at least 0.3 seconds in the FCU COB. ---- Emission Unit No. 22: Carbon Monoxide (CO): Emission Standards: CO emissions from the FCU WGS shall not exceed 500 ppm dry @ 0% O <sub>2</sub> on an hourly average, 200 ppm dry @ 0% O <sub>2</sub> on a rolling 365 day average,	Air Program
2/6/2012	When taking wet gas compressor (WGS) 22-K-302A offline for scheduled repairs, an alarm in its suction drum caused the shutdown of the other WGS 22-K-302B. With both WGS down, valve 22-PC-321 opened to release pressure to the flare which ended when WGS 22-K-304B was restarted. Resulted in the unpermitted release of 1,749 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/30/2012	Did not report the opacity exceedances on 10/10/11 and 10/11/11 on the semi-annual & annual certification received 1/30/12. ---- The Owner and/or Operator shall submit to the Department a report of any required monitoring not later than the first day of August (covering the period from January 1 through June 30 of the current calendar year) and the first day of February (covering the period July 1 through December 31 of the previous calendar year) of each calendar year. Each report shall identify any deviations from the monitoring, record keeping, and reporting requirements under this permit; and the probable cause of the deviations; and any corrective actions or preventative measures taken. If no deviations have occurred, such shall be stated in the report.	Air Program
12/24/2011	Co. experienced flaring incident that resulted in the unpermitted release of 463 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/22/2011	Co. experienced flaring incident that resulted in the unpermitted release of 191 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/2/2011	Co. experienced flaring incident that resulted in the unpermitted release of 213 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/21/2011	Co. experienced flaring incident that resulted in the unpermitted release of 171 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/17/2011	Co. experienced flaring incident over 2 days, 11/17/11 - 11/18/11 resulting in the unpermitted release of 3,320 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/26/2011	Co. experienced a flaring incident that resulted in the unpermitted release of 545 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/24/2011	Between 10/24/11 and 2/21/12, co. experienced 105 rolling 30-day periods where the FCCU SO <sub>2</sub> CEMS failed to obtain quality assured data due to the CEMS being out-of-control. ---- A minimum of 22 valid days of data shall be obtained every 30 rolling successive calendar days when complying with paragraph (b)(1) of this section.	Air Program
10/17/2011	FCCU WGS opacity exceedance on 10/17/11 ---- The opacity from the FCCU WGS stack shall not be greater than 20% opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. ---- The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.	Air Program

Violation Date	Nature of Violation	Program
10/14/2011	Co. experienced a flaring incident that resulted in the unpermitted release of 343 lbs. of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/9/2011	FCCU WGS opacity exceedance on 10/9/11; 10/10/11; 10/11/11; and 10/12/11 ---- The opacity from the FCCU WGS stack shall not be greater than 20% opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. ---- The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.	Air Program
10/6/2011	FCCU WGS opacity exceedance 10/6/11 and 10/7/11 ---- The opacity from the FCCU WGS stack shall not be greater than 20% opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period. ---- The Owner/Operator shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than 20 percent opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.	Air Program
10/3/2011	Company experienced flaring incident resulting in the unpermitted release of 216 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/2/2011	A FCCU COB outage from 10/2/11 through 10/25/11 resulted in the unpermitted release of 2,334 lbs of carbonyl sulfide (COS); 4,285 lbs of hydrogen cyanide (HCN), 40 lbs of hydrogen sulfide (H <sub>2</sub> S) and 139 lbs of ammonia (NH <sub>3</sub> ). ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/30/2011	Valves 42-PV-406 and 42-PV408 malfunctioned resulting in the unpermitted release of 238 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/15/2011	42-K-8B tripped offline resulting in the unpermitted release of 275 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/9/2011	36-K-1 tripped offline causing 36-R-3 to depressure resulting in the unpermitted release of 499 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/20/2011	During servicing of Boilers 3 & 4, boilers shutdown due to unplanned loss of power resulting in unpermitted release of 836 lbs of SO <sub>2</sub> to the atmosphere ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/11/2011	Co. failed to report the excess emissions that occurred on 5/26/11 - 5/27/11 on their semi-annual TV certification. ---- All emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department in a written report pursuant to Condition 3(c)(2)(i) and/or the specific reporting requirements listed in Condition 3 Table 1 of this permit.	Air Program
7/27/2011	Co. failed to report the excess emissions associated with June 2011 flaring incidents in the Title V Semi-Annual Report. ---- All emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department in a written report pursuant to Condition 3(c)(2)(i) and/or the specific reporting requirements listed in Condition 3 Table 1 of this permit.	Air Program
7/25/2011	24-K-1 leak resulted in unpermitted release of 108 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/23/2011	Flare gas recovery compressors tripped offline resulting in the unpermitted release of 8,322 lbs of SO <sub>2</sub> to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
7/4/2011	4 separate incidents. 7/4/11 42-K-2C tripped resulting in the unpermitted release of 295 lbs of SO2 to the atmosphere. Minor flaring occurred on 7/4-7/5/11. 7/6/11 startup of 22-K-302B caused flaring resulting in unpermitted release of 152 lbs of SO2 to the atmosphere. 7/7-7/8/11 introduction of feed to Coker hindered flow from flare recovery compressors, unpermitted release of 8,780 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/1/2011	During start-up of 21-C-401, leak detected. Despite shutdown procedures, a block valve left closed caused recovery compressor (21-K-1) to trip resulting in flaring which further resulted in unpermitted release of 2,745 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/28/2011	Due to flow indicator valve being turned off, while adding & increasing flow of natural gas to RFG system, system overpressurized resulting in flaring which in turn resulted in unpermitted release of 485 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/23/2011	A tripped recovery compressor resulted in flaring which in turn, resulted in unpermitted release of 154 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/13/2011	2 incidents resulted in a total unpermitted release of 689 lbs of SO2 to the atmosphere. 1st incident 6/13-6/14, while commissioning CCR 42-K-2C compressor, block valves were open ultimately causing increased pressure which led to flaring. 2nd incident 6/15 occurred after removing compressor 21-K-1 for repair, pre-startup activities at FCCU & Coker caused increased pressure which led to flaring. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/3/2011	During start-up, fuel imbalance resulted in excess gas being routed to flaring system resulting in unpermitted release of 1,772 lbs of SO2 to the atmosphere. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
5/26/2011	During restart of FCCU, co. experienced incident resulting in acid gas flaring further resulting in the unpermitted release of 83,463 lbs of SO2 starting 5/26/11 and ending 5/27/11. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
5/26/2011	During restart of FCCU, co experience acid gas flaring starting on 5/26/11 and ending on 5/27/11 that resulted in numerous odor complaints. ---- The Owner/Operator shall not cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution. ---- No person shall cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution.	Air Program
7/2/2009	Co. has not yet completed construction of the coke handling system as required by the Administrative Order on Consent. Was supposed to be done by 12/28/08. 6/29/09 & 7/29/09 marked the 7th & 8th months after construction was due to be completed and therefore co. subject to stipulated penalties of \$100k for each of those months totalling \$200k. ---- By no later than fifteen (15) months after completion of detailed engineering plans and placement of any necessary orders pursuant to paragraph 10(a) or twenty-two (22) months after the Permit Issuance Date, whichever is earlier, Premcor shall complete construction of the Coke Storage System. ---- Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC according to the provisions of this Section VII. For each referenced violation, the amounts identified below shall apply on the first day of violation, and shall be calculated for each incremental period of violation (or portion thereof). Requirements for the C	Air Program
6/30/2009	Co.'s report of TSP Hi-Vol Sampler results show it exceeded Secondary AAQS for PM with 167 micrograms per cubic meter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
5/14/2009	Co.'s report of TSP Hi-Vol Sampler results show it exceeded Secondary AAQS for PM with 167 micrograms per cubic meter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/12/2009	During start up of the FCCU following the spring shut down of the refinery, FCCU Cansolv amine degradation occurred resulting in unit's failure to scrub out SO2 emissions. Co. began exceeding a rolling 7 day average limit for SO2 emissions beginning 5/12/09 and ending on 6/12/09 for a period of 31 days resulting in release of 220,103 lbs SO2. ---- "SO2 emissions shall not exceed 25 ppmvd @ 0% O2 on a rolling 365 day average, 50 ppmvd @ 0% O2 on a rolling 7 day average, and 352 TPY"	Air Program
5/12/2009	---- "At all times, including periods of startup, shutdown, and malfunction, the Company shall, to the extent practicable, maintain and operate the facility including all associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions."	Air Program
2/27/2009	Co.'s report of TSP Hi-Vol Sampler results show it exceeded Secondary AAQS for PM with 167 micrograms per cubic meter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
2/18/2009	Steam emergency upset at refinery. Problems with the Coker Cansolv system resulted in the exceedance of the SO2 rolling 7 day average (which is based on previous 168 hourly concentrations) emission limit of 50 ppm. ---- "SO2 emissions shall not exceed 25 ppmvd @ 0% O2 on a rolling 365 day average, 50 ppmvd @0% O2 on a rolling 7 day average, and 174 TPY."	Air Program
2/16/2009	Steam emergency upset at refinery. Coker COB shutdown resulted in unpermitted release of H2S & HCN. FCCU Pressure Safety Valve resulted in unpermitted release of H2S; 1,3 Butadiene; CO; Methane; Propane; Propene; Iso-Butane; Iso-pentane; 2-Methyl-1-Butene & 1-Pentene. Units have permits to operate but the permits do not authorize the release of these pollutants and/or in the manner/quantity released. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secreta	Air Program
2/16/2009	Steam emergency upset at refinery. Coker COB shutdown resulted in release of 87,316 lbs of CO which was in excess of its permitted limit. ---- "CO emissions shall not exceed 500 ppm dry @ 0% O2 on an hourly average, 200 ppm dry @ 0% O2 on a rolling 365 day average, and 608 TPY"	Air Program
2/16/2009	Steam emergency upset at refinery. Coker COB shutdown resulted in failure to burn CO at the required temperature prior to emitting from FCU. ---- "The Company shall not cause or allow the emission of carbon monoxide from the FCU unless it is burned at no less than 1300 degrees F for at least 0.3 seconds in the FCU COB."	Air Program
2/16/2009	Steam emergency upset at refinery. Coker COB shutdown resulted in release of 624 lbs of ammonia, in excess of its permitted limit. ---- "Ammonia emissions shall not exceed 2 lbs/hour and 8.8 tpy."	Air Program
2/16/2009	Steam emergency upset at refinery. Hydrocarbon flaring began on 2/16/09 and continued into 2/17/09. Resulted in unpermitted release of 24,136 lbs SO2; 64 lbs H2S; 908 lbs NO; 74 lbs NO2; 8,000 lbs CO; 84 lbs Methane; 201 lbs Propane; 176 lbs Propene; 329 lbs Iso-Butane; & 817 lbs Iso-pentane. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/29/2008	Coke storage & handling system construction not completed by 12/28/08 as required by AOC dated 4/3/06. ---- By no later than fifteen (15) months after completion of detailed engineering plans and placement of any necessary orders pursuant to paragraph 10(a) or twenty-two (22) months after the Permit Issuance Date, whichever is earlier, Premcor shall complete construction of the Coke Storage System.	Air Program

