

Bryan W. Shaw, Ph.D., *Chairman*  
Buddy Garcia, *Commissioner*  
Carlos Rubinstein, *Commissioner*  
Mark R. Vickery, P.G., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

MR JAMES B ROECKER  
DIVISIONAL VICE PRESIDENT  
HOUSTON REFINING LP  
PO BOX 2451  
HOUSTON TX 77252-2451

Re: Permit Amendment and Renewal  
Permit Numbers: 2167 and PSDTX985  
Houston Refinery  
Houston, Harris County  
Regulated Entity Number: RN100218130  
Customer Reference Number: CN601313083

Dear Mr. Roecker:

This is in response to your application Form PI-1R (General Application for Air Permit Renewals) and PI-1 (General Application for Air Permit Applications) concerning the proposed renewal and amendment of Flexible Permit Number 2167.

Your permit referenced above is hereby renewed. Enclosed please find the permit for your facility, new special conditions, and a maximum allowable emission rates table. We appreciate your careful review of the special conditions of the permit and assuring that all requirements are consistently met. This permit will be in effect for ten years from the date of approval (Commission's final decision).

As of July 1, 2008, all analytical data generated by a mobile or stationary laboratory in support of compliance with air permits must be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program or meet one of several exemptions. Specific information concerning which laboratories must be accredited and which are exempt may be found in 30 TAC §§ 25.4 and 25.6.

For additional information regarding the laboratory accreditation program and a list of accredited laboratories and their fields of accreditation, please see the following Website:

Mr. James Roecker  
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[http://www.tceq.state.tx.us/compliance/compliance\\_support/qa/env\\_lab\\_accreditation.html](http://www.tceq.state.tx.us/compliance/compliance_support/qa/env_lab_accreditation.html)

For questions regarding the accreditation program, you may contact the Texas Laboratory Accreditation Program at (512) 239-3754 or by e-mail at [labprgms@tceq.state.tx.us](mailto:labprgms@tceq.state.tx.us).

If you need further information or have any questions, please contact Mr. John Barrientez at (512) 239-4786 or write to the Texas Commission on Environmental Quality, Office of Permitting and Registration, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Bryan W. Shaw, Ph.D., Chairman  
For the Texas Commission on Environmental Quality

Enclosures

cc: Bureau Chief of Air Quality Control, Health and Human Services Department, City of Houston, Houston, Texas  
Director, Environmental Public Health Division, Harris County Public Health and Environmental Services, Pasadena, Texas  
Air Section Manager, Region 12 - Houston

Project Number: 140155

**TCEQ AIR QUALITY PERMIT NO. 2167**  
**TCEQ DOCKET NO. 2009-0179-AIR**

<b>APPLICATION BY</b>	§	<b>BEFORE THE</b>
	§	
<b>HOUSTON REFINING LP</b>	§	<b>TEXAS COMMISSION ON</b>
	§	
<b>HARRIS COUNTY, TEXAS</b>	§	<b>ENVIRONMENTAL QUALITY</b>

**EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS**

The Executive Director of the Texas Commission on Environmental Quality (Commission or TCEQ) files this response (Response) to the requests for a contested case hearing submitted by the City of Houston (City) and by American Lung Association, Environmental Defense Fund, Environmental Integrity Project, and Galveston Houston Association for Smog Prevention (GHASP), collectively. The Texas Clean Air Act (TCAA), Tex. Health & Safety Code § 382.056(n) requires the commission to consider hearing requests in accordance with the procedures provided in Texas Water Code § 5.556.<sup>1</sup> This statute is implemented through the rules in 30 Texas Administrative Code (TAC) Chapter 55, Subchapter F.

A current compliance history report, technical review summary, and draft permit prepared by the Executive Director's staff are being filed concurrently with the TCEQ's Office of Chief Clerk for the Commission's consideration. In addition, the Executive Director's Response to Public Comments (RTC), which was mailed by the chief clerk to all persons on the mailing list, is on file with the Chief Clerk for the Commission's consideration.

**I. Application Request and Background Information**

Houston Refining LP (Applicant) applied to the TCEQ for renewal of Air Quality Permit No. 2167, which is a flexible permit issued February 2, 1999. The renewal would authorize the applicant to continue operation of an existing permitted refinery, located at 12000 Lawndale, Houston, Harris County, Texas. The refinery produces a variety of fuels and chemicals. Active units at the refinery include crude oil fractionation, hydro desulfurization, fluid catalytic cracking, benzene and toluene production, light ends fractionation, magnaformer, delayed coking, sulfur recovery, butane recovery, aromatics distillation, and paraxylene recovery. The refinery also includes loading/unloading facilities, boiler house, flare system, cooling towers, and wastewater collection and treatment

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<sup>1</sup> Statutes cited in this response may be viewed online at [www.capitol.state.tx.us/statutes/statutes.html](http://www.capitol.state.tx.us/statutes/statutes.html). Relevant statutes are found primarily in the Texas Health & Safety Code and the Texas Water Code. The rules in the Texas Administrative Code may be viewed online at [www.sos.state.tx.us/tac/index.shtml](http://www.sos.state.tx.us/tac/index.shtml), or follow the "Rules, Policy & Legislation" link on the TCEQ website at [www.tceq.state.tx.us](http://www.tceq.state.tx.us).

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facilities. All activities and permitted and exempt facilities are authorized under the flexible permit. The facilities at the refinery will emit the following air contaminants: VOC, NO<sub>x</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, H<sub>2</sub>SO<sub>4</sub>, H<sub>2</sub>S, ammonia, benzene, carbonyl sulfide (COS), carbon disulfide (CS<sub>2</sub>) and antimony.

This renewal would not authorize any change in currently authorized operations or change in currently authorized pollutants. The following are the reductions associated with this project. There is an overall decrease associated with this project for both short term and annual emissions. The following are the decreases in the flexible caps:

<b>Pollutant</b>	<b>Pound per Hour Decrease</b>	<b>Tons Per Year Decrease</b>
NO <sub>x</sub>	76.3	99.7
CO	138.7	281.0
SO <sub>2</sub>	86.0	56.4
PM	35.4	91.7
VOC	732.3	941.1
Benzene	127.0	17.9
NH <sub>3</sub>	20.9	97.4
H <sub>2</sub> S	.2	1.4

In addition to the renewal, this application includes an amendment that is not subject to notice. The primary purpose of the proposed amendment is to:

- Update calculations for currently-permitted sources to reflect the latest calculation methodologies.
- Update source emission point number (EPN) names to match the site's Title V permit and Emission Inventories.
- Incorporate several Permits by Rule.
- Update SO<sub>2</sub> and PM/PM<sub>10</sub> emissions factors for the marine vapor combustor.
- Update cooling water circulation rates.
- Update marine vapor combustor performance based on actual test data.
- Implement the 28 MID fugitive monitoring program for components previously under the 28 VHP fugitive monitoring program, a more stringent fugitive monitoring program.<sup>2</sup>
- Improve fittings for numerous external floating roof storage tanks.
- Remove shutdown and demolished sources from the permit.
- Adjust benzene emission factor for heater and boiler emissions to match test data.
- Remove the ammonia and ammonium sulfate byproduct emissions for several sources that are no longer expected to be retrofitted with Selective Catalytic Reduction.

Air quality permits, including flexible permits, are required by the TCAA to be renewed every ten years.<sup>3</sup> The Applicant submitted a renewal application on August 7, 2008, which was declared

<sup>2</sup> This more stringent requirement is included at the Applicant's request.

<sup>3</sup> Tex. Health & Safety Code § 382.055.

## ***EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS***

administratively complete on August 22, 2008. The Notice of Intent to renew the Air Quality Permit was published on September 2, 2008, in the *Houston Chronicle* and September 3, 2008 in *La Voz*. Although the notices provided that the comment period would end on September 18, 2008, the close of the comment period for this application was extended to September 29, 2008 due to the landfall of Hurricane Ike on September 12-13, 2008. Since this application was administratively complete after September 1, 1999, this action is subject to the procedural requirements adopted in accordance with House Bill 801, 76<sup>th</sup> Legislature, 1999.

The RTC was filed on December 16, 2008 and mailed to all interested persons, including those who asked to be placed on the mailing list for this application and those who submitted comment or requests for contested case hearing with the agenda setting letter. The cover letter to the RTC provided information about filing a response to hearing requests.

As of December 31, 2009, Applicant is not delinquent on any administrative penalty payments or fees to the TCEQ.

## **II. HEARING REQUESTS ANALYSIS**

### **A. Application of Applicable Law**

Applicant is seeking a renewal that would not result in an increase in allowable emissions and will not result in an emission of an air contaminant not previously emitted. Texas Health & Safety Code § 382.056(g) states, "The commission may not seek further comment or hold a public hearing...in response to a request for a public hearing on an amendment, modification, or renewal that would not result in an increase in allowable emissions and would not result in the emission of an air contaminant not previously emitted."<sup>4</sup> Therefore, the Commission should deny the hearing requests as a matter of law and approve the renewal of Applicant's Permit No. 2167.

For air permit renewals, the statute states that the commission shall impose only those requirements the commission determines to be economically reasonable and technically practicable considering the age of the facility and the effect of its emissions on the surrounding area.<sup>5</sup> Further, the statute prohibits the commission from imposing requirements that are more stringent than those of the existing permit unless such a change is necessary to avoid a condition of air pollution or to ensure compliance with otherwise applicable federal or state air quality control requirements.<sup>6</sup> In this case, the applicant has voluntarily requested that its required fugitive monitoring program be changed to a more stringent program. Otherwise, no more stringent conditions will be added to the permit.