Violation Date	Nature of Violation	Program
12/2/2008	Faulty pressure indicator (42-PI-128) did not allow its associated pressure control valve (42-PCV-128B) to properly control the hydrogen system pressure. This resulted in excess H2 being sent to flare header. Flaring lasted total of 1.9 hrs and resulted in the unpermitted release of 3,335 lbs SO2 & 64 lbs NO to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the disch	Air Program
11/29/2008	Faulty pressure indicator (42-PI-128) did not allow its associated pressure control valve (42-PCV-128B) to properly control the hydrogen system pressure. This resulted in excess H2 being sent to flare header. Flaring lasted total of 1.63 hrs and resulted in the unpermitted release of 225 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an ai	Air Program
11/12/2008	Two flaring episodes during preparation for crude unit shutdown & during shutdown led to flaring for a duration of 10.2 hrs. Resulted in the unpermitted release of 2,316 lbs SO2 & 19 lbs NO to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/5/2008	Co. suspects an elevated amount of heavy oil in compressor separator drum (21-D-53) caused a blockage causing it not to pump at full capacity leading to flaring for a duration of 20.9 hours. Resulted in the unpermitted release of 622 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/5/2008	Operators made a process move to a lag reactor at the butamer unit to improve isobutene purity by opening the control valve to the reactor. However, the valve to the lag reactor was blocked in for repairs by the LDAR program. The reactor experienced increased pressure and a PSV on the butamer charge heater lifted, vented butane to the header system and caused flaring for a duration of 2.5 hrs. Resulted in unpermitted release of 247 lbs SO2 & 30 lbs NO to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No perso	Air Program
10/3/2008	CCR operators attempted to bring 42-K-8B online following repairs but did not fully load causing flaring for 9 minutes. Communication difficulties at the CCR left some unaware that the instrument air to the 42-K-8B loaders were tagged out for additional work not identified in original scope of work. Resulted in the unpermitted release of 494 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way w	Air Program

Violation Date	Nature of Violation	Program
9/26/2008	Co. suspects air may have become entrained in the lube oil system during switch of lube oil filters on the Hydrocracker recycle compressor (36-K-1). Compressor tripped due to abnormal lube oil pressure initiating shutdown and flaring. Resulted in unpermitted release of 8,273 lbs SO <sub>2</sub> & 22 lbs NO to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air	Air Program
9/5/2008	Co. exceeded Secondary AAQS for TSP on 9/5/08. ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
8/26/2008	Pressure safety valve (24-PSV-926) lifted below its set pressure causing venting to the flare header. Suspect maintenance at the depropanizer drum may have caused the premature lift. Resulted in unpermitted release of 201 lbs of SO <sub>2</sub> to the atmosphere over a 22 minute time period. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/21/2008	Hydrocracker operators observed a fire at the hydrogen injection line flow transmitter (36-FT-210). Operators began to address fire, depressurized & shut down the unit. Resulted in unpermitted release of 3,882 lbs SO <sub>2</sub> & 35 lbs NO to the atmosphere over a 78 minute time period. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/18/2008	Co. exceeded the Secondary AAQS for TSP on 8/18/08 according to 3rd Qtr. 08 report. ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
8/10/2008	Hydrocarbon flaring incident from 8/10/08 to 8/13/08 resulted in citizen odor complaints. ---- The Owner/Operator shall not cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution.	Air Program
8/10/2008	Co. had unpermitted release of 282,307 lbs of SO <sub>2</sub> ; 2,641 lbs NO <sub>x</sub> & 754 lbs of H <sub>2</sub> S during 8/10/08 - 8/13/08 hydrocarbon flaring incident. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
7/31/2008	Despite process adjustments by FCCU operator due to tidal conditions, 25-PSV-918b lifted & vented material to the flare header for an 11 minute duration. Resulted in the unpermitted release of 195 lbs SO <sub>2</sub> to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/13/2008	Co. experienced exceedance of the primary and secondary AAQS on 6/14/08 with 337 micrograms per cubic meter of TSP. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. ---- The Primary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
6/9/2008	Co. experienced exceedance of secondary AAQS on 6/9/08 with 234 micrograms per cubic meter of TSP. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
6/8/2008	CCR compressor (42-K-2C) tripped due to high vibration & shutdown causing over pressurization of vessels having to relieve to the flare header. Cause inconclusive. Resulted in the unpermitted release of 350 lbs of SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/2/2008	Premcor is found to be in violation of Permit: APC-81/0829-O(A7) by continuing operation of the FCU despite bypassing the FCU COB and WGS between 20:30 hours on June 2, 2008 through 21:30 hours on June 8, 2008 for a total duration of 140 hours causing the release 395,886 lbs SO2, and for causing the release of 122,833 lbs CO, 118 lbs HCN, 863 lbs NH3, 3,707 lbs H2S when the back up incinerator tripped from 10:30 hours to 15:30 hours on June 5, 2008. Conditions 3.1.3, 3.1.4 and 3.2 of Permit: APC-81/0829-O(A7) were violated. These Conditions state, in part, that the WGS & the COB shall be operating properly when the FCU is in operation, and an unplanned shutdown or bypass of the COB or WGS shall not constitute the right of the Company to emit excess emissions.	Air Program
5/27/2008	On 5/27/08, during start-up of FCU after maintenance work, the wet gas compressor tripped resulting in flaring event that released 24,889 lbs SO2 & 221 lbs NOx over approximately 6 hours. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
5/27/2008	On 5/27/08, co. discovered a leak in an expansion joint in the duct work used to convey the FCU burner overhead flue gas to the FCU COB. Co. had planned on repairing w/out taking the FCU COB out of service but found it could not be done safely. So, from 5/27/08 until the FCU COB was taken out of service on 6/2/08 to repair the leak, 139,370 lbs CO; 136 lbs HCN; 979 lbs NH3 & 7,946 lbs SO2 was released as a result. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
5/20/2008	Boiler 1 failed stack test for PM ---- Stack test based PM10 emissions including H2SO4 shall not exceed the following limits: 0.0104 lb/mmBtu when firing natural gas or refinery fuel gas in Boilers 1, 2 and 3.	Air Program
5/20/2008	Boiler 1 failed stack test for PT ---- Stack test based TSP emissions shall not exceed the following limits: 0.0062 lb/mmBtu when firing natural gas or refinery fuel gas in Boilers 1, 2 and 3.	Air Program
4/25/2008	Co. experienced exceedance of secondary AAQS on 4/25/08 with 160 micrograms per cubic meter of TSP. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
4/24/2008	During shutdown procedures after an apparent flameout observed in Reformer heater (25-H-01), system flow & pressure controllers did not maintain set pressure resulting in the Absorber tower (25-C-402) over pressurizing and venting to flare header. Resulted in unpermitted release of 158 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
4/19/2008	Co. experienced exceedance of secondary AAQS on 4/19/08 with 216 micrograms per cubic meter of TSP. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
3/25/2008	Four flaring episodes for a total duration of 3.7 hrs resulted in the unpermitted release of 2,272 lbs SO2; 14 lbs NO & 1 lb NO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/23/2008	Two flaring episodes for a total duration of 11.1 hours resulted in the unpermitted release of 11,572 lbs SO2; 123 lbs NO & 10 lbs NO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/15/2008	Exceeded secondary aaqs 3/15/08. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
3/11/2008	CCR operator attempted to remove liquid from the suction to the hydrogen compressors. While opening valve, a bracket on the chain-operated assembly failed & left valve open & venting to flare header. Resulted in unpermitted release of 140 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/10/2008	Failure of a level indicator to correctly indicate actual drum level to pump the drum down resulted in eventual overflow into the compressor knock-out drum, which alarmed on "high level" & tripped flare gas recovery compressor. Resulted in unpermitted release of 1,105 lbs SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/8/2008	Co. suspects cooling fan attached to a pump motor (21-P-33) at the Crude unit overheated & seized causing flare gas recovery compressor to trip. Resulted in the unpermitted release of 2,289 lbs of SO2 & 17 lbs NO to the atmosphere over a period of 12.23 hrs. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
3/4/2008	Exceeded secondary aaqs 3/4/08. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
2/29/2008	Exceeded primary & secondary AAQS 2/29/08 & 3/1/08 ---- The Primary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
2/26/2008	Increased pressures in the low pressure gas header & flare header, no conclusive cause determined. Two flaring episodes lasting a total of 88 minutes resulted in the unpermitted release of 358 lbs of SO2 to the atmosphere. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/20/2008	Water present in crude charge from Tank 11 & resulted in tower 21-C-1 to pressure up and lift a pressure safety valve to the flare header due to water vaporizing. Co. has permit to operate the flare but the permit does not authorize the release of any emissions from the flare. 167 lbs SO2 was release to the atmosphere over a 75 minute time period. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/15/2008	Co. experienced numerous flaring episodes during the start up of the refinery following the 2/10/08 power interruption that disrupted most unit operations. Co. has permit to operate flare but the permit does not authorize the release of any emissions from the flare. Emissions are grouped in 24-hour blocks beginning at 2pm on 2/15/08 and are as follows: 2/15-16/08 1,789 lbs SO2 & 35 lbs NO; 2/16-17/08 1,591 lbs SO2 & 24 lbs NO; 2/17-18/08 40 lbs SO2 & 1 lb NO; 2/18-19/08 23 lbs SO2. ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way	Air Program
2/11/2008	Tail gas flaring episode resulting in release of 66,682 lbs SO2 ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
2/11/2008	Boilers 1 & 4 had excess NOx emissions; Boiler 2 had excess CO emissions; the DCPD stack exceeded opacity limit; CT 2 had excess NOx emissions & co. failed to implement steam injection as a NOx control in CT 2 as required by its permit ---- Except during start-ups, shut downs and fuel transfers (syngas to LSDF and LSDF to syngas), the CCUs shall not be operated unless the NOx control measures described in Operational Limit (A) above is operating properly. ---- NOx control shall be achieved by injecting nitrogen gas into the combustion chambers of the CUs when burning syngas and by steam injection when burning LSDF. ---- The NOx emissions from each CCU shall not exceed the following levels on an hourly basis: 42 ppmvd @ 15% O2 when the CCU burns LSDF without duct firing ---- Upon completion of the modification of 80-2 authorized by the referenced permit, or June 25, 2004, whichever is earlier, the Company shall not cause or allow the emission of CO from Boiler 80-2 in excess of the following limits: 0.034 lb/mmBtu on an hourly basis ---- The NOx emissions shall not exceed the following levels based on a 24-hour rolling average basis: 0.20 lb/mmbtu when firing refinery fuel gas and/or natural gas in Boilers 80-1, 80-2, 80-3 and 80-4 ---- Emission Unit 80 (Boiler 80-1; Boiler 80-2; Boiler 80-3 and Boiler 80-4) The Company shall not cause or allow the emission of visible air contaminants from this unit in excess of twenty percent (20%) opacity for an aggregate of more than three (3) minutes in any one (1) hour period, or more than fifteen (15) minutes in any twenty-four (24) hour period.	Air Program
2/11/2008	FCCU Cansolv Unit was shut down for repair resulting in 72,377 lbs of SO2 emissions that exceeded permitted limit. ---- SO2 emissions shall not exceed 25 ppmvd @ 0% O2 on a rolling 365 day average, 50 ppmvd @ 0% O2 on a rolling 7-day average, and 361 TPY.	Air Program

Violation Date	Nature of Violation	Program
2/10/2008	SO2 emissions from SCOT I & SCOT II (individually & combined) exceeded permitted limits. Sulfur pits were not maintained under negative pressure. ---- The steam eductor system shall be operating properly at all times when molten sulfur is stored in the sulfur pits. Proper operation of the eductor system is defined as maintaining a negative pressure at the sulfur pits as measured on a minute average basis. ---- Combined air contaminant emission levels from both SCOT Units, unless specified otherwise, shall not exceed those specified by the State of Delaware "Regulations Governing the Control of Air Pollution." The annual limits below (TPY) shall be defined as "tons per rolling 12 months." - Sulfur Dioxide (SO2) Emissions - SO2 emissions shall not exceed 0.025 percent by volume (250 ppm) in each SCOT stack at zero percent oxygen on a dry basis on a twelve hour rolling average basis, except during startup or shutdown conditions, 153.4 lb/hour calculated on a 24 hour rolling average basis and 672 TPY. During startup and shutdown conditions, the SO2 emission limits listed in Attachment "A" shall apply in lieu of the 250 ppm limit.	Air Program
2/10/2008	FCU CO Boiler trip resulted in unpermitted release of COS, HCN, NH3 & H2S ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
2/10/2008	FCCU CO Boiler trip resulted in unpermitted release of COS, HCN, NH3 & H2S ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/10/2008	Intermittent hydrocarbon flaring resulted in 14,459 lbs SO2 ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
2/10/2008	Two episodes of acid gas flaring, beginning 2/10/08 and ending 2/12/08 resulting in a total of 35,573 lbs SO2 ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
1/21/2008	An underwater sediment collapse in the cooling water intake channel resulted in loss of cooling water to refinery. Resulted in release of 15,230 lbs SO2; 524 lbs NO & 42 lbs NO2 to the atmosphere during a 5 hour & 50 min. time period. Co. has permit to operate flare but permit does not authorize the release of any emissions from the flare.---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
1/8/2008	Operator error led to trip of gas recovery compressor 21-K-3. Field reset switch failed extending the duration. 127 lbs SO2 released over 111 minutes. Co. has permit to operate flare but permit does not authorize the release of any emissions from the flare. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program

Violation Date	Nature of Violation	Program
1/4/2008	A hydrocarbon flaring event on 1/4/08 resulted in an unpermitted release of 15,049 lbs SO <sub>2</sub> , 10 lbs NO <sub>2</sub> & 128 NO. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/27/2007	A failed air line caused the CCR compressor 42-K-2A to trip. 199 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/19/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/15/2007	A pump at the FCCU tripped & a check valve failed resulting in flaring. 3,200 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/10/2007	2 compressors, 1 in the Cracked Naphtha unit & 1 in the Selective Hydrogenation unit, tripped causing the unit to vent hydrogen to the recovery system. 178 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/24/2007	The CCR experienced high pressure & caused the flaring. Operators were unaware of the PSA shutdown because of a loose communication cable. 146 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/14/2007	CCR operators were placing compressor 42-K-2A in service & believe the unloader valves were stuck closed. The equipment over-pressured & vented to the flare gas header line. 215 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/22/2007	Flow control valve 50-FC-104X failed open while the control system indicated to operators that valve was closed. Natural gas flowed in the system & it overpressured. 796 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/19/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter.---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
10/12/2007	A malfunctioning solenoid at the CCR pressure swing absorber led to a shutdown of the PSA. Hydrogen gas vented to the flare header line. 437 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/4/2007	Flaring during start-up of the Continuous Catalytic Reformer and HDS Train 1. 562 lbs SO <sub>2</sub> emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/27/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
9/14/2007	Premcor caused exceedances of the primary and secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Primary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
9/6/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
9/6/2007	Company installed & used fuel gas liquid injection into Boilers 1 and 3. ---- (b)(1)No person shall without first having obtained a permit from the Secretary construct, install, replace, modify or use any equipment or device or other article which may cause or contribute to the discharge of an air contaminant." ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
9/6/2007	Company continued to combust liquid fuel beyond Consent Decree deadline of 10/03. In addition fuel usage reports did not identify the amount of fuel gas liquid condensate combusted. ---- Except as allowed under Paragraph 22(b), Motiva shall eliminate burning of any liquid fuel in all heaters and boilers at the Delaware City, Delaware, refinery in accordance with the schedule below, and result in the following per day, refinery-wide, maximum liquid fuel burning by the following deadlines: July 31, 2001 3760 bbl/day; October 30, 2002 2000 bbl/day; May 31, 2003 1000 bbl/day; October 31, 2003 0 bbl/day. Motiva shall report the amount of liquid fuel burned annually across the refinery in the Updates required pursuant to Paragraph 16.	Air Program
9/6/2007	Company's method of pumping the fuel gas liquid condensate to the boilers does not conform to good air pollution control practices. ---- At all times, including periods of startup, shutdown, and malfunction, the Company shall maintain and operate the equipment and processes covered by this Permit, including all structural and mechanical components of all equipment and processes and all associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. ---- At all times, including periods of startup, shutdown, and malfunction, the Company shall maintain and operate the equipment and processes covered by this Permit, including all structural and mechanical components of all equipment and processes and all associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. ---- At all times, including periods of startup, shutdown, and malfunction, the Company shall maintain and operate the equipment and processes covered by this Permit, including all structural and mechanical components of all equipment and processes and all associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.	Air Program
9/6/2007	Company combusted liquid fuel in boilers 1 and 3 ---- Only desulfurized refinery fuel gas (RFG) with a hydrogen sulfide content less than 0.1 grain/dscf on a 3 hour rolling average and/or natural gas may be fired in Boilers 1, 2, and 3. In addition, Boiler 3 is allowed to fire clean syngas. ---- Only desulfurized refinery fuel gas (RFG) or natural gas may be fired in Boilers 80-1, 80-2 and 80-4. Only desulfurized RFG, natural gas, or syngas may be fired in Boiler 80-3.	Air Program
9/6/2007	Company's use of liquid fuel not reflected in its approved stack test protocol ---- All monitor performance specification testing and stack emissions testing shall require the submission of a "Source Sampling Guidelines and Preliminary Survey Form" which must be found acceptable to the Department at least 30 days prior to the testing.	Air Program
9/6/2007	Company did not monitor or record the quantity of fuel gas liquid condensate fired in Boilers 1 and 3. ---- The Company shall continuously monitor and record the fuel flow rates for each boiler.	Air Program
9/6/2007	Company did not maintain records of the flow rate & high heating value for the liquid condensate combusted in Boilers 1 and 3 ---- The following records shall be maintained for a period of 5 years...fuel flow rates and high heating values of fuels combusted for each boiler.	Air Program
9/6/2007	Company did not certify in its annual compliance certification that no liquid fuel had been combusted in any of the combustion units. ---- In the annual compliance certification required under Condition 3(c)(3) of this permit, and pursuant to the referenced Consent Decree, the Company shall certify that liquid fuel was not burned in any combustion unit at the facility during the reporting period.	Air Program
9/6/2007	Using the FLIR GasFindIR thermal imaging camera, propane was observed leaking from several points around the periphery of the Frozen Earth Storage (FES) tank. Evidence points to continuing leakage at least as far back as May 2004 when Premcor purchased the refinery from Star Enterprise and began a leak repair program. The leakage was ongoing as of the date of the NOV. This information was never reported to the Department. (b)(1)No person shall without first having obtained a permit from the Secretary construct, install, replace, modify or use any equipment or device or other article which may cause or contribute to the Failure to report the discharge of an air contaminant to the Department immediately upon discovery of said discharge. Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent	Air Program

Violation Date	Nature of Violation	Program
9/4/2007	Co. experienced an FCU wet gas scrubber upset on 9/4/07. Co. exceeded SO2 emissions from 4am on 9/4/07 through 1am on 9/11/07. Co. also failed to submit a timely incident report. ---- In addition to complying with Condition 8.1 of this permit, any reporting required by 7 Del. C. Section 6028 "Reporting of a Discharge of a Pollutant or an Air Contaminant" and any other reporting requirements mandated by the State of Delaware, the owner or operator shall, for each occurrence of excess emissions, within 30 calendar days of becoming aware of such occurrence, supply the Department in writing with the following information..." ---- SO2 emissions shall not exceed 25 ppmvd @ 0% O2 on a rolling 365 day average, 50 ppmvd @ 0% O2 on a rolling 7 day average, and 174 TPY.	Air Program
8/7/2007	An upset at the foul water separator tripped the bas recoery compressor due to low seal water flow. A second, smaller flaring event occurred during repairs. 1,517 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
8/3/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
7/26/2007	Refinery experienced 2 short intermittent events of unknown origin. 170 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/25/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
7/24/2007	Premcor caused exceedance of the secondary State Ambient Air Quality Standards for total suspended particulate matter. ---- The Secondary Ambient Air Quality Standards for Particulate Matter are: ---- A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
7/18/2007	At the Crude unit, build-up on a probe kept a controller in the open position & led to flaring. 195 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/15/2007	A Poly unit backwash operation at the same time Blenders operators were venting to the gas header and a river water temperature increase during a tide swing caused the flaring incident. 175 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
7/9/2007	A card that controls 2 instruments in the FCCU Alky Merox section failed. 275 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
6/20/2007	6/20/07 stack test results showed Boiler 3 had excess TSP emissions at a rate of 0.01123 lb/mmBTU ---- Stack test based TSP emissions shall not exceed the following limits...0.0062 lb/mmBtu when firing natural gas or refinery fuel gas in Boilers 1, 2, and 3.	Air Program
6/20/2007	6/20/07 stack test results showed Boiler 3 had excess TSP emissions at a rate of 0.0079 lb/mmBTU. ---- Stack test based TSP emissions shall not exceed the following limits...0.0074 lb/mmBtu when firing syngas in Boiler 3.	Air Program
6/20/2007	6/20/07 stack test showed Boiler 3 had excess PM10 emission at a rate of 0.01093 lb/mmBTU. ---- Stack test based PM10 emissions including H2SO4 shall not exceed the following limits...0.0104 lb/mmBtu when firing natural gas or refinery fuel gas in Boilers 1, 2, and 3.	Air Program
5/24/2007	DGA upset resulted in SCOT 1 & SCOT 2 exceeding 250 ppm SO2 on a 12 hour rolling average basis for 44 hours from 1pm on 5/24/07 through 9pm 5/25/07 and combined emissions from SCOT 1 & SCOT 2 exceeding 153.4 lb/hr SO2 on a 24 hour rolling average basis for 45 hours beginning midnight 5/24/07 through 8pm 5/25/07. ---- "SO2 emissions shall not exceed 0.025 percent by volume (250 ppm) in each SCOT stack at zero percent oxygen on a dry basis on a twelve hour rolling average basis, except during startup or shutdown conditions, 153.4 lb/hr calculated on a twenty-four (24) hour rolling average basis and 672 TPY."	Air Program