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<sup>4</sup> See also 30 TAC § 55.201(i)(3)(C) (Renewals of air applications that "would not result in an increase in allowable emissions and would not result in the emission of an air contaminant not previously emitted" are applications for which there is no right to a contested case hearing).

<sup>5</sup> Tex. Health & Safety Code § 382.055(e).

<sup>6</sup> *Id.*

## ***EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS***

Although this renewal application will not result in an increase in allowable emissions and will not result in an emission of an air contaminant not previously emitted, Tex. Health & Safety Code § 382.056(o) states “Notwithstanding other provisions of this chapter, the commission may hold a hearing on a permit amendment, modification, or renewal if the commission determines that the application involves a facility for which the applicant’s compliance history is in the lowest classification under Sections 5.753 and 5.754, Water Code, and rules adopted and procedures developed under those sections.”<sup>7</sup> The commission adopted 30 TAC, Chapter 60 to evaluate compliance history. The lowest classification under the Texas Water Code §§ 5.753 and 5.754 and 30 TAC § 60.2 is a “poor performer.” Under 30 TAC § 60.3(a)(3)(B), the TCEQ may hold a hearing on an air permit renewal if the site is classified as a poor performer. The compliance history for the company and the site is reviewed for the five-year period prior to the date the permit application was received by the Executive Director.<sup>8</sup> The company and this site each have a rating of 13.6, and have been classified as “average” and not “poor” performers.<sup>9</sup> Therefore, a hearing should not be granted under Tex. Health & Safety Code § 382.056(o) based on the compliance history of Applicant.<sup>10</sup>

### **B. Analysis of Specific Legal Issues in the City’s Hearing Request**

This renewal application meets the requirements for issuance without being subject to a contested case hearing. Consistent with previous filings by the Executive Director regarding consideration of hearing requests on a “no increase” renewal application is governed by Tex. Health & Safety Code § 382.056(g) and (o), no analysis of the individual hearing requests is included, and no map that indicates the locations of the requestors was prepared.

However, the City cites two particular legal issues as its basis for requesting a hearing. First, it requests a hearing in the public interest. Specifically, it argues that there have been a long series of permit changes that have incrementally altered the permit without public review, and there has been no review with public participation in eight years. They request a “fully transparent” hearing to demonstrate the toxic consequences of and the safety regarding the refinery’s benzene emissions and the refinery’s incremental impact on the region’s overall emissions of benzene and other toxic emissions. In addition, the City mentions the fact that the refinery is located in a TCEQ Air Pollutant Watch List (APWL) area, arguing that the permit is therefore subject to the highest level of scrutiny

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<sup>7</sup> See also 30 TAC § 55.201(i)(3)(C) (stating the commission may hold a hearing if the application “involves a facility for which the applicant’s compliance history contains violations which are unresolved and which constitute a recurring pattern of egregious conduct which demonstrates a consistent disregard for the regulatory process, including the failure to make a timely and substantial attempt to correct the violations”).

<sup>8</sup> A copy of the Compliance History Report prepared for consideration as part of the preparation of the draft permit, as required by 30 TAC Chapter 60, is being concurrently filed with the Office of the Chief Clerk as part of the backup documentation for this matter for the commission’s consideration on February 24, 2010. The backup also includes the draft permit and Technical Review. These are accessible on the Agendas and Work Sessions web page at: [http://www.tceq.state.tx.us/comm\\_exec/agendas/](http://www.tceq.state.tx.us/comm_exec/agendas/).

<sup>9</sup> 30 TAC § 60.2(e)(2)(C).

<sup>10</sup> The City made extensive comments regarding the Applicant’s compliance history and complaints filed regarding this refinery. In addition to determining that the Applicant is not a poor performer, the Executive Director’s staff reviewed these specific comments, and determined that no changes were necessary to the permit based on this information.

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prior to authorization. The City also cites the fact that it believes the amount of benzene emissions per barrel of refined product from this refinery is higher than average in Texas and the United States. Therefore, the City argues that these factors distinguish this application from others and therefore qualify it for a contested case hearing in the public interest.

The executive director acknowledges that there have been changes to this permit over the past ten years, but it is not uncommon for refineries to routinely request changes to their permits, including those that do not require public notice. For this permit, the majority of the changes are not subject to notice because they meet the requirements for an alteration.<sup>11</sup> Research conducted by the Air Permits Division revealed the following information: Since conversion of the permit to a flexible permit on February 2, 1999, Houston Refining has had 17 alterations (which are not subject to notice), one SB 1126 (Qualified Facilities program) change which is also not subject to notice, and three prior amendments.<sup>12</sup> Further, local air pollution programs, such as the City's Bureau of Air Quality (BAQC) are provided the opportunity to review draft permits for amendment applications and provide comment to the TCEQ during the technical review of the application. In this case, BAQC provided comment in July 2009, which was in addition to the City's comments provided during the comment period in September 2008.

This refinery is located in an APWL area and as such the draft permit was subject to review twice, first by the TCEQ Region 12 office and local programs, which included BAQC, as noted above, and by Harris County.<sup>13</sup> It was later reviewed by a group within TCEQ who reviews all draft permits for facilities within an APWL area immediately before issuance, and changes were made to the draft permit based on comments from the Region 12 staff. Therefore, the appropriate review was conducted and the necessary conditions are included in this draft permit.

With regard to the City's comment regarding the "large amount" of benzene emissions emitted by the Applicant's facilities,<sup>14</sup> the Executive Director notes that this draft permit would result in a decrease of 17.9 tons per year of allowable benzene emissions. Further, the latest monitoring

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<sup>11</sup> An alteration is a decrease in allowable emissions; or any change from a representation in an application, general condition, or special condition in a permit that does not cause a change in the method of control of emissions, a change in the character of emissions, or an increase in the emission rate of any air contaminant. 30 TAC § 116.116(c). This process that has been in effect since 1993 and is part of Texas' approved State Implementation Plan (SIP).

<sup>12</sup> We could find no specific documentation of whether notice was provided for an amendment issued in April 1999; it was to quantify and permit previously unrecognized existing routine emissions and to represent the flares as in continuous operation. An amendment issued in February 2002 to construct new facilities and modify existing facilities to implement their Clean Air Project, enabling the refinery to manufacture low sulfur gasoline and diesel fuel in compliance with EPA and state regulations, was subject to notice and one comment was received. The amendment for authorization of maintenance, startup and shutdown (MSS) activities, received January 2007 and issued August 2009 was subject to notice and no comments were received. A concurrent amendment to update permit representations is not subject to notice; it will be issued with this renewal.

<sup>13</sup> Harris County did not provide any comments regarding the draft permit.

<sup>14</sup> The City made extensive comments regarding the health effects of benzene emissions. The Executive Director's toxicology staff reviewed these specific comments, and determined that no changes were necessary to the permit based on this information.

## ***EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS***

information indicates improvements in air quality with regard to those emissions. On January 22, 2010, TCEQ staff presented an Air Quality Update to the commission at its Work Session held in Galveston, Texas. That update included two key updates regarding benzene. In 2008, no monitors in Harris County were above the long-term effects emissions screening level (ESL) for benzene. In addition, all monitors in the Houston Region showed a decrease in average benzene concentration from 2005-2008. With regard to the Galena Park monitor, which is approximately 1 mile north of Houston Refining, annual average benzene concentrations have been reduced 33% from 2005 to 2008. Preliminary data for 2009 indicate a continued decreasing trend. Other ambient air monitors in the vicinity of Houston Refining have continually measured short and long-term concentrations below the monitoring comparison values; therefore, no potential adverse health effects would be expected due to these measured concentrations of benzene.<sup>15</sup> Therefore, the Executive Director does not find the facts in this case to be so unique as to provide a basis for holding a hearing in the public interest, and therefore finds the City's arguments regarding a hearing in the public interest to be unpersuasive.

Second, the City cites the TCAA, Tex. Health & Safety Code § 382.112 which provides that the "[a] local government may make recommendations to the commission concerning any rule, determination, variance or other order of the commission that affects any area within its territorial jurisdiction. The commission shall give maximum consideration to the recommendations of the local government." Houston Refining's plant is located within the Houston city limits.

To the knowledge of the executive director's staff, the interpretation of this statute and a request to use this statute as a basis for granting a request for a contested case hearing is a case of first impression for the commission. A form of this section of the TCAA has been in the Act since 1969.<sup>16</sup> Although the Executive Director has made the determination that the permit should be

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<sup>15</sup> In addition, the commission announced on January 22, 2010 that benzene will be removed from the Lynchburg Ferry APWL because benzene levels in the Lynchburg Ferry area have been dropping steadily since 2005. Intense inspections, investigations, and enforcement; pollution reduction programs with industry; and coordination with the U.S. Coast Guard have resulted in benzene levels dropping 65% from 2005 through 2008. The current level, .9 parts per billion (ppb), is well below the ESL of 1.4 ppb.

<sup>16</sup> In 1967, the 60th legislature passed the Texas Clean Air Act (TCAA), found in Tex. Vernon's Civil Statutes Article 4477-5. Article 4477-5 subsection E § 5.02 says, "[a] local government may make recommendations to the board concerning any rule, regulation, determination, variance or other order of the board that affects any area within its territorial jurisdiction. The board shall give due consideration to the recommendations of the local government." Acts 1967, 60th leg., p. 1941, ch. 727. Although Article 4477-5 was amended six times between 1967 and 1989, § 5.02 remained the same throughout. In 1976 the term "maximum consideration" was first used. The "due consideration" requirement is used in a much broader sense, meaning, due regard to local governments.