Violation Date	Nature of Violation	Program
5/24/2007	DGA upset caused the power plant boilers to experience excess opacity for 94 minutes on 5/24/07. ---- No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary or mobile source, the shade or appearance of which is greater than twenty (20%) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period. ---- Emission Unit 80 (Boiler 80-1; Boiler 80-2; Boiler 80-3 and Boiler 80-4) The Company shall not cause or allow the emission of visible air contaminants from this unit in excess of twenty percent (20%) opacity for an aggregate of more than three (3) minutes in any one (1) hour period, or more than fifteen (15) minutes in any twenty-four (24) hour period.	Air Program
5/24/2007	DGA upset caused CCR heater 42-H-1,2,3 to experience excess opacity on 5/24/07 and 5/25/07 and company failed to perform Reference Method 9 visible emissions evaluations on 5/24/07 and 5/25/07. ---- No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary or mobile source, the shade or appearance of which is greater than twenty (20%) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period. ---- Compliance with Condition 2.3 shall be based on conducting daily qualitative visible emissions evaluations. If any opacity is observed, the Company shall conduct a visible emissions evaluation using Reference Method 9 of 40 CFR Part 60, Appendix A. ---- The emission of visible air contaminants from this unit shall not exceed twenty (20) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour, or more than fifteen (15) minutes in any twenty-four (24) hour period.	Air Program
5/24/2007	DGA upset caused Reformer heater 29-H-8 to experience excess opacity. ---- Emission Unit 29 Visible Emissions Standard: The Company shall not cause or allow the emission of visible air contaminants and/or smoke from any emission unit, the shade or appearance of which is greater than twenty (20) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period.	Air Program
5/24/2007	DGA upset cause crude unit atmospheric heater 21-H-701 to experience excess opacity on 5/24 & 5/25/07 & co. failed to perform Ref. Method 9 visible emission evaluations on 5/24 & 5/25/07. ---- Compliance with Condition 2.3 shall be based upon conducting daily qualitative visible emissions evaluations. If any opacity is observed, the Company shall conduct a visible emissions evaluation using RM 9 of 40 CFR part 60, Appendix "A". ---- The Company shall not cause or allow the emission of visible air contaminants and/or smoke from 21-H-701, the shade or appearance of which is greater than twenty (20%) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period.	Air Program
5/24/2007	DGA upset caused the release of 2,599 lbs of H <sub>2</sub> S from the Sulfur Recovery & SCOT Units from midnight 5/24/07 through 8pm 5/25/07. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
5/23/2007	DGA upset resulted in release of 933 lbs of SO <sub>2</sub> through intermittent hydrocarbon flaring on 5/23/07 & 5/24/07. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ---- Except as exempted in Section 2.2, no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval of his application from the Department or, if eligible, prior to submitting to the Department a completed registration form.	Air Program
5/23/2007	DGA upset affected refinery's ability to produce RFG that contained less than 0.10 grain H <sub>2</sub> S per dry standard cubic foot (162 ppm). The 3 hour rolling average H <sub>2</sub> S concentration was measured at 8.45 gr/dscf (or 13, 690 ppm) beginning 10pm 5/23/07 through 4pm 5/25/07. ---- The provisions of Subpart J - Standards of Performance for Petroleum Refineries, of Part 60, Title 40 of the Code of Federal Regulations dated July 1, 1981, are hereby adopted by reference. ---- "No owner or operator subject to the provisions of this subpart shall burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H <sub>2</sub> S) in excess of 230 mg/dscm (0.10 gr/dscf)."	Air Program
5/23/2007	Premcor caused an exceedance of the secondary State Ambient Air Quality Standard for total suspended particulate matter. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
5/16/2007	Premcor caused exceedances of the primary and secondary State Ambient Air Quality Standards for total suspended particulate matter. The Primary Ambient Air Quality Standards for Particulate Matter are: A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/15/2007	Premcor caused exceedances of the primary and secondary State Ambient Air Quality Standards for total suspended particulate matter. The Primary Ambient Air Quality Standards for Particulate Matter are: A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/14/2007	Premcor caused an exceedance of the secondary State Ambient Air Quality Standard for total suspended particulate matter. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/11/2007	Premcor caused an exceedance of the secondary State Ambient Air Quality Standard for total suspended particulate matter. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/10/2007	Premcor caused an exceedance of the secondary State Ambient Air Quality Standard for total suspended particulate matter. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/9/2007	FCCU CO Boiler trip resulted in 41 pounds HCN and 4,241 pounds COS being released to the air. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
5/4/2007	A sticking valve actuator led to the automatic safety shutdown of the CCR pressure swing absorber unit. 146 lbs SO2 emitted. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
5/1/2007	Pressure build-up at Poly unit debutanizer during a period of increased flare header load due to tide conditions. 290 lbs SO2 emitted. ---- (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
4/22/2007	Excess emissions resulting from failure of the fluid coking unit's backup incinerator when the temperature dropped below 1700 degrees F for a period of 20 hours on April 21 and 22, 2007. Maximum particulate matter emissions of 0.19 grain per dry standard cubic foot (dscf) shall be achieved either by operating at a temperature of 2200 degrees F (modified to 1700 degrees F per January 1	Air Program
4/17/2007	Following the first 24 hour period following the Fluid Coking Unit's CO Boiler trip and the failure of the backup incinerator to commence operation, Coker off-gas was not introduced into the incinerator for another 23 hours, spanning 4/17 and 4/18. During this time the uncontrolled gas was vented ou the bypass stack at opacities greater than 20%. Opacity shall not exceed 25% (revised to 20% per January 10, 1995 letter from DNREC to Company) for an aggregate of more than three (3) minutes in any one(1) hour period, or more than fifteen (15) min	Air Program
4/16/2007	FCU CO Boiler trip resulted in 34,655 pounds of H2S, 8,069 pounds ammonia, 1,100 pounds HCN, 18,548 pounds particulate, and 561,869 pounds CO being released to the air. The Backup Incinerator failed to start up within 24 hours as required by permit. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant ...If there is an emergency shutdown of the Coker CO Boiler and/or the ESP, the Company may conduct an evaluation of the cause of the shutdown. If the CO Boiler and/or the ESP can be repaired in less Carbon Monoxide combustion shall be achieved at a minimum of 1300 degrees F, and at a minimum retention time of 0.3 second.	Air Program

Violation Date	Nature of Violation	Program
4/11/2007	Premcor caused exceedances of the primary and secondary State Ambient Air Quality Standards for total suspended particulate matter. The Primary Ambient Air Quality Standards for Particulate Matter are: An annual geometric mean of 75 micrograms per cubic meter not to be exceeded, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
4/2/2007	Operators were thawing a section of a line that was frozen due to a leaking PSV at the Alky unit coalescer. The line unplugged & caused a rapid release of propane to the flare header system. 104 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/19/2007	Leaking cooling water supply line resulted in water spray contacting an adjacent electrical panel which tripped 3 lighting panels & gas recovery compressor 21-K-1. 23,451 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/17/2007	2 brief flaring events were a result of low cooling water intake rates caused by freezing temperatures, high winds & low tide. 159 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/14/2007	FCU CO Boiler trip resulted in 5,439 pounds of H2S, 1,266 pounds ammonia, and 173 pounds HCN being released to the air. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/13/2007	Pressure safety valve 24-PSV-923 lifted at the FCCU depropanizer tower below the set pressure. 325 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/12/2007	Hydrocracker operators were steaming out equipment prior to blinding & maintenance activities. An increase in flare header pressure resulted in flaring. 111 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/9/2007	Pressure safety valve 24-PSV-923 lifted at the FCCU depropanizer tower below the set pressure. 323 lbs SO2 emitted. Cold weather froze piping systems & resulted in a fire. Operators began immediate shutdown & depressuring of the unit & gasses were flared. 7,397 lbs of SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/8/2007	Flaring related to unit startup & depressuring from desulfurizer train 2 after maintenance on a feed pump. 50 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/6/2007	Plugging in the cooling water strainers caused restricted cooling water flow at the Poly. Contributing factors were freezing temperatures, high winds & low tide. 323 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/5/2007	False level indication on the high pressure separator due to freeze up leading to increased flow & pressure in column 25-C-401. 220 lbs SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
2/4/2007	FCCU CO Boiler trip resulted in 36 pounds HCN, and 3,740 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program

Violation Date	Nature of Violation	Program
1/31/2007	FCCU CO Boiler trip resulted in 58 pounds HCN, and 5,987 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/29/2007	Pressure safety valve 24-PSV-923 lifted at the FCCU Depropanizer tower below the set pressure. 399 lbs of SO2 emitted. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/11/2007	FCCU CO Boiler trip resulted in 69 pounds HCN, and 7,090 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
1/8/2007	7 separate flaring events during the day totaling 80 minutes. 224 pounds of SO2 emitted. No conclusive source was id'd. ---- (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/21/2006	914 pounds of SO2 were emitted because condensed hydrocarbons restricted flow to the flare recovery compressors. (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
12/6/2006	Exceedance of primary State Ambient Air Quality Standard for Total Suspended Particulate. 24 hour concentration was 294 ug/m <sup>3</sup> . A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$10,000 per calendar day for each exceedance of the primary ambient air quality standard resulting from coke s	Air Program
12/4/2006	The Company emitted 445 pounds of SO2 due to an upset at the depropanizer tower 24-C-3. The Delaware reportable quantity of NOx was also exceeded by the emission of 17.2 pounds of NOx. (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/29/2006	FCU CO Boiler trip resulted in 3,097 pounds of H2S, 482 pounds ammonia, and 66 pounds HCN being released to the air. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/18/2006	FCCU CO Boiler trip resulted in 243 pounds NH3, 99 pounds HCN, and 6,994 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/18/2006	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/16/2006	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/16/2006	Exceedance of secondary State Ambient Air Quality Standard for Total Suspended Particulate. 24 hour concentration was 212 ug/m <sup>3</sup> . A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program

Violation Date	Nature of Violation	Program
11/16/2006	FCCU CO Boiler trip resulted in 297 pounds NH3, 119 pounds HCN, and 8,424 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminan (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/11/2006	Exceedance of secondary State Ambient Air Quality Standard for Total Suspended Particulate. 24 hour concentration was 161 ug/m^3. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC... \$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
11/8/2006	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/8/2006	The fluid coker unit's (FCU's) carbon monoxide boiler tripped releasing pollutants and causing a hydrocarbon flaring incident. This resulted in an unpermitted release of emissions. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminan (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
11/8/2006	FCCU CO Boiler trip resulted in 331 pounds NH3, 129 pounds HCN, and 9,121 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminan (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/17/2006	The Company released 319 pounds of SO2 as the catalytic cracking reformer's (CCR) pressure swing absorber tripped. (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/14/2006	228 pounds of SO2 emitted as a result of the CCR's pressure swing absorber tripping. (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/11/2006	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
10/11/2006	FCCU CO Boiler trip resulted in 50 pounds NH3, 20 pounds HCN, and 1,410 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminan (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/6/2006	FCCU CO Boiler trip resulted in 274 pounds NH3, 108 pounds HCN, and 7,621 pounds COS. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminan (a)No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
10/6/2006	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
9/29/2006	SRU SO2 >85.7 lb/hr on a 24-hr rolling average basis.	Air Program
9/29/2006	SRU Stack SO2 > 250 ppm	Air Program
9/28/2006	CO Boiler trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
9/22/2006	CO Boiler Trip resulted in excess VE from the FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program

Violation Date	Nature of Violation	Program
8/30/2006	SRU Stack SO2 > 250 ppm	Air Program
7/31/2006	Refinery fuel gas treated at the gas plant exceeded the H2S content limit of 162 ppm and affected downstream units firing RFG.	Air Program
7/26/2006	SRU Stack SO2 > 250 ppm	Air Program
7/26/2006	SRU SO2 >85.7 lb/hr on a 24-hr rolling average basis.	Air Program
7/26/2006	Refinery fuel gas treated at the gas plant exceeded the H2S content limit of 162 ppm and affected downstream units firing RFG.	Air Program
7/25/2006	CO Boiler trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
6/30/2006	The permit limit for inorganic hazardous air pollutant (HAP) emissions of Nickel of 0.165%-acfm-ppmw-hr/kg of coke burned was exceeded on 46 days in the first half of 2006. The Company shall comply with all the applicable requirements of 40 CFR Part 63, subpart UUU. You can elect to comply with the Ni lb/1,000 lb of coke burn-off emissions limit (option 4).	Air Program
6/27/2006	Coke handling caused an exceedance of the secondary State Ambient Air Quality Standard for particulate matter. A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
6/1/2006	Power interruptions resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
4/14/2006	Coke handling caused an exceedance of the secondary State Ambient Air Quality Standard for particulate matter. A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
4/11/2006	Coke handling caused an exceedance of the secondary State Ambient Air Quality Standard for particulate matter. A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
4/3/2006	Coke handling caused an exceedance of the secondary State Ambient Air Quality Standard for particulate matter. A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
3/31/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
3/29/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
3/12/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
3/11/2006	Stack SO2 > 250 ppm	Air Program
3/10/2006	Stack SO2 > 250 ppm	Air Program
3/10/2006	The Delaware primary and secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$10,000 per calendar day for each exceedance of the primary ambient air quality standard resulting from coke s	Air Program
3/9/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
3/8/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
2/13/2006	Stack SO2 > 250 ppm	Air Program
1/31/2006	Stack SO2 > 250 ppm	Air Program