In 1989, the TCAA was codified as Chapter 382 of the Texas Health & Safety Code, and § 5.02 was codified as § 382.112. Subsequently, there have been some slight modifications to the language of the statute. For example, in 1991 the Texas Natural Resource Conservation Commission was established so "board" was changed to "commission," and "regulation" taken out in 1995 because "rule" was considered to include a regulation. There have been no court cases directly ruling on § 5.02 or § 382.112. The only legal discussion found concerning either statute was in a 1969 Texas Law Review article discussing air pollution control in Texas. This article mentions § 382.112 in passing by stating "[s]ince the Board is required to give "maximum consideration" to local government recommendations concerning

## ***EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS***

renewed, notably § 382.112 does not specifically mention permits and has been analyzed as being applicable to rules that establish standards for pollutants. The Texas Code Construction Act provides that if a general provision conflicts with a special or local provision, the provisions shall be construed, if possible, so that effect is given to both. And, if the conflict between the general provision and the special or local provision is irreconcilable, the special or local provision prevails as an exception to the general provision, unless the general provision is the later enactment and the manifest intent is that the general provision prevail.<sup>17</sup> Section 382.112 is a general provision which has been essentially the same since 1967 and does not specifically apply to permit renewal applications or requests for contested case hearings on permit applications. In contrast, the specific renewal requirements in § 382.055 have substantively been amended several times since 1991. Therefore, this supports the proposition that the legislature intended that the specific and later enacted renewal requirements in § 382.055 are intended to control over any arguments based on the general provisions in § 382.112. Therefore, given the specific requirements for renewal applications as discussed in section II.A. above, the Executive Director is not persuaded that application of § 382.112 should prevail over the application of the specific law regarding renewal applications. Thus, the City's argument is not persuasive to overcome the specificity of the statutory requirements for renewal applications. The commission should determine that this statute is not a basis for granting the City's request for a hearing.

### **III. Conclusion**

The renewal of this permit would not result in an increase in allowable emissions and would not result in the emission of an air contaminant not previously emitted. Under these circumstances, Tex. Health & Safety Code § 382.056(g) directs the Commission to "not seek further comment or hold a public hearing." Because consideration of hearing requests on a "no increase" renewal application is governed by Tex. Health & Safety Code § 382.056(g) and (o), this Response does not include an analysis of the individual hearing requests. Accordingly, the Executive Director respectfully recommends the Commission deny both of the hearing requests as a matter of law and approve the renewal of Applicant's Permit No. 2167.

Further, the analysis of the arguments made by the City of Houston for a hearing in the public interest reveals that they are not based on any unique facts nor compelling issues that would support a decision to grant a hearing in the public interest. And, the City's recommendation made pursuant to Tex. Health & Safety Code § 382.112 does not legally prevail over the specific permit renewal

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regulations, local authority to protect itself from particular pollution problems seems adequately safeguarded. Moreover, if the Board has not established standards for a particular pollutant, nothing prevents local authorities from setting their own standards, since any regulations they make will not be in conflict with a state standard." 47 *Tex. Law Rev.* 1086, pg. 230.

<sup>17</sup> Tex. Gov't Code § 311.026.

***EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS***

statutes. Accordingly, the Executive Director recommends that the commission determine that neither of these arguments are valid bases for granting the City's hearing request regarding the renewal of this permit.

Respectfully submitted,

Texas Commission on Environmental Quality

Mark R. Vickery P.G.  
Executive Director

Stephanie Bergeron Perdue, Deputy Director  
Office of Legal Services

Robert Martinez, Division Director  
Environmental Law Division



Janis Boyd Hudson, Staff Attorney  
Environmental Law Division  
Texas Bar No. 10157400

Representing the Executive Director of the Texas  
Commission on Environmental Quality

*EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUESTS*

**CERTIFICATE OF SERVICE**

On January 29, 2010, a true and correct copy of the foregoing instrument was served on all persons on the attached mailing list by the undersigned via deposit into the U.S. Mail, inter-agency mail, facsimile, electronic transmission or hand delivery.

  
Janis Boyd Hudson

**MAILING LIST**  
**HOUSTON REFINING, L.P.**  
**DOCKET NO. 2009-0179-AIR; PERMIT NO. 2167**

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FOR ALTERNATIVE DISPUTE RESOLUTION:

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Alternative Dispute Resolution, MC-222  
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FOR THE CHIEF CLERK:

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*See attached list of Requesters/Interested Persons.*

**PUBLIC OFFICIALS – REQEUSTER(S)**

THE HONORABLE ANNISE PARKER  
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JOANNA HARPSTER  
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WEBSTER TX 77598-2025

TRACY HESTER  
711 LOUISIANA ST STE 2300  
HOUSTON TX 77022



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AIR QUALITY PERMIT



*A PERMIT IS HEREBY ISSUED TO*  
**Houston Refining, L.P.**  
*AUTHORIZING THE CONTINUED OPERATION OF*  
**Houston Refinery**  
*LOCATED AT Houston, Harris County, Texas*  
**LATITUDE 29° 43' 00" LONGITUDE 095° 13' 51"**

1. **Facilities covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]**
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with §§ 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. This permit may be appealed pursuant to 30 TAC § 50.139.
12. This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
13. There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
14. **Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.**

PERMITS 2167 and PSDTX985

Date: \_\_\_\_\_

\_\_\_\_\_  
For the Commission

## SPECIAL CONDITIONS

Flexible Permit Numbers 2167 and PSDTX985

### EMISSION CAPS AND INDIVIDUAL EMISSION LIMITATIONS

1. This permit authorizes emissions (including maintenance, startup, and shutdown (MSS) emissions) only from those points listed in the attached table entitled "Emission Sources - Emissions Caps and Individual Emission Limitations," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit. **(05/05)**

### FEDERAL APPLICABILITY

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A, J, K, Ka, Kb, and QQQ on Standards of Performance for New Stationary Sources promulgated for Petroleum Refineries, Volatile Organic Storage Vessels, and VOC Emissions from Petroleum Refinery Wastewater Systems. **(2/10)**
3. These facilities shall comply with all applicable requirements of the EPA regulations in 40 CFR Part 61, Subparts A, J, V, BB, and FF on National Emission Standards for Hazardous Air Pollutants (NESHAPS) promulgated for Equipment Leaks (Fugitive Sources) of Benzene, Benzene Storage Vessels, Benzene Transfer, and Benzene Waste Operations. **(2/10)**
4. These facilities shall comply with all applicable requirements of Title 30 Texas Administrative Code (30 TAC) §§ 113.100, 113.110, 113.120, 113.130, 113.300, and 113.340, including the referenced requirements contained in the EPA regulations on NESHAPS for Source Categories promulgated for SOCMIs for Process Vents, Storage Vessels, Transfer Operations, Wastewater, and Equipment Leaks in 40 CFR Part 63, Subparts F, G, and H; and Refinery Maximum Allowable Control Technology in 40 CFR Part 63, Subpart CC. **(2/99)**

### INITIAL DETERMINATION OF COMPLIANCE

5. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the 637 Reactor Feed Heater (Emission Point No. [EPN] 637F0001). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.
  - A. The appropriate Texas Commission on Environmental Quality (TCEQ) Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

## SPECIAL CONDITIONS

Flexible Permit Numbers 2167 and PSDTX985

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The notice shall include:

- (1) Date for pretest meeting.
- (2) Date sampling will occur.
- (3) Name of firm conducting sampling.
- (4) Type of sampling equipment to be used.
- (5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the Director of the TCEQ Compliance Support Division in Austin shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in Item B of this condition shall be submitted to the TCEQ Office of Permitting, Remediation, and Registration, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standards (NSPS) testing which must have the EPA approval shall be submitted to the TCEQ Compliance Support Division in Austin.

- B. Air contaminants emitted from the heaters to be tested for include (but are not limited to) nitrogen oxide (NO<sub>x</sub>) and carbon monoxide (CO).
- C. Stack sampling shall occur within 60 days after initial start-up of the heaters and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform stack sampling shall be submitted to the TCEQ Regional Office.

Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval, and requests shall be submitted to the TCEQ Compliance Support Division.

- D. The heaters shall operate at no less than 90 percent of maximum firing rate during stack emission testing. Primary operating parameters that enable determination of firing rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the heaters are unable to operate at the required firing rates during testing, then future firing rates may be limited to the rates established during testing. Additional stack testing may be required when higher firing rates are achieved.

SPECIAL CONDITIONS

Flexible Permit Numbers 2167 and PSDTX985

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- E. Copies of the final sampling report shall be forwarded to the TCEQ within 45 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

One copy to the Harris County Pollution Control Department, Pasadena.

One copy to the Bureau of Air Quality Control, City of Houston.