Violation Date	Nature of Violation	Program
1/29/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
1/28/2006	The Delaware secondary AAQS for total suspended particulate was exceeded as a result of coke handling. Premcor shall pay stipulated penalties to DNREC for violations of the terms of this AOC...\$4000 per calendar day for the first through fifth exceedances of the secondary standard following the first s	Air Program
12/28/2005	Violation of primary and secondary State ambient air quality standards for total suspended particulate matter resulting from coke handling/storage. The Primary Ambient Air Quality Standards for Particulate Matter are: A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/27/2005	Stack SO2 > 250 ppm	Air Program
12/27/2005	SO2 >85.7 lb/hr on a 24-hr rolling average basis.	Air Program
12/26/2005	Tail Gas Flaring Incident [Company] shall be liable for the following stipulated penalties: (a) AG Flaring or Tail Gas Incidents for which [Company] is liable under this part.	Air Program
12/24/2005	Acid Gas Flaring Incident [Company] shall be liable for the following stipulated penalties: (a) AG Flaring or Tail Gas Incidents for which [Company] is liable under this part.	Air Program
12/24/2005	Stack SO2 > 250 ppm	Air Program
12/23/2005	Violation of primary and secondary State ambient air quality standards for total suspended particulate matter resulting from coke handling/storage. The Primary Ambient Air Quality Standards for Particulate Matter are: A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/21/2005	Excess visible emissions (coke dust) were observed from the Coker Storage Silo stack. No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary or mobile source, the shade or appearance of which is greater than twenty (20%) percent opacity f	Air Program
12/11/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
12/6/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/16/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
11/14/2005	Process problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/11/2005	Process problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
10/31/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
10/25/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
10/21/2005	Stack SO2 > 250 ppm	Air Program
10/8/2005	CO Boiler trip causes low firebox temperature	Air Program
10/5/2005	Visible emissions >20% opacity observed at the coke storage area. No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary or mobile source, the shade or appearance of which is greater than twenty (20%) percent opacity f	Air Program
9/27/2005	Stack SO2 > 250 ppm	Air Program
9/26/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
9/22/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
8/31/2005	Visible Emissions violations observed. No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary or mobile source, the shade or appearance of which is greater than twenty (20%) percent opacity f	Air Program
8/3/2005	The Company failed a stack test for particulate matter less than 10 microns in aerodynamic diameter (PM10). The results were also submitted late. Emissions shall not exceed 0.052 lb/MMBTU PM10 from each of the two Shell Claus Offgas Treatment units and PM10 emissions from the two units shall not exceed 22.3 tons per year combined. The Company shall submit all required stack test results within 90 days of completion of the stack test.	Air Program
8/3/2005	The Company failed a stack test for sulfuric acid (H2SO4) being emitted from Shell Claus Offgas Treatment units I and II. They also submitted the stack test results late. The Company shall submit all required stack test results within 90 days of completion of the stack test. The Company shall not emit sulfuric acid in excess of 5.9 tons per year from the two Shell Claus Offgas Treatment units, combined.	Air Program
7/28/2005	Soot blowing resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
7/27/2005	Soot blowing resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
7/25/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
7/21/2005	Stack SO2 > 250 ppm	Air Program
7/20/2005	Stack SO2 > 250 ppm	Air Program
7/17/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
6/26/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
6/24/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
6/15/2005	CO Boiler trip causes low firebox temperature	Air Program
6/9/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
6/8/2005	Stack SO2 > 250 ppm	Air Program
6/7/2005	Stack SO2 > 250 ppm	Air Program
6/1/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/31/2005	CO Exceedance	Air Program
5/19/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
5/7/2005	Stack SO2 > 250 ppm	Air Program
4/30/2005	Stack SO2 > 250 ppm	Air Program
4/30/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
4/26/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program

Violation Date	Nature of Violation	Program
4/6/2005	Process problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
4/6/2005	CO Boiler trip causes low firebox temperature	Air Program
4/4/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
4/4/2005	CO Boiler trip causes low firebox temperature	Air Program
4/4/2005	CO Exceedance	Air Program
4/1/2005	CO Exceedance	Air Program
4/1/2005	Soot blower problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
3/29/2005	Premcor failed the yearly compliance test of the Cracked Naphtha Hydrotreater Heater 25-H-401 for NOx. Air contaminant emission levels shall not exceed the following and those specified by the State of Delaware "Regulations Governing the Control of Air Pollution"... For NOx: For units 25-H-401 and 25-	Air Program
3/26/2005	Continued shutdown of CO boiler resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
3/25/2005	CO Boiler tube rupture and shutdown resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
3/21/2005	Exceedance of 250 ppmvd (at 0% oxygen) sulfur dioxide limit from sulfur recovery area. No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2	Air Program
3/20/2005	Exceedance of 250 ppmvd (at 0% oxygen) sulfur dioxide limit from sulfur recovery area. No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2	Air Program
3/19/2005	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
3/13/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
3/5/2005	Exceedance of 250 ppmvd (at 0% oxygen) sulfur dioxide limit from sulfur recovery area. No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2	Air Program
2/10/2005	Process problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
1/21/2005	Process problems resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
1/14/2005	CO Boiler Trip resulted in excess VE from FCCU. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
1/12/2005	Exceedance of 250 ppmvd (at 0% oxygen) sulfur dioxide limit from sulfur recovery area: 1/12/05 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2	Air Program

Violation Date	Nature of Violation	Program
1/11/2005	Exceedance of 250 ppmvd (at 0% oxygen) sulfur dioxide limit from sulfur recovery area: 1/11/05 to 1/12/05. No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2 No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of... 2	Air Program
12/27/2004	Visible Emissions from the FCCU exceeded opacity limits included in March 26, 2001 consent order 18750-NC paragraph 26. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
12/26/2004	Visible Emissions from the FCCU exceeded opacity limits included in March 26, 2001 consent order 18750-NC paragraph 26. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
12/23/2004	Violation of primary and secondary State ambient air quality standards for total suspended particulate matter resulting from coke handling/storage. The Primary Ambient Air Quality Standards for Particulate Matter are: A value of 260 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/22/2004	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/21/2004	Visible Emissions from the FCCU exceeded opacity limits included in March 26, 2001 consent order 18750-NC paragraph 26. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
12/12/2004	CO exceedance	Air Program
12/11/2004	CO exceedance	Air Program
12/9/2004	CO exceedance	Air Program
12/8/2004	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
12/6/2004	CO exceedance	Air Program
12/3/2004	CO exceedance	Air Program
12/1/2004	CO exceedance	Air Program
11/27/2004	Violation of secondary State ambient air quality standard for total suspended particulate matter resulting from coke handling/storage. The Secondary Ambient Air Quality Standards for Particulate Matter are: A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.	Air Program
11/23/2004	CO exceedance	Air Program
11/22/2004	Visible Emissions from the FCCU exceeded opacity limits included in March 26, 2001 consent order 18750-NC paragraph 26. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/21/2004	Visible Emissions from the FCCU exceeded opacity limits included in March 26, 2001 consent order 18750-NC paragraph 26. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/20/2004	FCCU visible emissions violation in excess of 50% opacity. Violation of Paragraph 26 of March 26, 2001 consent order 18750-NC. [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of	Air Program
11/4/2004	Company failed to submit an Operation, Maintenance, and Monitoring Plan for the FCCU bypass stack closure, called a goggle valve. The Company also failed to submit the goggle valve's specifications for the Department's approval before its construction as required by Permit Condition No. 4.1: "The Company shall install and operate a device (including a flow indicator, level recorder, or electronic valve position monitor)...to continuously detect, at least every hour, whether flow is present in the bypass line. The device specifications must be submitted for the Department's approval at least 30 days prior to construction." Also a violation of Permit Condition No. 3.1: "The Company shall prepare and implement an Operation, Maintenance, and Monitoring (OMM) plan for the goggle valve and continous monitoring system. The OMM plan must be submitted for the Department' approval at least 30 days prior to construction."	Air Program

Violation Date	Nature of Violation	Program
10/26/2004	Stack SO2 > 250 ppm	Air Program
10/4/2004	Premcor modified Tank 322 prior to obtaining a permit from the Department. "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant	Air Program
9/25/2004	Unpermitted release of emissions from the Fluid Catalytic Cracking Unit (FCCU). Violation of DE Regulation No. 2, Section 2.1: "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant." Also violates 7 Del.C. Chapter 6003(a)(1): (a) No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant..."	Air Program
8/31/2004	On August 31, 2004, the Fluid Catalytic Cracking Unit (FCCU) had emissions in excess of 50% opacity for 70 minutes. As per Paragraph 63 of the State of Delaware Consent Order: [The Company] shall pay stipulated penalties to DNREC, for each failure by [the Company] to comply with the terms of the Consent Order and Paragraph 63(c)(viii) stipulates a penalty of \$3,000 per day for each failure to meet the 50% opacity standard.	Air Program
8/31/2004	Premcor is found in violation for the release of unpermitted emissions from the Hydrogen Plant occurring from August 31 through September 8, 2004. Violation of 7 DEL.C. Chapter 6003(a)(1): "No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant..." Also violates DE Reg. No. 2, Section 2.1: "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant..." Permit Condition No. 6.2 states "Emissions in excess of any permit condition...shall be reported to the Department immediately upon discovery by calling the Environmental Emergency Notification and Complaint number.	Air Program
8/31/2004	Hydrogen plant LTS bypass	Air Program
7/7/2004	The Department received a copy of the daily emissions observation log which showed that refinery personnel observed emissions from the FCCU Carbon Monoxide Boiler bypass stack each day from July 7-12, 2004. Paragraph 24 of Civil Action 18750-NC states: [The Company] shall maintain the FCCU bypass valve at all times in the fully closed position and in a leak free condition which is defined as no measurable flow across the valve or in the stack using DNREC approved protocol unless an emergency situation requires the valve to be opened. Paragraph 63 states: [The Company] shall pay stipulated penalties to DNREC, for each failure by [the Company] to comply with the terms of the Consent Order. Paragraph 63 requires a stipulated penalty of \$200,000 be paid for violation of this term. Violation correction confirmed by AQM's inspection of the bypass stack's new sealing device.	Air Program
7/4/2004	Four (4) violations of Regulation No. 3, section 3.2b: "a value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations." This violates the state's secondary ambient air quality standard (AAQS) for particulate matter.	Air Program
6/30/2004	The Company failed to meet the PM10 (with all particulate measured as PM10) emission limit in the permit during a reference method stack test. PM10 emissions shall not exceed 0.025 lb/mmBTU in each SCOT stack... There shall be no emissions of TSP other than those measured as PM10.	Air Program
6/30/2004	The Company failed to meet the PM10 (with all particulate measured as PM10) emission limit in the permit during a reference method stack test. PM10 emissions shall not exceed 0.025 lb/mmBTU in each SCOT stack... There shall be no emissions of TSP other than those measured as PM10.	Air Program
6/30/2004	Stack SO2 > 250 ppm	Air Program
6/29/2004	Stack SO2 > 250 ppm	Air Program
6/23/2004	Stack SO2 > 250 ppm	Air Program
6/13/2004	Four (4) violations of Regulation No. 3, section 3.2b: "a value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations." This violates the state's secondary ambient air quality standard (AAQS) for particulate matter. The following exceedances were monitored: May 1, May 2, June 13, and July 4, 2004.	Air Program
6/8/2004	CO Boiler (COB) burner trip causes firebox temperature <1300 degrees F.	Air Program
6/5/2004	SO2 >85.7 lb/hr on a rolling 2-hour average basis.	Air Program
6/4/2004	Stack SO2 > 250 ppm	Air Program

Violation Date	Nature of Violation	Program
6/4/2004	Environmental Protection Agency (EPA) finds Motiva in-violation of the March 2001 Federal Consent Decree. As such, Motiva is subject to the following penalties of \$442 (\$750/ton x 1179/2000) for the flaring incident under Paragraph 156(b): the stipulated penalty provisions of Paragraph 165(a) shall apply to a failure of equipment that is due to a failure by Motiva to operate and maintain that equipment in a manner consistent with good engineering practice. Paragraph 176 states: Motiva shall pay such stipulated penalties only upon written demand by the United States and the State of Delaware (50% to each). Violation pertains to the shutdown of SCOT I heater 28-H-301 due to loose electrical connections that resulted in an acid gas flaring of 1,179 lbs. of sulfur dioxide (SO2) on June 4-5, 2004.	Air Program
6/4/2004	On June 4, 2004 the Fluid Catalytic Cracking Unit (FCCU) had emissions in excess of 50% opacity for a period of 35 minutes. Violates Paragraph 26: [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of fifteen (15) minutes on a calendar day... As per Paragraph 63: [The Company] shall pay stipulated penalties to DNREC, for each failure by [the Company] to comply with the terms of the Consent Order.	Air Program
6/3/2004	The FCCU Carbon Monoxide Boiler tripped because radiographic work being performed likely impacted the operation of the burner flame scanners. Violation of Regulation No. 2, Section 2.1: "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant." Also violates 7 Del.C, Section 6003(a)(1): "No person shall, without first having obtained a permit from the Secretary undertake any activity in a way which may cause or contribute to the discharge of an air contaminant."	Air Program
6/2/2004	FCCU CO Boiler trip causes: Release of pollutants and CO emissions >500 ppm.	Air Program
6/1/2004	FCCU CO Boiler trip causes: Release of pollutants and CO emissions >500 ppm.	Air Program
5/31/2004	FCCU CO Boiler trip causes: Release of pollutants and CO emissions >500 ppm.	Air Program
5/31/2004	The FCCU Carbon Monoxide Boiler tripped when an air blower shut down due to a faulty mechanical governor on the turbine drive. Violation of Permit APC-82/0981-Operation (Amendment 1). Violation of 7DEL.C. Chapter 6003(a)(1): "No person shall, without first having obtained a permit from the Secretary undertake any activity (1) In a way which may cause or contribute to the discharge of an air contaminant" and Regulation No. 2, section 2.1: "no person shall initiate construction, install, alter or initiate operation of any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to receiving approval from the Department."	Air Program
5/31/2004	On May 31, 2004 the Fluid Catalytic Cracking Unit (FCCU) had emissions in excess of 50% opacity for a period of 35 minutes. Violates Paragraph 26: [The Company] agrees to control the FCCU opacity from the main stack to 40% or less calculated on a rolling 24-hour basis; also agrees to control opacity not to exceed 50% for not more than a total of fifteen (15) minutes on a calendar day... As per Paragraph 63: [The Company] shall pay stipulated penalties to DNREC, for each failure by [the Company] to comply with the terms of the Consent Order.	Air Program
5/20/2004	A transmitter in the Continuous Catalyst Regeneration (CCR) Reformer failed, resulting in hydrogen gas being vented to the flare gas recovery system. The amount of gas vented exceeded the capacity of the recovery system and the excess gas flared. The incident resulted in an unpermitted release of emissions, which is a violation of Permit APC-81/830-Operation.	Air Program
5/2/2004	Four (4) violations of Regulation No. 3, section 3.2b: "a value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations." This violates the state's secondary ambient air quality standard (AAQS) for particulate matter.	Air Program
5/1/2004	Four (4) violations of Regulation No. 3, section 3.2b: "a value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations." This violates the state's secondary ambient air quality standard (AAQS) for particulate matter.	Air Program
5/1/2004	The Company's predecessor (Motiva Enterprises, LLC) made operational changes beginning on October 1, 2002 to the FCCU and its CO boiler to comply with the 500 ppmvd NSPS limit for CO. These changes presumably increased NOx emissions by about 650 tons annually. Premcor has continued operating the FCCU in a manner that has increased NOx emissions by approximately 650 tons annually above baseline figures. Violation of DE Regulation 25, 2.1: Applicability - The provisions of this Section shall apply to any person responsible for any proposed new major stationary source or any proposed major modification.	Air Program

Violation Date	Nature of Violation	Program
1/11/2004	<p>January 11, 2004 release of 2,083 lbs. of SO<sub>2</sub> lasting for a period of twenty-two hours. Operator error and level control problems in the high pressure separator caused the shutdown of the Sulfur Recovery Unit (SRU) II, which in turn caused acid gas flaring and a tail gas incident. Violates Paragraph 156 (a) &amp; (b), Paragraph 165(a) of Consent Decree: "(a) Error resulting from careless operation by the personnel charged with the responsibility for the SRP's, TGTU's, or Upstream Process Units..." A failure of equipment that is due to a failure by [Company] to operate and maintain that equipment in a manner consistent with good engineering practice. [Company] shall be liable for the following stipulated penalties: (a) AG Flaring or Tail Gas Incidents for which [Company] is liable under this part.</p>	Air Program

**From:** [Godlewski, Thomas](#)  
**To:** [Rennie, Lindsay \(DNREC\)](#)  
**Cc:** [Boyd, Larry](#); [Deemer, John](#); [Marconi, Angela D. \(DNREC\)](#)  
**Subject:** 2018-01-14 DCRC Coker CO Boiler Preliminary Emissions estimate  
**Date:** Tuesday, January 15, 2019 4:51:00 PM  
**Attachments:** [2019-01-14 - FCU COB Trip Emissions Estimate.xlsx](#)

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Lindsey,

For the reported pollutants, below is an “order of magnitude” emissions estimate. Again, please be advised that this is a preliminary number that has not gone through a full engineering review, so the numbers may be somewhat different in the final incident report. If you have any questions, please feel free to contact me or Larry.

SO2: 60,000 lb

CO: 340,000 lb

H2S: 12,000 lb

NH3: 5,000 lb

HCN: 600 lb

COS: 90 lb - (Note: This is below 100 lb RQ. If final numbers reflect this, we will rescind the release report for this pollutant)

***Thomas S. Godlewski, Jr.***

***Environmental Manager***

***Delaware City Refining Company***

***Office: (302) 834-6053***

***Mobile: (302) 757-1192***

***FAX: (302) 836-6505***

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Flue Gas Composition from Burner OH Analysis (see email from C. McGill 10/6/2005)		mol pct		MW	Wet, wt%
		Dry	Wet		
Carbon Monoxide	CO	6.32	4.442	28.01	0.060679726
Carbon Dioxide	CO2	12.65	8.82	44.01	0.189309278
Hydrogen	H2	2.1	1.5	2.02	0.001474802
Nitrogen	N2	77.55	54.18	28.01	0.740123263
Methane	CH4	1.2	0.84	16.04	0.006571062
Hydrogen Sulfide	H2S	0.16	0.11	34.08	0.001828286
Carbonyl Sulfide	COS	0.0002	4.6358E-04	60.08	1.35822E-05
Sulfur Dioxide	SO2			64.06	0
Water	H2O			18.00	0

Estimated NH3 in Burner Overhead (dry)	888.5 ppm
Calculated NH3 in Burner Overhead (wet)	888.5 ppm
Estimated HCN mole ratio to NH3	0.074074
Estimated HCN mass ratio to NH3	0.117647

Coker CO Boiler Outage SO2 Emissions Calculations

[..\..\..\..\AI-12-00 - Permitting Files\22 - Fluid Coker\SO2 Calculations\FCU Bypass Stack SO2](#)

In accordance with Condition 5.5, I calculating SO<sub>2</sub> emission from the has developed a calculation to project historical SO<sub>2</sub> monitoring data for uses different factors dependent on 4,450 lbs/hr, are as follows:

1. For Coker Operation with projec  
(SO<sub>2</sub> - #/hr) = 23.5 x (coker fres
2. For Coker Operation with projec  
(SO<sub>2</sub> - #/hr) = 29.95 x (coker fre

22FI100

Notes

Calculation Period	#NAME?
Date/Time	#NAME?

Flue Gas to Bypass Stack  
Flue Gas back to COB

1/14/2019 19:07	43.15
1/15/2019 9:10	35.33

**Total**

7:07  
21:10  
14:03  
0.05

[Calculation Methodology.pdf](#)

Premcor hereby proposes a specific methodology for Coker during periods of CO Boiler bypass. Premcor project SO<sub>2</sub> emissions during bypass operations based on the Coker. The proposed calculation methodology is whether the projected SO<sub>2</sub> emission rate exceeds

Projected SO<sub>2</sub> emissions less than 4,450 lbs/hr  
 (Coker feed rate - kbpd) x (calculated wt% sulfur in feed)

Projected SO<sub>2</sub> emissions (greater) than 4,4450 lbs/hr  
 (Coker feed rate - kbpd) x (calculated wt% sulfur in feed)

AVG COKER FEED SULFUR CONTENT PCT	AVG SULFUR DIOXIDE EMISSIONS LB/HR	Duration HRS	Total SO2 Emissions LBS
4.780	6177.39715	0.00	-
4.780	3968.6189	14.05	55,759
		<b>14.05</b>	<b>55,759</b>

**MEMORANDUM**

NOV 30 2017  
#13032

TO: Angela D. Marconi, P.E., BCEE *ADM*

FROM: Ravi Rangan, P.E. *RR*  
Lindsay T. Rennie *LR*

**SUBJECT: Delaware City Refining Company  
2017 Partial Compliance Evaluation Report<sup>1</sup>**  
Fluid Coking Unit (FCU), FCU Carbon Monoxide Boiler (COB) 22-H-3, FCU Selective Non-Catalytic Reduction (SNCR) System, FCU Wet Gas Scrubber (WGS) System, FCU Selas Steam Superheater (22-H-2) and FCU Back up Incinerator (BUI) 22-H-4, Coke Storage and Handling  
**Permit: AQM-003/00016 – Part 2 (Renewal 1)(Revision 1), Section da, db** dated April 11, 2017

DATE: November 17, 2017

This inspection report addresses the Division of Air Quality's (DAQ's) findings and observations during an inspection of the Fluid Coking Unit (FCU), FCU Carbon Monoxide Boiler (COB) 22-H-3, FCU Selective Non-Catalytic Reduction (SNCR) System, FCU Wet Gas Scrubber (WGS) System, FCU Selas Steam Superheater (22-H-2), FCU Back up Incinerator (BUI) 22-H-4, and the Petroleum Coke Storage and Handling Complex.