One copy to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division. **(03/02)**

CONTINUOUS DEMONSTRATION OF COMPLIANCE - MONITORING

6. The holder of this permit shall install, calibrate, and maintain a continuous emissions monitoring system (CEMS) to measure and record the inlet sulfur dioxide (SO<sub>2</sub>) and oxygen (O<sub>2</sub>) to the fluid catalytic cracking unit (FCCU) wet gas scrubber (WGS) and the outlet SO<sub>2</sub>, O<sub>2</sub>, NO<sub>x</sub>, and CO from the FCCU WGS.
7. The holder of this permit shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of SO<sub>2</sub> and O<sub>2</sub> from the 435 and 440 Tail Gas Thermal Oxidizers (TGTOs). Demonstration of compliance with the maximum allowable emission rates shall be made using concentration data and exhaust flow rates as determined by stack sampling.
8. The holder of this permit shall install, calibrate, and maintain a CEMS or predictive emission monitoring system (PEMS) to determine the in-stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> from all heaters and boilers with maximum firing rates greater than or equal to 100 Million British thermal units per hour (MMBtu/hr). A CEMS may be shared by up to three sources. These sources are listed in Attachment 2. All CEMS or predictive emissions monitoring systems shall be installed in accordance with the requirements in 30 TAC Chapter 117, which presently require installation when NO<sub>x</sub> controls are implemented, or by March 31, 2007, whichever is earlier.
- A. The EPNs 636F0002 and 733F0007 shall be fired at a rate of less than 100 MMBtu/hr. **(10/06)**
9. This condition is added as a requirement of the TCEQ Agreed Order, Docket Number 2001-0072-AIR-E, dated August 19, 2002. **(12/02)**

The holder of this permit shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> from the 537 Crude Unit F1 Heater (EPN 537F0001). The CEMS will comply with the requirements in 40 CFR § § 60.8 and 60.13; 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, and 4; and 40 CFR Part 60, Appendix F, Procedure 1. In addition, the holder of this permit shall comply with the following:

SPECIAL CONDITIONS

Flexible Permit Numbers 2167 and PSDTX985

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- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable rules identified in this condition.
- B. The CEMS shall be zero and span checked daily, and quality-assured once per calendar quarter in accordance with 40 CFR Part 60, Appendix F, Procedure 1. These quality assurances shall occur at least two months apart.
- C. All monitoring data and quality-assurance data shall be maintained by the permit holder for a period of two years. The quarterly CGA reports shall be submitted semiannually to the Executive Director of the TCEQ and to the Houston TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each calendar quarter.

CONTINUOUS DEMONSTRATION OF COMPLIANCE WITH EMISSIONS CAPS (03/02)

10. In order to demonstrate ongoing compliance with the hourly and annual emission limits specified in the maximum available emissions rates table, the permit holder, at a minimum, is to keep those records required under the section heading titled "Recordkeeping." Below is a short summary of whether the hourly and annual emissions are based on actual data or worst-case permit representations. Actual data means there is at least one variable that is tracked, recorded, and changing in the calculation methodology used to estimate the emissions for the period (i.e., hourly and annual). The basis shown below is how the permit holder will demonstrate ongoing compliance.

<u>Source Category</u>	<u>Hourly Emissions</u>	<u>Annual Emissions</u>
Process Heaters and Boilers	Actual	Actual
Flares	Actual	Actual
Cooling Towers	Actual*	Actual
Fugitives	Component count	Component count
Storage Tanks	Worst-case	Actual
Loading	Actual **	Actual
Wastewater	Worst-case	Actual
FCCU WGS	Actual	Actual
MSS	Actual	Actual
SRUs	Actual	Actual

\*Based on monthly cooling tower return sample results or analyzer data.

\*\*Based on daily total transfer rates averaged over 24 hours.

## SPECIAL CONDITIONS

Flexible Permit Numbers 2167 and PSDTX985

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- A. Process Heaters and Boilers: The hourly emissions from each heater and boiler will be determined from the following basic data:

Actual measured fuel consumption from flow meters and actual fuel higher heating value from calorific monitors or lab analyses.

Represented emission factors (from vendor guarantees, stack test data, or AP-42 or other TCEQ/EPA-approved emission factor sources).

Actual CEMS/PEMS readings for NO<sub>x</sub>, CO, and SO<sub>2</sub> (SO<sub>2</sub> emission factor for all sources combusting fuel gas will be derived from the hydrogen sulfide (H<sub>2</sub>S) CEMS installed on the outlet of the fuel gas mixing drum).

Actual CEMS readings or values measured by alternative method for ammonia (NH<sub>3</sub>) (see required submittals section of this permit).

Annual emissions from each source will be the sum of all its hourly emissions data.

- B. Flares: The hourly emissions from each flare will be determined from measured flare header flow rates, measured or known compositions, and the TCEQ and EPA-accepted emission factors and control efficiencies. Annual emissions from each source will be the sum of all its hourly emissions data.
- C. Cooling Towers: The hourly emissions from each cooling tower will be determined from maximum design cooling water circulation rate and monthly cooling water return lab analyses or based on continuous flow meters and continuous emission monitors. Annual emissions from each source will be the sum of all its hourly emissions data.
- D. Fugitives: The hourly emissions from fugitives (equipment leaks from piping components) will be determined from represented component counts and applicable leak detection and repair (LDAR) program emission factors and allowed control efficiencies. Annual emissions from each area/source will be the sum of all its hourly emissions data.
- E. Storage Tanks: The hourly emissions of VOC and benzene from storage tanks will be determined from represented tank attributes (e.g., tank type and capacity, seals, deck fittings, etc.), properties of material stored, and maximum fill/withdrawal rates, as outlined in this permit under Storage and Loading of VOC.

The contributions to hourly VOC and benzene emission caps from storage tanks were based upon worst-case scenarios (i.e., highest vapor pressures of materials stored and maximum fill/withdrawal rates) based upon physical configurations of tanks and maximum capacities of pumps lined up to tanks. For purposes of demonstrating compliance with hourly emission caps, the hourly emissions from storage tanks will be assumed to be these

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same maximum worst-case emissions and will be recalculated when anything changes which will affect these maximum possible hourly emission rates (e.g., tank attributes, change of service, pump capacities, etc.)

For each tank, annual emissions will be calculated for each material which was stored based upon actual throughput and annual average properties.

- F. Tank Truck, Railcar, and Marine Loading: The hourly emissions of VOC and benzene from loading operations will be determined from properties of material loaded, applicable collection and control efficiencies, and maximum loading rates, as outlined in this permit under Storage and Loading of VOC.

As with storage tanks, the contributions to hourly VOC and benzene emission caps from loading operations were based upon worst-case scenarios, i.e., highest vapor pressures of materials loaded and maximum loading rates. For purposes of demonstrating compliance with hourly emission caps, the hourly emissions from loading operations will be determined based on daily transfer rates averaged over 24 hours.

For each loading point, annual emissions will be calculated for each material which was loaded based upon actual quantity loaded and annual average properties.

- G. Wastewater: The hourly emissions of VOC from wastewater will be determined from maximum/design wastewater flow rates, maximum measured or assumed VOC concentrations in wastewater, and applicable control efficiencies.

As with storage tanks and loading, the contributions to hourly VOC emission caps from wastewater were based upon worst-case scenarios. For purposes of demonstrating compliance with hourly emission caps, the hourly emissions from wastewater will be assumed to be these same maximum worst-case emissions and will be recalculated when anything changes which will affect these maximum possible hourly emission rates.

The annual VOC emissions from each wastewater system will be calculated based upon actual annual wastewater flows and wastewater lab analyses.

- H. FCCU WGS:

The hourly emissions of  $\text{NO}_x$ ,  $\text{CO}$ , and  $\text{SO}_2$  from the FCCU WGS will be determined from actual CEMS readings at the outlet of the FCCU WGS, and particulate matter (PM) and VOC emissions will be calculated.

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After Selective Catalytic Reduction (SCR) is installed, NH<sub>3</sub> emissions (slip) will be determined by actual CEMS readings or an alternative method (see Required Submittals section of this permit).

Annual emissions from the FCCU WGS will be the sum of all its hourly emissions data.

- I. SRUs: The hourly emissions of SO<sub>2</sub> from the TGTOs will be determined from actual stack CEMS readings. Hourly emissions of NO<sub>x</sub>, CO, PM, and VOC will be estimated using stack test data or the represented emission factors.

Annual emissions from the sulfur recovery complex TGTOs will be the sum of all its hourly emissions data.

11. Compliance with the annual emission caps shall be based on a 12-month rolling average of emissions except during the first year after issuance of the flexible permit when compliance will be on a calendar basis beginning January 1, 1999. Emissions shall be calculated monthly and summed for the most recent 12-month period for comparison to the caps. The emission caps will be adjusted accordingly as combustion sources are retrofitted with control technology. Adjustments to the caps will be prorated over the 12-month period to reflect the duration of operation with the control technology retrofit in place. The full increment of the adjustment associated with control technology retrofitting will be represented in the cap 12 months after the retrofit date. Except as otherwise noted in this paragraph, emission caps are effective January 1 of each year for which an emission cap has been established. **(02/10)**

CONTROL TECHNOLOGY IMPLEMENTATION

12. The FCCU Regenerator/CO Boiler/WGS and all fired sources with firing rate capacities greater than 40 MMBtu/hr are all candidates for retrofit with SCR or equivalent NO<sub>x</sub> reduction technology and the installation of those controls necessary will be such that the reductions achieved will meet the Flexible Permit NO<sub>x</sub> caps and the Mass Emission Cap and Trade Program NO<sub>x</sub> Caps. **(05/05)**

13. Reserved **(02/10)**

PIPING, VALVES, CONNECTORS, PUMPS, AND COMPRESSORS IN VOC SERVICE-INTENSIVE DIRECTED MAINTENANCE - 28MID

14. Except as may be provided for in the special conditions of this permit, the following requirements apply to all piping facilities covered in the permit.

## SPECIAL CONDITIONS

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- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 psia at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list to be made available upon request.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable ANSI, API, ASME, or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by 30 TAC Chapter 115, shall be identified in a list to be made available upon request.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas-tested or hydraulically-tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in 40 CFR § 60.485(a)-(b).

A directed maintenance program shall consist of the repair and maintenance of components assisted simultaneously by the use of an approved gas analyzer such that a minimum concentration of leaking VOC is obtained for each component being maintained. Replaced components shall be re-monitored within 15 days of being placed back into VOC service.