**Table 1: Facility Information**

Permittee/Owner (hereafter referred to as "Company/Owner")	Operator (hereafter referred to as "Operator")
Company Name: Delaware City Refining Company Address: 4550 Wrangle Hill Road Delaware City, DE 19706 Responsible Official: Jeffery Coleman Title: Refinery Manager	Operator Name: DCRC Operator Address: Same as Permittee
Plant Site Location (hereafter referred to as "Facility")	Plant Mailing Address
Latitude 39°34'54.2784" N Longitude 75°30'45.0000" W	Plant Name: DCRC Mailing Address: same as above

**Table 2: Permit Information**

SOURCE CODE	A
FACILITY ID NUMBER	1000300016
APPLICABLE PERMIT	<b>Permit: AQM-003/00016 – Part 2 (Ren1)(Rev1), Section da, db</b>
APPLICABLE REGULATIONS	Same as those listed in the technical memoranda for the above referenced permits
INSPECTION DATE(S)	August 29, 2017

<sup>1</sup> This Inspection Report is a full compliance evaluation of the FCU, FCU COB 22-H-3, FCU SNCR System, FCU WGS System, FCU Selas Steam Superheater (22-H-2), FCU BUI 22-H-4 and Coke Storage and Handling Complex to fulfill DAQ's 3 yearly inspection commitment. This inspection report has been designated as a (PCE) because it does not address other unit operations at the Delaware City Refinery. An FCE for the entire facility will be presented at a later date when the entire facility has been inspected within the required three year cycle. Table 7 at the end of this report provides an updated table of all inspections completed in the present 3-year cycle.

**MEMORANDUM**

**Permit: AQM-003/00016 - Part 2 (Ren1)(Rev1), Section da, db** dated April 11, 2017

**Delaware City Refining Company**

**FCU, COB, SNCR, WGS, Selas Steam Super-heater, FCU BUI, Coke Handling and Storage**

Partial Compliance Evaluation

Date: November 17, 2017

Page 12

	shall be based on monitoring/testing and recordkeeping requirements.			
	<p>i. Emission Standard:  C. For the FCU WGS:  1. TSP emissions shall not exceed 47.1 lb/hour and 206.3 TPY, and  2. PM<sub>10</sub> emissions (including TSP and H<sub>2</sub>SO<sub>4</sub>) shall not exceed 133.1 lb/hour and 582.9 TPY.</p> <p>iii. Compliance Method:  C. Compliance with Emission Standard (C) shall be based upon stack testing conducted in accordance with Condition 3 - Table 1.da.2a.iv.A.</p> <p>iv. Monitoring/Testing:  A. The Owner/Operator shall conduct annual performance testing of the WGS, unless the Department approves less frequent testing</p>	<p>Twelve month rolling PM emissions:  Highest: 164 TPY (January 2016)  Lowest: 103 TPY (January 2013)  Average: 139 TPY</p> <p>Twelve month rolling PM10 emissions:  Highest: 139 TPY (January 2016)  Lowest: 63.6 TPY (September 2014)  Average: 99.7 TPY</p> <p>Stack tests were conducted in the fall of 2014, 2015 and 2016. Another stack test is scheduled for the week of November 13, 2017.</p>	Yes	None
da. 3. Sulfur dioxide (SO <sub>2</sub> ):	<p>i. Emission Standards:  A. SO<sub>2</sub> emissions shall not exceed 25 ppmvd @ 0% O<sub>2</sub> on a rolling 365 day average, 50 ppmvd @ 0% O<sub>2</sub> on a rolling 7 day average, and 182.3 TPY.</p> <p>ii. Compliance Method:  A. Compliance with Emission Standard (A) shall be based on CEMS.</p> <p>iii. Monitoring/Testing:  B. The CEMS for SO<sub>2</sub> and O<sub>2</sub> must be certified by satisfying the applicable Performance</p>	<p>No new deviations discovered.</p> <p>Twelve month rolling SO<sub>2</sub> emissions:  Highest: 590 TPY (February 2016)  Lowest: 10 TPY (March 2015)  Average: 216.2 TPY</p> <p>These SO<sub>2</sub> levels listed are inclusive of emissions from the bypass stack and backup incinerator. DCRC has received several NOVs relating to excess SO<sub>2</sub> emissions from the FCU. Specifically, they received NOVs for incidents in April 2015 incident (crr16004).</p>	No, Corrected	None

**MEMORANDUM**

Permit: **AQM-003/00016 - Part 2 (Ren1)(Rev1), Section da, db** dated April 11, 2017

**Delaware City Refining Company**

**FCU, COB, SNCR, WGS, Selas Steam Super-heater, FCU BUI, Coke Handling and Storage**

Partial Compliance Evaluation

Date: November 17, 2017

Page 13

	Specification in 40 CFR, Part 60, Appendix "B".	The first was for a tube leak which resulted in the release of 620,000 lbs of SO <sub>2</sub> . The second was for a crack in the COB casing which resulted in 525,000 lbs of SO <sub>2</sub> released.		
da. 4 Nitrogen Oxides (NO <sub>x</sub> ):	<p>i. Emission Standard:</p> <p>A. For Unit 22-H-2: NO<sub>x</sub> emissions shall not exceed those achieved through an annual tune up performed by qualified personnel</p> <p>ii. Compliance Method:</p> <p>A. Compliance with Emission Standard (A) shall be by conducting an annual tune up of each unit by qualified personnel.</p> <p>iv. Recordkeeping:</p> <p>A. A log of all tune ups performed and documentation of qualification of personnel responsible for conducting the tune up.</p>	Unit 22-H-2 is receiving annual tune-ups performed by Petro-chem Group. Most recent tune-ups were performed on September 19, 2016 and November 2, 2015.	Yes	None
	<p>i. Emission Standards:</p> <p>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO<sub>x</sub>)" in Part 1, Condition 3, Table 1.j</p> <p>C. NO<sub>x</sub> emissions from the FCU WGS shall not exceed the following:</p> <ol style="list-style-type: none"> <li>1. 152 ppmvd @ 0 % oxygen on a 30-day rolling average basis.</li> <li>2. 152 ppmvd @ 0 % oxygen on a 30-day rolling average basis.</li> <li>3. 115.2 ppmvd @ 0% oxygen on 365-day rolling average basis.</li> </ol> <p>ii. Compliance Method:</p> <p>B. Comply with "Facility-wide Emission Limit for Nitrogen Oxides (NO<sub>x</sub>)" in Part 1, Condition</p>	<p>There hasn't been an exceedance of the Facility-wide Emission Limit for NO<sub>x</sub>.</p> <p>Twelve month rolling NO<sub>x</sub> emissions:                      Highest: 514 TPY (July 2013)                      Lowest: 299 TPY (August 2014)                      Average: 391 TPY</p> <p>FCU NO<sub>x</sub> emissions exceeded 152.0 ppm @ 0 % Oxygen on a 7-day rolling average basis from 01.23.2016 to 01.30.2016 during a refinery-wide power outage. An NOV was issued.</p>	No, Corrected	None



October 2, 2018

CMRRR# 7017 2620 0000 5490 7509

Ms. Angela Marconi  
DNREC  
715 Grantham Lane  
New Castle, Delaware 19720

**SUBJECT: September 4, 2018 Coker CO Boiler Trip Event Incident Report  
Delaware City Refining Company LLC - Delaware City Refinery (DCR)**

Dear Ms. Marconi:

Pursuant to Section 2.5 of the DNREC regulation "Reporting of a Discharge of a Pollutant or Air Contaminant," The Delaware City Refining Co. (DCRC) submits the enclosed investigation report for the above referenced incident.

On September 4, 2018 the refinery experienced a release from the Coker due to a trip of Carbon Monoxide Boiler that resulted in an exceedance of the DNREC, EPCRA and CERCLA reportable quantity for hydrogen sulfide, ammonia and hydrogen cyanide, an exceedance of the DNREC and EPCRA reportable quantity for sulfur dioxide and an exceedance of the DNREC reportable quantity for carbon monoxide.

If you have any questions or need additional information, please contact me at (302) 836-6750 or via email at [Larry.Boyd@pbfenergy.com](mailto:Larry.Boyd@pbfenergy.com).

Sincerely,

Larry Boyd  
Environmental Engineer

cc: (w/enclosures)

Ravi Rangan – DNREC

CMRRR# 7017 2620 0000 5494 2425  
David H. Irwin  
Chairman/Planning Coordinator  
New Castle County LEPC  
P.O. Box 2998  
Wilmington, DE 19805-0998

CMRRR# 7017 2620 0000 5494 2432  
DNREC/DAWM Central Repository  
State Street Commons  
100 W. Water Street, Suite 6A  
Dover, DE 19904

## HAZARDOUS SUBSTANCE RELEASE REPORT FORM

**FACILITY:** The Delaware City Refining Co. LLC. - Delaware City Refinery

**ADDRESS:** 4550 Wrangle Hill Rd., Delaware City, DE 19706

**SIC CODE:** 2911      **DUNN & BRADSTREET NO.:** 19-962-3414

**A) CHEMICAL NAME OR IDENTITY OF RELEASE:**

Sulfur Dioxide (SO<sub>2</sub>) - CAS 7446-09-5

Ammonia (NH<sub>3</sub>) - CAS 7664-41-7

Hydrogen Sulfide (H<sub>2</sub>S) - CAS 7783-06-4

Hydrogen Cyanide (HCN) - CAS 74-90-8

Carbon Monoxide (CO) - CAS 630-08-0

**B) ON EXTREMELY HAZARDOUS SUBSTANCE LIST: YES  NO**

**C) ESTIMATE OF QUANTITY RELEASED:**

Sulfur Dioxide (SO<sub>2</sub>) - 42,000 lb

Ammonia (NH<sub>3</sub>) - 2,600 lb

Hydrogen Sulfide (H<sub>2</sub>S) - 6,500 lb

Hydrogen Cyanide (HCN) - 310 lb

Carbon Monoxide (CO) - 195,000 lb

**D) DATE:** 9/4/2018    **TIME:** 2:20PM    **DURATION:** 6.6 hr

**E) RELEASED TO: AIR  WATER  LAND**

**F) ASSOCIATED HEALTH RISKS: YES  NO  ADVICE**

**G) PRECAUTIONS:** None required

**H) CONTACT:** Larry Boyd    **PHONE:** (302) 836-6750    **24-HOUR** (302) 834-6271

## Attachment A

The following information is supplied pursuant to Section 2.5 of DNREC Regulation for *Reporting of a Discharge of a Pollutant or an Air Contaminant*.

### Part I.

**i. *Actions taken to respond to and contain the release in the form of a chronology.***

On September 4, 2018 at approximately 2:19PM the Coker CO Boiler tripped offline as a result of the temporary loss of 600# steam and flow to the steam drum. Operations personnel immediately responded and began preparation to restart the CO Boiler. Prior to relighting the CO Boiler, the flue gas is required to be directed away from the CO Boiler to the bypass stack for safety purposes. Operations personnel proceeded to drain the bypass seal drum and the flue gas was directed to the bypass stack and out of the CO Boiler by approximately 2:26PM. The level in the main seal drum 22-D-20 was raised to isolate the flue gas from the CO Boiler. The pilots and the burners on the CO Boiler were relit at approximately 4:00PM and the CO Boiler temperature was slowly ramped up to normal operating temperature by approximately 7:21PM. Flue gas was directed back into the CO Boiler by approximately 8:55PM ending the release event.

As a result of the Coker Co Boiler trip on September 4, 2018, there were releases in exceedance of the DNREC, EPCRA and CERCLA reportable quantity for hydrogen sulfide, ammonia and hydrogen cyanide, exceedances of the DNREC and EPCRA reportable quantity for sulfur dioxide and exceedances of the DNREC reportable quantity for carbon monoxide.

Timeline - All times are approximate:

Date	Time	Event
9/4/2018	2:15PM	Refinery personnel inadvertently closed the instrument air to the in service South 1300/600 steam break down station while attempting to change out a positioner on the North break down station.
9/4/2018	2:16PM	A temporary loss of the 600# steam supply to the Coker which resulted in a pressure drop in the boiler tubes.
9/4/2018	2:17PM	As a result of the lower steam supply pressure the RPM of the steam driven boiler feed pump, 22-P-23B, dropped.
9/4/2018	2:17PM	In response, operations personnel opened the steam supply valve to 100% open. The 1300/600 break down station was returned to service and the steam header pressure rose quickly back up to normal while the steam supply valve was 100% open
9/4/2018	2:17PM	The rapid increase in supplied power to the turbine resulted in the pump, 23-P-23B, to over speed and trip, resulting in a loss of flow to the steam drum.
9/4/2018	2:19PM	As a result of the loss of flow to the steam drum, the Coker CO Boiler tripped offline.