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- G. All new and replacement pumps and compressors shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

All other pump and compressor seals emitting VOC shall be monitored with an approved gas analyzer at least quarterly.

- H. Damaged or leaking valves, connectors, compressor seals, and pump seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. At the discretion of the TCEQ Executive Director or designated representative, early unit shutdown or other appropriate action may be required based on the number and severity of tagged leaks awaiting shutdown.
- I. In lieu of the monitoring frequency specified in paragraph F, valves in gas and light liquid service may be monitored on a semiannual basis if the percent of valves leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Valves in gas and light liquid service may be monitored on an annual basis if the percent of valves leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of valves leaking for any semiannual or annual monitoring period is 0.5 percent or greater, the facility shall revert to quarterly monitoring until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

- J. The percent of valves leaking used in paragraph I shall be determined using the following formula:

$$(V_l + V_s) \times 100/V_t = V_p$$

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Where:

$V_l$  = the number of valves found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

$V_s$  = the number of valves for which repair has been delayed and are listed on the facility shutdown log.

$V_t$  = the total number of valves in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including nonaccessible and unsafe-to-monitor valves.

$V_p$  = the percentage of leaking valves for the monitoring period.

- K. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the TCEQ Executive Director or designated representative upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections are not required unless a leak is detected.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable NSPS, or an applicable NESHAPS and does not constitute approval of alternative standards for these regulations.
- M. For the purpose of establishing the final emission rate caps for this flexible permit, implementation of the 28MID programs and the appropriate reduction credits were utilized. If any other LDAR program is used for a set of components subject to this permit, the fugitive emissions for all components shall be calculated using the appropriate reduction credits for the LDAR program actually used to monitor each component. For components monitored under an LDAR program other than 28MID, the net emission rates for these components must be equivalent or less than those obtained if 28MID were in place. **(03/01)**
15. Flanges in the benzene toluene unit shall be monitored according to the requirements in 28MID once per year.
16. Ethylene and propane seals on the nine ethylene or propane compressors in the Paraxylene Recovery Unit of ARU Phases 0, 1, 2, and 3 will be equipped with purged packing that collects the emissions from the shaft seal and routes the emissions to a control device. **(3/02)**

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SULFUR RECOVERY COMPLEX - PIPING, VALVES, PUMPS, AND COMPRESSORS IN H<sub>2</sub>S SERVICE

17. Audio, olfactory, and visual checks for H<sub>2</sub>S leaks within the SRU Complex operating area shall be made every four hours. Immediately, but no later than one-hour upon detection of an H<sub>2</sub>S leak, plant personnel shall take the appropriate corrective action including (but not limited to) the following actions:
- A. Stop the leak by taking the equipment out of service or bypass the equipment so that it is no longer in service;
  - B. Isolate the leak;
  - C. Commence repair or replacement of the leaking component; or,
  - D. If the leak cannot be repaired within six hours, the holder of this permit shall implement a leak detection or containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Records shall only be maintained at the plant site if leaks are detected. Records include the time leaks were detected and all repairs and replacements made due to leaks. These records shall be maintained for a period of two years and made available to representatives of the TCEQ upon request. (02/99)

PIPING, VALVES, PUMPS, AND COMPRESSORS IN NH<sub>3</sub> SERVICE

18. A. Audio, olfactory, and visual checks for NH<sub>3</sub> leaks within the operating area shall be made every four hours.
- B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take the following actions:
- (1) Isolate the leak.
  - (2) Commence repair or replacement of the leaking component.
  - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

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Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be kept and maintained in accordance with General Condition No. 7. **(03/02)**

STORAGE AND LOADING OF VOC

19. A. The control requirements specified in paragraphs B through F of this condition shall not apply: (1) where the VOC has an aggregate partial pressure of less than 0.5 psia at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons.
- B. An internal floating deck or roof or equivalent control shall be installed in all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal. Installation of equivalent control requires prior review and approval by the TCEQ Executive Director.
- C. (1) An open-top tank containing a floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an internal floating roof tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal, and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
- (2) This paragraph is added to satisfy the EPA Storage Tank Emission Reduction Partnership Program (STERPP) Agreement dated May 23, 2001: **(12/02)**
- “External floating roof storage tanks that are or become “affected facilities” under NSPS Subpart Ka or Kb shall have properly installed, operated, and maintained slotted guidepole controls. For existing or new tanks that become “affected facilities,” the controls shall be installed and in place prior to initial startup as an “affected facility.”
- D. For any tank equipped with a floating roof, the holder of this permit shall follow 40 CFR § 60.113b, Testing and Procedures, to verify seal integrity. Additionally, the permit holder shall follow 40 CFR § 60.115b, Reporting and Recordkeeping Requirements, to provide records of the dates seals were inspected, seal integrity, and corrective actions taken.

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- E. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650, or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
  - F. Uninsulated tank exterior surfaces exposed to the sun shall be white or aluminum.
  - G. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations - see Continuous Demonstration of Compliance with Emissions Caps in this permit. **(03/02)**
  - H. Emissions for storage tanks shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 7 - Liquid Storage Tanks" including Supplement D pages dated September 1997 and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks." Emissions for loading operations shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids" dated January 1995 and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations." **(03/02)**
  - I. For tanks currently storing materials with an aggregate VOC partial pressure of greater than or equal to 0.5 psia, compliance with the tank inspections required by paragraph D of this condition shall be completed within 24 months of issuance of this flexible permit. For tanks that are currently storing material with an aggregate VOC partial pressure of less than 0.5 psia that undergo a change of service to store material with an aggregate VOC partial pressure of greater than or equal to 0.5 psia, the tank inspections required by paragraph D of this condition shall be completed within 24 months after permanent change in service occurs. **(02/99)**
20. No material having a true vapor pressure of 0.5 psia or greater shall be loaded into tank trucks or railcars unless the vapors are collected and the collected vapors are routed to a control device having at least 98 percent destruction or removal efficiency. Loading operations that are exempt from the control provisions in 30 TAC Chapter 115 are exempt from this condition. **(02/99)**
21. Pressure tanks shall be maintained such that there are no emissions of VOC to the atmosphere during normal operating conditions. Tanks not in volatile organic liquid (VOL) service shall not be placed in VOL service unless a permit amendment is first approved by the TCEQ or the change of service meets the requirements of an exemption from permitting under 30 TAC Chapter 106 or other TCEQ authorization. A list of tanks without emissions of VOC to the atmosphere or not in VOC service is contained in Attachment 1. **(02/99)**

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22. Compounds with VOC vapor pressure of 0.4 psia or greater shall not be loaded onto marine vessels unless the vapors are collected and routed to the marine vapor combustion system (MVCS). These compounds may not be loaded when the MVCS is not operational. "Heavy aromatics" and xylenes shall not be loaded onto marine vessels unless the vapors are collected and routed to the MVCS. **(02/99)**
23. Material containing greater than 60 percent benzene by weight may not be stored in any tank within 500 feet of the property line. **(02/99)**

## COOLING TOWERS

24. The cooling tower water shall be monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director. For units equipped with a CEMS, the daily average total VOC concentration shall be used in determination of a leak. When speciated VOC concentrations are available, total VOC shall mean the sum of the individual VOC concentrations detected. Otherwise, total VOC concentration shall mean total VOC as methane.

Total VOC concentration measured in the stripping gas above 6.2 ppmv (above background) indicates a leak. Leaking equipment shall be repaired at the earliest opportunity but no later than 45 days after discovering a leak, except as allowed under the delay of repair provisions below.

If the repair is technically infeasible without a shutdown and the total strippable VOC concentration is initially and remains less than 62 ppmv for all monthly monitoring periods during the delay of repair, repair may be delayed until the next scheduled shutdown of the heat exchange system.

If the repair is technically feasible without shutdown and the necessary equipment, parts, or personnel are not available and the total strippable VOC concentration is initially and remains less than 62 ppmv for all monthly monitoring periods during the delay of repair, repair may be delayed for a maximum of 120 calendar days.

Emissions from the cooling tower are not authorized if the VOC concentration measured in the stripping gas exceeds 62 ppmv above background. The VOC concentrations above 62 ppmv are not subject to extensions for delay of repair under this permit condition. The results of the monitoring and maintenance efforts shall be recorded. **(02/10)**

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### HEATER, BOILER, AND FLARE OPERATION

25. Fuel used in the process heaters and boilers, supplemental fuel for the flares, and fuel for the flare pilots shall be limited to pipeline-quality natural gas, refinery fuel gas, or a combination of natural gas and refinery fuel gas. The H<sub>2</sub>S concentration of the fuel gas shall not exceed 0.1 grain per dry standard cubic foot (dscf) (approximately 160 ppmv) on a three-hour rolling average basis. The H<sub>2</sub>S concentration shall be monitored and recorded in accordance with NSPS, Subpart J. Pipeline-quality natural gas shall contain no more than 0.25 grain H<sub>2</sub>S and 5.0 grains total sulfur per 100 dscf. **(02/99)**
26. Opacity of emissions from the boiler and heater stacks must not exceed 5 percent averaged over a six-minute period, except for those periods described in 30 TAC § 111.111(a)(1)(E). **(02/99)**
27. For combustion devices equipped with SCR, the NH<sub>3</sub> slip (emissions of NH<sub>3</sub>) shall not exceed 10 ppmvd on an hourly basis when corrected to 3 percent O<sub>2</sub> at any operating load except during periods of start-up or shutdown. **(03/02)**
28. Flares shall be designed and operated in accordance with the following requirements:
  - A. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate regional office to demonstrate compliance with these requirements.
  - B. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications
  - C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of steam assist to the flare. **(02/10)**
29. Opacity of emissions from the flares must not exceed 5 percent averaged over a six-minute period. **(02/99)**