9/4/2018	2:26PM	Operations personnel proceeded to drain the bypass seal drum and the flue gas was directed to the bypass stack and out of the CO Boiler. The level in the main seal drum 22-D-20 was raised to isolate the flue gas from the CO Boiler.
9/4/2018	2:26PM	Operations personnel proceeded to drain the bypass seal drum and the flue gas was directed to the bypass stack and out of the CO Boiler. The level in the main seal drum 22-D-20 was raised to isolate the flue gas from the CO Boiler.
9/4/2018	4:00PM	The pilots and the burners on the CO Boiler were relit.
9/4/2018	7:21PM	COB Temperature reestablished.
9/4/2018	8:55PM	The flue gas was directed back into the CO Boiler ending the release event.

**ii. Any known or anticipated acute or chronic health risks associated with the release.**

There are no known acute or chronic health risks associated with this release.

**iii. Where appropriate, advice regarding medical attention necessary for exposed individuals.**

There were no known exposed individuals regarding this release.

**Part II.**

**iv. *The facts and circumstances leading to the environmental release including a detailed identification of the pathway through which the discharge to the environment occurred and potential environmental impacts.***

On September 4, 2018, the refinery experienced a release from the Fluid Coking Unit ("Coker") due to a trip of the Carbon Monoxide (CO) Boiler.

On September 4th, at approximately 2:15PM, refinery personnel inadvertently closed the instrument air to the in service South 1300/600 steam break down station while attempting to change out a positioner on the North break down station. This resulted in a temporary loss of the 600# steam supply to the Coker which resulted in a pressure drop in the boiler tubes. The tubes carry two phase flow of both steam and water, the reduction in pressure allowed for an increase in vapor space, pushing more liquid into the steam drum. As a result of the lower steam supply pressure the RPM of the steam driven boiler feed pump, 22-P-23B, dropped at approximately 2:17PM. In response, operations personnel opened the steam supply valve to 100% open. The 1300/600 break down station was returned to service at approximately 2:17PM and the steam header pressure rose quickly back up to normal while the steam supply valve was 100% open. The rapid increase in supplied power to the turbine resulted in the pump, 23-P-23B, to over speed and trip, resulting in a loss of flow to the steam drum at 2:17PM. As a result of the loss of flow to the steam drum, the Coker CO Boiler tripped offline at approximately 2:19PM..

As a result of the Coker CO Boiler trip incident on September 4, 2018, approximately 42,000 lb of sulfur dioxide (SO<sub>2</sub>), 2,600 lb of ammonia (NH<sub>3</sub>), 6,500 lb of hydrogen sulfide (H<sub>2</sub>S), 310 lb of hydrogen cyanide (HCN) and 195,000 lb of carbon monoxide were released. The releases occurred primarily from the Coker Bypass Stack (following transition from the CO Boiler/Wet Gas Scrubber stack, see above timeline). There are no known potential environmental impacts from the discharge. Refer to the Hazardous Substance Release Report Form for discharge quantities.

v. ***Measures proposed to prevent such a discharge from occurring in the future and to remedy the deficiencies, if any, in the prevention, detection, response containment, cleanup or removal plan components.***

1. Refinery personnel immediately reestablished the South 1300/600 break down station control restoring 600# steam supply to the FCU CO Boiler.

vi. ***Such other information which the Department may require.***

No other information is required by the Department at this time.



September 20, 2018

CMRRR# 7017 2620 0000 5490 7486

Angela D. Marconi  
DNREC  
715 Grantham Lane  
New Castle, Delaware 19720

**SUBJECT: August 22, 2018 FCCU CO Exceedance Incident Report  
Delaware City Refining Company LLC - Delaware City Refinery (DCR)**

Dear Ms. Marconi:

Pursuant to Section 2.5 of the DNREC regulation "Reporting of a Discharge of a Pollutant or Air Contaminant," The Delaware City Refining Co. (DCRC) submits the enclosed investigation report for the above referenced incident.

On August 22, 2018 the refinery experienced a release from the FCCU due to the loss of the Carbon Monoxide Boiler that resulted in an exceedance of the DNREC reportable quantity for carbon monoxide.

If you have any questions or need additional information, please contact me at (302) 836-6750 or via email at [Larry.Boyd@pbfenergy.com](mailto:Larry.Boyd@pbfenergy.com).

Sincerely,



Larry Boyd  
Environmental Engineer

cc: (w/enclosures)

Ravi Rangan – DNREC

CMRRR# 7017 2620 0000 5490 7493  
DNREC/DAWM Central Repository  
State Street Commons  
100 W. Water Street, Suite 6A  
Dover, DE 19904

**HAZARDOUS SUBSTANCE RELEASE REPORT FORM**

**FACILITY:** The Delaware City Refining Co. LLC. - Delaware City Refinery

**ADDRESS:** 4550 Wrangle Hill Rd., Delaware City, DE 19706

**SIC CODE:** 2911      **DUNN & BRADSTREET NO.:** 19-962-3414

**A) CHEMICAL NAME OR IDENTITY OF RELEASE:**

Carbon Monoxide (CO) – CAS 630-08-0

**B) ON EXTREMELY HAZARDOUS SUBSTANCE LIST: YES  NO**

**C) ESTIMATE OF QUANTITY RELEASED:**

Carbon Monoxide (CO) – 164,000 lb

**D) DATE:** 8/22/2018    **TIME:** 12:49 hrs    **DURATION:** 6.5 hr

**E) RELEASED TO: AIR  WATER  LAND**

**F) ASSOCIATED HEALTH RISKS: YES  NO  ADVICE**

**G) PRECAUTIONS:** None required

**H) CONTACT:** Larry Boyd    **PHONE:** (302) 836-6750    **24-HOUR** (302) 834-6271

## Attachment A

The following information is supplied pursuant to Section 2.5 of DNREC Regulation for *Reporting of a Discharge of a Pollutant or an Air Contaminant*.

### Part I.

#### i. **Actions taken to respond to and contain the release in the form of a chronology.**

On August 22, 2018 at approximately 12:48PM, the refinery experienced a carbon monoxide (CO) release from the FCCU due to a loss of the Carbon Monoxide (CO) Boiler while attempting to place the standby Forced Draft Combustion Air Fan, 23-K-404A in service.

Operations personnel immediately responded and began troubleshooting efforts. It was determined that there was a failed positioner which was not allowing the outlet damper, 23-HC-2967, for the Forced Draft Combustion Air Fan 23-K-404A to fully open. At approximately 1:20PM, an attempt was made to bypass the CO Boiler as operations personnel were preparing to restart the CO Boiler, however, a mechanical issue prevented the hydraulic bypass valve, 23-PV-400, from opening properly. Operations personnel requested maintenance assistance to fix the valve. At approximately 2:44PM, Operations personnel swapped back to the Forced Draft Combustion Air Fan 23-K-404B. At approximately 4:45PM, the issue with the bypass valve, 23-PV-400 was resolved and the CO Boiler was successfully bypassed as required prior to restart of the CO Boiler. At approximately 4:55PM, the burners were relit on the CO Boiler and firebox temperature was slowly brought up to temperature. At approximately 6:33PM, the CO Boiler firebox temperature was restored to its normal operating temperature above 1,300°F. At approximately 6:40PM, regenerator flue gas was returned to the CO Boiler and by approximately 7:20PM, CO levels were back to within permitted levels.

As a result of the loss of the FCCU CO Boiler there was a release in excess of the DNREC reportable quantity for carbon monoxide.

Timeline - All times are approximate:

Date	Time	Event
8/22/2018	12:45PM	Refinery personnel attempted to switch from the Forced Draft Combustion Air Fan, 23-K-404B, to 23-K-404A for planned maintenance.
	12:46PM	Forced Draft Combustion Air Fan, 23-K-404A, was brought on line and 23-K-404B was removed from service.
	12:47PM	The outlet damper, 23-HC-2967, for the Forced Draft Combustion Air Fan, 23-K-404A, did not open to its required set point.
	12:48PM	An attempt to restart Forced Draft Combustion Air Fan 23-K-404B was made however the multi lim safety system for the fan had timed out and would not allow operations personnel to restart the fan.
	12:48PM	The CO Boiler trips offline due to low air flow.

8/22/2018	1:20PM	An attempt was made to bypass the CO Boiler as operations personnel were preparing to restart the CO Boiler, however, a mechanical issue prevented the hydraulic bypass valve, 23-PV-400, from opening properly. Operations personnel requested maintenance assistance to fix the valve.
	2:44PM	Operations personnel swapped back to the Forced Draft Combustion Air Fan 23-K-404B.
	4:45PM	The issue with the bypass valve, 23-PV-400 was resolved and the CO Boiler was successfully bypassed as required prior to restart of the CO Boiler
	4:55PM	Burners were relit on the CO Boiler and the firebox temperature was slowly brought up to temperature.
	6:33PM	The CO Boiler firebox temperature was restored to its normal operating temperature above 1,300°F.
	6:40PM	Regenerator flue gas was returned to the CO Boiler.
	7:20PM	CO levels were back to within permitted levels.

**ii. Any known or anticipated acute or chronic health risks associated with the release.**

There are no known acute or chronic health risks associated with this release.

**iii. Where appropriate, advice regarding medical attention necessary for exposed individuals.**

There were no known exposed individuals regarding this release.

**Part II.**

**iv. *The facts and circumstances leading to the environmental release including a detailed identification of the pathway through which the discharge to the environment occurred and potential environmental impacts.***

On August 22, 2018 the refinery experienced a carbon monoxide (CO) release from the FCCU due to a trip of the Carbon Monoxide (CO) Boiler.

At approximately 12:45PM on August 22<sup>nd</sup>, refinery personnel initiated a planned swap for the Forced Draft Combustion Air Fans from 23-K-401B to 23-K-401A for planned maintenance on 23-K-404B. At approximately 12:46PM, the Forced Draft Combustion Air Fan, 23-K-404A, was brought on line and 23-K-404B was removed from service. During the process of switching fans, the outlet damper, 23-HC-2967, for the Forced Draft Combustion Air Fan, 23-K-404A, did not open to its required set point. At approximately 12:48PM, an attempt to restart Forced Draft Combustion Air Fan 23-K-404B was made however the multi lim safety system for the fan had timed out and would not allow operations personnel to restart the fan.

At 12:48PM, the CO Boiler tripped offline due to low air flow. With the loss of the CO Boiler, the CO levels in the stack rose above permitted levels.

As a result of the loss of the CO Boiler, CO levels rose and exceeded the DNREC reportable quantity of 1,000 lb/hr on August 22, 2018 for a duration of 6.5 hours. Approximately 164,000 lb of carbon monoxide was released as a result of this incident. There are no known potential environmental impacts from the discharge. Refer to the Hazardous Substance Release Report Form for discharge quantities.

- v. ***Measures proposed to prevent such a discharge from occurring in the future and to remedy the deficiencies, if any, in the prevention, detection, response containment, cleanup or removal plan components.***

Action: The actuator for the outlet damper 23-HC-2967 was repaired and the damper positioner was replaced. Forced Draft Combustion Air Fan, 23-K-404A, was returned to standby. **COMPLETE**

- vi. ***Such other information which the Department may require.***

No other information is required by the Department at this time.