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30. Flares shall operate with no less than 98 percent efficiency in disposing of the carbon compounds captured by the collection system. A destruction efficiency of 99 percent will be allowed for C<sub>2</sub> and C<sub>3</sub> compounds. **(3/02)**

SULFUR RECOVERY UNITS (SRUs)

31. Emissions of CO from the 435 and 440 TGTOs shall not exceed 100 ppmv each on a one-hour average basis. **(02/99)**

32. The minimum sulfur recovery efficiency for this permit unit shall be 99.8 percent. The sulfur recovery efficiency shall be determined by calculation as follows:

$$\text{Efficiency} = \frac{(\text{S recovered}) * (100)}{(\text{S acid gas})}$$

Where:

Efficiency	=	sulfur recovery efficiency, percent
S recovered	=	(S acid gas - S stack), lbs/hr
S acid gas	=	sulfur in acid gas stream, lbs/hr
S stack	=	sulfur in incinerator stack, lbs/hr

The efficiency will be calculated for TCEQ personnel upon request. The values for S recovered, S acid gas, and S stack shall be determined on a 24-hour average basis. **(02/99)**

33. A. The total sulfur recovered from the 433, 434, and 439 SRUs shall not exceed 730 long tons per day (LTPD).
- B. In case of emergency shutdown of the 439 SRU with the two tail gas units (TGU) still in operation, the remaining two SRUs shall not exceed a sulfur recovery rate of 500 LTPD based on a monthly average. In case of emergency shutdown of 433 SRU or 434 SRU with the two TGU still in operation, the remaining two SRUs shall not exceed a recovery rate of 730 LTPD based on a monthly average. The company shall make every effort to restart the shutdown SRU as soon as practical using best engineering judgment. Flaring of SO<sub>2</sub> associated with the SRU shutdown shall be limited to four hours per shutdown. If flaring beyond four hours is required by operational necessity, it shall be considered an upset and reported as required under 30 TAC § 101.6.

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The Company will maintain documentation to demonstrate that the repair was accomplished as soon as possible. These records shall include relevant work orders and purchase orders that document efforts made to restart the shutdown SRU. Records shall be maintained by the company to show compliance with this condition for a period not less than two years.

- C. The total sulfur recovered from the 433, 434, and 439 SRUs shall not exceed 550 LTPD when 435 TGU is not operational. The total sulfur recovered from the 433, 434, and 439 SRUs shall not exceed 500 LTPD when the 440 TGU is not operational. **(02/99)**
34. Quantities of sulfur loaded into barges and tank cars shall not exceed 500 short tons per hour. **(02/99)**
35. Emissions from the sulfur pits, seal legs, and sulfur storage tanks shall be collected by a vapor collection system and routed to an appropriate control device with a minimum destruction efficiency of 98 percent for the H<sub>2</sub>S vapors routed to it. **(02/99)**
36. The SO<sub>2</sub> concentration in the exhaust gas of the 435 and 440 TGTOs shall not exceed 235 ppmv on a one-hour average basis. **(02/99)**
37. All waste gas streams from the amine regeneration units containing H<sub>2</sub>S and/or VOC shall be routed to the SRUs under normal operating conditions. Only under start of operations, shutdowns, or emergency conditions shall the vent streams be sent to the flare (EPNs 338K0001, 338K0002, 338K0005, 338K0007, 338K0008, 736K0101A, and P-FL-5). Any other exception to this condition requires prior review and approval by the TCEQ Executive Director, and such exceptions may be subject to strict monitoring requirements. **(02/10)**
38. All acid gas or other waste gases from these facilities shall be burned in the TGTOs and/or flare (emergency use) as specified in the flexible permit application. It is not permissible under any conditions to vent waste gases directly to the atmosphere. **(02/99)**
39. The SRUs shall be equipped with an H<sub>2</sub>S monitoring system. The systems shall be operated and maintained with the company operating procedures for H<sub>2</sub>S monitoring. **(02/99)**

## COKER UNIT

40. There shall be no visible emissions leaving the property during normal coke handling operations. **(02/99)**

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41. Coke dust emissions from the coke pit shall be controlled by maintaining the moisture content at no less than 8 percent moisture. This moisture content shall be maintained by adding additional water when necessary. It shall not be a deviation from this provision if water is added within 24 hours after sampling indicates that the moisture level has dropped below 8 percent.
42. Coke stockpiles above ground shall be permitted only under emergency conditions. Should stockpiles be necessary, the coke shall be tested for moisture content three times per week and shall be maintained at a moisture content not less than 8 percent moisture. It shall not be a deviation from this provision if water is added within 24 hours after sampling indicates that the moisture level has dropped below 8 percent. Records shall be kept for two years. (02/99)

### FCCU AND WGS OPERATION (12/02)

43. The continuous opacity monitoring system for the FCCU catalyst regenerator which is required under 40 CFR § 60.105(a)(1) of NSPS, Subpart J and 30 TAC § 111.111(a)(2)(C) is replaced by an alternate method as allowed by 30 TAC § 111.111(a)(3). The alternate method was approved by the EPA (letter dated April 21, 2000) and the TCEQ pursuant to 40 CFR § 60.13(i) and 30 TAC § 111.111(a)(1)(F)(iv), and is described as follows:
  - A. The FCCU WGS shall be equipped with continuous monitors and recorders for the pressure drop across the scrubber and the ratio of the scrubbing liquid to flue gas treated. An hourly average of the pressure drop and liquid-to-gas ratio shall be calculated and recorded to determine compliance with this condition.
  - B. The WGS shall operate such that a minimum pressure drop across the scrubber of 0.91 psi and a minimum liquid-to-gas ratio of 16.0 gallons/1,000 actual cubic feet shall be maintained.
  - C. The permit holder shall monitor and record the pressure drop across the scrubber and the ratio of the scrubbing liquid to flue gas treated during all performance tests for PM of the FCCU catalyst regenerator. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of defining excess emissions. The arithmetic averages of the pressure drop across the WGS and the ratio of the scrubbing liquid to flue gas treated, which were determined during performance testing for PM which was conducted prior to the date of approval (April 21, 2000) of this alternate monitoring, may be used as the baseline average values for the purposes of defining excess emissions.
  - D. Reports of excess emissions shall be submitted to the TCEQ semiannually. All reports shall be postmarked by the 30th day following the end of each calendar half. Excess emissions are defined as follows:

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- (1) Any one-hour period when the average pressure drop across the scrubber is less than 70 percent of the average value recorded during the most recent performance testing that demonstrated compliance with the PM standard in 40 CFR § 60.102(a)(1) of NSPS Subpart J. The most recent performance testing average value is 1.3 psi; 70 percent of this value is 0.91 psi.
  - (2) Any one-hour period when the average ratio of the scrubbing liquid to flue gas treated is less than 70 percent of the average value recorded during the most recent performance testing that demonstrated compliance with the PM standard in 40 CFR § 60.102(a)(1) of NSPS Subpart J. The most recent performance testing average value is 22.8 gallons/1,000 actual cubic feet; 70 percent of this value is 16.0 gallons/1,000 actual cubic feet.
- E. Records of the pressure drop across the WGS, the liquid-to-gas ratio, and excess emissions reports shall be kept at the plant for a rolling two-year period and shall be made available upon request. Performance test data are to be kept for the same length of time or, if the performance test data is being used to satisfy or comply with any part of this condition, then it must be kept until it no longer is to be used or referenced.

RECORDKEEPING

44. The following are the records required to be kept for each storage tank and loading operation for the section heading Storage and Loading of VOC:

Tank or Loading Point ID number;

Control Method used;

Tank or Vessel Capacity in gallons;

Name of the material stored or loaded;

VOC molecular weight;

VOC monthly average liquid temperature in °F (Exception: This is not required for unheated tanks that receive liquids that are at or below ambient temperatures);

VOC monthly maximum liquid temperature in °F;

VOC vapor pressure at the monthly average material temperature in psia;

VOC vapor pressure at the maximum monthly material temperature in psia;

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VOC throughput for the previous month and year-to-date; and

For tanks equipped with a floating roof: seal integrity records as per 40 CFR §§ 60.113b and 60.115b that include seal inspection dates, seal gap measurement data, and corrective actions taken. **(02/10)**

45. Fuel gas H<sub>2</sub>S concentration records shall be kept as required per 40 CFR Part 60, Subpart J.
46. Flare/pilot flame monitoring records shall be kept.
47. Recordkeeping requirements for SRUs include the following:

Daily records of sulfur quantities loaded shall be maintained in units of LTPD. These records shall clearly indicate the total daily quantities of sulfur loaded for each type of vessel (e.g., tank car, barge, etc.).

Hours when any SRU/TGU/TGTO is shutdown, has an upset or excursion and the corrective action taken. Records shall be sufficient to determine compliance with the conditions in the SRUs section of this permit.

Average daily sulfur production from each SRU derived from monthly production. **(12/02)**

Additionally, records shall be kept of the stack test demonstrating compliance with the one-hour average in-stack CO concentration in ppmv, and records of the one-hour average in-stack SO<sub>2</sub> concentration in ppmv from the 435 and 440 TGTOs. **(03/02)**

48. Records shall be kept of the coke moisture content sampling done when emergency conditions necessitate storing coke in stockpiles above ground. The coke shall be tested for moisture content three times per week and shall be maintained at a moisture content not less than 8 percent moisture. **(02/10)**
49. For the FCCU WGS, records shall be kept of the hourly average pressure drop (psi) across the scrubber and the scrubber hourly average liquid-to-gas (scrubbing liquid to flue gas treated) ratio in gallons/1,000 actual cubic feet.
50. The records required in the conditions of this permit, and those required to demonstrate ongoing compliance with emission caps and individual emission limitations, will be updated monthly or sooner if applicable but no later than three months after a calendar month ends and kept in accordance with General Condition No. 7.

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### SHUTDOWN FACILITIES

51. The following are facilities that have been shutdown over the years or are facilities that will be shutdown in the future as a result of various projects.
- A. The facilities with EPNs 733F0004, 733-F0006, and 733F0008 were shutdown in 1996.
  - B. The facilities with EPNs 931F0501A, 931F0501, 931F0500A, and 931F0500B were shutdown in 1999.
  - C. The facilities with EPNs 332B0012, 340B0013, 333B0014, and 337B0015 were shutdown in July 2002. The facilities with EPNs ENG\_AIR1, ENG-AIR2, ENG-AIR3, ENG-AIR4, and ENG-AIR5 will be shutdown in the future. Since the modified and new facilities will startup at different times over an estimated two to six-year period, shutdown of the aforementioned facilities will be staged such that the appropriate reductions as represented in the Clean Air Project permit amendment application submittals are in place prior to the start-up of any of the modified and new facilities. The permit holder at each occurrence must notify the TCEQ and in the notification is to provide the information needed to confirm compliance with this requirement. The notification is to be made no later than 30 days after each occurrence.
  - D. This permit is conditioned on the completion of the following emission reduction projects represented in the permit alteration application dated August 2003 as follows:  
  
Shutdown of the five facilities with EPNs 932F0501, 734F0103, 734F0104, 734F0105, and 734F0106. **(10/03)**
  - E. The facility with EPN 832F0101 was shut down at the end of 1996 and has not operated since. **(05/05)**

### REQUIRED SUBMITTALS

52. Prior to installation of SCR on any facilities, the permit holder shall submit proposed methods for measuring NH<sub>3</sub> slip. When approved by the TCEQ, these methods and associated requirements shall be added to the permit conditions. **(03/02)**
53. Prior to installation of SCR on any facilities, the permit holder shall submit a proposal for the NH<sub>3</sub> handling system, with any required safeguards, for approval and incorporation into the permit. **(03/02)**

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OPERATIONAL LIMITATIONS

54. 537F0001 Crude Heater (EPN 537F0001) and 537F0002 Vacuum Heater (EPN 537F0002) are limited to 290 MMBtu/hr annual average firing rate (higher heating value of fuel) and 265 MMBtu/hr annual average firing rate (higher heating value of fuel) respectively. This condition shall no longer apply after installation of burners that are demonstrated not to exceed 0.03 lb NO<sub>x</sub> / MMBtu (higher heating value of fuel) in one or both heaters. **(06/08)**

MAINTENANCE STARTUP AND SHUTDOWN CONDITIONS (MSS)

MSS EMISSION CAPS

55. This permit authorizes the emissions for the planned maintenance, startup, and shutdown (MSS) activities summarized in the following MSS Activity Summary table provided the emissions are compliant with the respective MAERT and special conditions of this permit.

<u>Facilities</u>	<u>Description</u>	<u>Emissions Activity</u>	<u>EPN</u>	<u>MSS Monitoring and Recordkeeping</u>
All process units and tank farms	Line breaks other than process vessels associated with turnaround (piping, valves, pumps, compressors, instrumentation, filters, sight glasses, exchangers, miscellaneous small equipment, etc)	Venting and evaporative losses to atmosphere	Various	Level 1
All process units and tank farms	Pan emissions	Evaporative losses to atmosphere	Various	Level 1
All process units and tank farms	Washpad emissions	Evaporative losses to atmosphere	Various	Level 1

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<u>Facilities</u>	<u>Description</u>	<u>Emissions Activity</u>	<u>EPN</u>	<u>MSS Monitoring and Recordkeeping</u>
All process units and tank farms	Vacuum Truck Loading	Venting to atmosphere or portable control device	Various	Level 1
All process units and tank farms	Portable/Frac Tanks	Venting to atmosphere or portable control device	Various	Level 1
All process units and tank farms	Heat Treating	Emissions to atmosphere	Various	Level 1
All process units and tank farms	Catalyst Handling	Emissions to atmosphere	Various	Level 1
All process units and tank farms	Catalyst Reactivation	Emissions to atmosphere	Various	Level 1
All process units and tank farms	SRU Catalyst Blows	Emissions to atmosphere	Various	Level 1
All process units and tank farms	Aerosol Degreasing/ Lubrication	Evaporative losses to atmosphere	Various	Level 1
All process units and tank farms	Surface coating/Aerosol Usage/Abrasive Blasting	Painting/abrasive blasting/aerosol degreasing/lubricating	Various	Level 2
All heaters	Furnace/Heater Decoking	Heater decoking	Portable decoking drum	Level 2

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<b>Facilities</b>	<b>Description</b>	<b>Emissions Activity</b>	<b>EPN</b>	<b><u>MSS</u> <u>Monitoring</u> <u>and</u> <u>Recordkeeping</u></b>
All facilities	Surface Coating	Painting	Various	Level 2
All facilities	Abrasive Blasting	Surface Preparation	Various	Level 2
All floating roof tanks	Tank roof landing/product changes/refilling	Operation with landed roof	Various	Level 3
All tanks	Tank degassing/cleaning/maintenance	Venting to portable control device	Various	Level 3
All tanks	Tank degassing/cleaning/maintenance	Venting to atmosphere	Various	Level 3
All process units and tank farms	Process vessel line breaks associated with a turnaround - shutdown/depressurize/purge/degas/drain	Vent to atmosphere	Various	Level 3
All process units	Process unit startup	Vent to flare or other primary control device (thermal oxidizer/wet gas scrubber/etc)	Various	Same as Routine Emissions
All process units and tank farms	Process unit line breaks - shutdown/depressurize/purge/degas/drain	Vent to flare	Various	Same as Routine Emissions
All heaters	Heater startup, shutdown, or turndown	Variability in emissions during firing rate changes	Various	Same as Routine Emissions

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The Recordkeeping requirements for these activities are based on the notation in the final column of the above table. Level 1, Level 2, and Level 3 Recordkeeping requirements are defined as follows:

<b>Level</b>	<b>Description</b>
Level 1	Level 1 recordkeeping is for inherently low emitting MSS activities that may be performed at the refinery. Emissions from these activities shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from these activities must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.
Level 2	Level 2 recordkeeping is for activities that may be tracked through the work orders, purchase records, or equivalent. Emissions from these activities shall be calculated using the number of work orders or equivalent per month and the emissions associated with that activity identified in the permit application.
Level 3	The performance of each Level 3 activity shall be recorded and include at least the following information:  A. the physical location at which emissions from the MSS activity occurred, including the emission point number and common name for the point at which the emissions were released into the atmosphere;  B. the type of planned MSS activity and the reason for the planned activity;  C. the common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;  D. the date and time of the MSS activity and its duration;  E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

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All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis. **(8/09)**

### MSS Work Practices

56. Process units and facilities, with the exception of inherently low emitting MSS activities (Level 1) and those complying with Special Conditions 59, 60, and 62, shall be depressurized, drained, and degassed in accordance with the following requirements.
- A. The process equipment shall be depressurized to a control device or a controlled recovery system prior to venting to atmosphere, degassing, or draining liquid. Equipment that only contains material that is liquid with VOC partial pressure less than 0.50 psia at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special condition without depressuring or degassing to a control device. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
  - B. If mixed phase materials must be removed from process equipment, the cleared material shall be routed to a knockout drum or equivalent to allow for managed initial phase separation. If the VOC partial pressure is greater than 0.50 psia at either the normal process temperature or 95°F, any vents in the system must be routed to a control device or a controlled recovery system. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded. Control must remain in place until degassing has been completed or the system is no longer vented to atmosphere.
  - C. All liquids from process equipment or storage vessels must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be drained into a closed vessel unless prevented by the physical configuration of the equipment. If it is necessary to drain liquid into an open pan or sump, the liquid must be covered or transferred to a covered vessel within one hour of being drained.
  - D. If the VOC partial pressure is greater than 0.50 psia at the normal process temperature or 95°F, facilities shall be degassed using good engineering practice to ensure air contaminants are removed from the system through the control device or controlled recovery system to the extent allowed by process equipment or storage vessel design. The vapor pressure at 95°F may be used if the actual temperature of the liquid is verified to be less than 95°F and the temperature is recorded.
    - i. For MSS activities identified as Level 2, the following option may be used in lieu of ii. below. The facilities being prepared for maintenance shall not be vented directly to atmosphere, except as necessary to verify an acceptable VOC concentration and

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establish isolation of the work area, until the VOC concentration has been verified to be less than 10,000 ppmv or 10 percent of the lower explosive limit (LEL) (*or equivalent*) per the site safety procedures.

- ii. For equipment subject to Level 3 Monitoring and Recordkeeping, the following additional requirements apply:
  - a. Exit points for the exhaust gases shall be recorded (PFD's or P&ID's may be used to demonstrate compliance with the requirement).
  - b. If the process equipment is purged with a gas, purge gas must have passed through the control device or controlled recovery system for a sufficient period of time in accordance with the applicable site operating procedures before the vent stream may be sampled to verify acceptable VOC concentration prior to uncontrolled venting. Documented refinery procedures used to deinventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures) that achieve at least the same level of purging may be used in lieu of the above.
  - c. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 57. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged, except to provide dilution air to allow monitoring instruments to function. The facilities shall be degassed to the control device or controlled recovery system until the VOC concentration is less than 10,000 ppmv or 10% of the LEL.
- E. Gases and vapors with VOC partial pressure greater than 0.50 psia may be vented directly to atmosphere if all the following criteria are met:
  - i. It is not technically practicable to depressurize or degas, as applicable, into the process.
  - ii. There is not an available connection to a plant control system (flare).
  - iii. There are no more than 50 lbs of air contaminants to be vented to atmosphere during the MSS activity.

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All instances of venting directly to atmosphere per Special Condition 56.E. must be documented when occurring as part of any MSS activity. The emissions associated with venting without control must be included in the work order or equivalent for those planned MSS activities identified in Level 2. (8/09)

57. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

i. The instrument shall be calibrated within 24 hours of use. The calibration gas and the gas to be measured, and its approximate response factor shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows:

$$\text{VOC Concentration} = \text{Concentration as read from the instrument} * \text{RF}$$

ii. Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes and the greatest VOC concentration recorded. This VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

iii. If a TVA-1000 series FID analyzer calibrated with methane is used to determine the VOC concentration, a measured concentration of 34,000 ppmv may be considered equivalent to 10,000 ppmv as VOC.

B. Colorimetric gas detector tubes may be used to determine air contaminant concentrations if they are used in accordance with the following requirements.

i. The air contaminant concentration measured is less than 80 percent of the range of the tube. If the maximum range of the tube is greater than the release concentration defined in iii., the concentration measured is at least 20 percent of the maximum range of the tube.

ii. The tube is used in accordance with the manufacturer's guidelines.

iii. At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

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measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

10,000\* mole fraction of the total air contaminants present that can be detected by the tube.

The mole fraction may be estimated based on process knowledge. The release concentration and basis for its determination shall be recorded.

Records shall be maintained of the tube type, range, measured concentrations, and time the samples were taken.

- C. Lower explosive limit measured with a lower explosive limit detector.
- i. The detector shall be calibrated monthly with a certified pentane gas standard at 25% of the lower explosive limit (LEL) for pentane. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.
  - ii. A daily functionality test shall be performed on each detector using the same certified gas standard used for calibration. The LEL monitor shall read no lower than 90% of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.
  - iii. A certified methane gas standard equivalent to 25% of the LEL for pentane may be used for calibration and functionality tests provided that the LEL response is within 95% of that for pentane.
58. If the removal of a component for repair or replacement results in an open-ended line or valve, the open-ended line is exempt from any NSR permit condition requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;
- A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
  - B. the permit holder shall verify that there is no leakage from the open-ended line or valve. The open-ended line or valve shall be monitored on a weekly basis in accordance with the applicable NSR permit condition for fugitive emission monitoring except that a leak is defined as any VOC reading greater than background. Leaks must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve. The results of this weekly check and any corrective actions taken shall be recorded.
- (8/09)

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59. This permit authorizes emissions from the storage tanks identified in the attached MAERT during planned floating roof landings. Except for periods in which the tank vapor space is routed to a control device meeting the requirements of Special Condition 65, tank roofs may only be landed for changes of tank service or tank inspection/maintenance as identified in the permit application. Emissions from change of service tank landings, for which the tank is not cleaned and degassed, shall not exceed 10 tons of VOC in any rolling 12 month period. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The following requirements apply to tank roof landings:

A. The tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank has been drained to the maximum extent practicable without entering the tank. Liquid level may be maintained steady for a period of up to two hours if necessary to allow for valve lineups and pump changes necessary to drain the tank. This requirement does not apply where the vapor under a floating roof is routed to control during this process.

This requirement does not apply if the level is lowered to allow for maintenance that is expected to be completed in less than 24 hours. In that case, the tank must be filled and the roof floated within 24 hours of landing the roof and the evolution documented in accordance with Special Condition 59.E.

B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psia at 95°F, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:

i. Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10% of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.

ii. The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.

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- iii. A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any combustion air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 57.
  - iv. The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged, except to provide dilution air to allow monitoring instruments to function.
  - v. If ventilation is to be maintained with emission control, the VOC concentration shall be recorded once an hour.
  - vi. Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- C. The tank shall not be opened except as necessary to set up for degassing and cleaning, or ventilated without control, until either all standing liquid has been removed from the tank or the liquid in the tank has a VOC partial pressure less than 0.02 psia. These criteria may be demonstrated in any one of the following ways.
- i. Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
  - ii. If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
    - a. Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435, Subpart A, Appendix 1.
    - b. Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).

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- c. Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 57.

- iii. No standing liquid verified through visual inspection.

- iv. Once the VOC partial pressure is verified less than 0.02 psia, any subsequent/additional water flushes that may be performed do not trigger additional verification.

The permit holder shall maintain records to document the method used to release the tank.

D. Tanks shall be refilled as rapidly as practicable until the roof is off its legs with the following exceptions:

- i. Tank refilling rate or rates will be managed to maintain hourly emissions within the MAERT limitations.

- ii. The vapor space under the floating roof is routed to control during refilling.

E. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:

- i. the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;

- ii. the reason for the tank roof landing;

- iii. for the purpose of estimating emissions, the date and time of each of the following events:

- a. the roof was initially landed,

- b. all liquid was pumped from the tank to the extent practical,

- c. start and completion of controlled degassing, and total volumetric flow,

- d. all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to  $<0.02$  psia,

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- e. if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
  - f. refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and
  - g. tank roof off supporting legs, floating on liquid;
- iv. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events (c) and (g) with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application. **(8/09)**
60. The following requirements apply to degassing of fixed roof tanks:
- A. Storage tanks shall not be ventilated without control, until either all standing liquid has been removed from the tank or the liquid in the tank has a VOC partial pressure less than 0.02 psia. This shall be verified and documented through one of the criteria identified in Special Condition 59.C.
  - B. Storage tank manways may be opened without emission controls when there is standing liquid with a VOC partial pressure greater than 0.02 psia vapor as necessary to set up for degassing and cleaning. One manway may be opened to provide access to the tank when necessary to allow access to remove or de-volatilize the remaining liquid.
  - C. The emission control system shall meet the requirements of Special Condition 59.B.i through 59.B.v and records maintained per Special Condition 59.E.iii.c through 59.E.iv. For fixed roof storage tanks where condition 59.B.i through 59.B.v refer to "floating roof" it shall be read as "fixed roof" for the purposes of this condition. Low vapor pressure liquid may be added to and removed from the tank as necessary to lower the vapor pressure of the liquid mixture remaining in the tank to less than 0.02 psia. **(8/09)**
61. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:
- A. Vacuum pumps and blowers shall not be operated on trucks containing or vacuuming liquids with VOC partial pressure greater than 0.50 psia at 95°F unless the vacuum/blower exhaust is routed to a control device or a controlled recovery system.
  - B. Equip fill line intake with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

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- C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.
- i. Prior to initial use, identify any liquid in the truck. Record the liquid level and document that the VOC partial pressure is less than 0.50 psia if the vacuum exhaust is not routed to a control device or a controlled recovery system. After each liquid transfer, identify the liquid transferred and document that the VOC partial pressure is less than 0.50 psia if the vacuum exhaust is not routed to a control device or a controlled recovery system.
  - ii. For each liquid transfer made with the vacuum operating, record the duration of any periods when air may have been entrained with the liquid transfer. The reason for operating in this manner and whether a “duckbill” or equivalent was used shall be recorded. Short, incidental periods, such as those necessary to walk from the truck to the fill line intake, do not need to be documented.
  - iii. If the vacuum truck exhaust is controlled with a control device other than an engine or oxidizer, VOC exhaust concentration upon commencing each transfer, at the end of each transfer, and as required by Special Condition 65, measured using an instrument meeting the requirements of MSS Special Condition 57.
  - iv. The volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.
- D. The permit holder shall determine the vacuum truck emissions each month using the daily vacuum truck records and the calculation methods utilized in the permit application. If records of the volume of liquid transferred for each pick-up are not maintained, the emissions shall be determined using the physical properties of the liquid vacuumed with the greatest potential emissions. Rolling 12 month vacuum truck emissions shall also be determined on a monthly basis.
- E. If the VOC partial pressure of all the liquids vacuumed into the truck is less than 0.10 psia, this shall be recorded when the truck is unloaded or leaves the plant site and the emissions may be estimated as the maximum potential to emit for a truck in that service as documented in the permit application. The recordkeeping requirements in Special Condition 61.A through 61.D do not apply. **(8/09)**
62. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

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- A. Except for labels, logos, etc. not to exceed 15% of the tank/vessel total surface area, the exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum effective May 1, 2013. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled.
- B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom.
- C. These requirements do not apply to vessels storing less than 100 gallons of liquid that are closed such that the vessel does not vent to atmosphere.
- D. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all frac tanks during the previous calendar month and the past consecutive 12 month period. The record shall include:
  - i. tank identification number,
  - ii. dates put into and removed from service,
  - iii. control method used (if any),
  - vi. tank capacity,
  - v. volume of liquid stored in gallons,
  - vi. name of the material stored,
  - vii. VOC molecular weight, and
  - viii. VOC partial pressure at the estimated monthly average material temperature in psia.
  - ix. Filling emissions for tanks shall be calculated using the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Loading Operations" and standing emissions determined using: the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."
- E. If the tank/vessel is used to store liquid with VOC partial pressure less than 0.10 psia at 95°F, records may be limited to the days the tank is in service and the liquid stored. Emissions may be estimated based upon the potential to emit as identified in the permit application. **(8/09)**

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63. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit. **(8/09)**
64. All permanent facilities must comply with all operating requirements, limits, and representations during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for emissions from routine emission points are identified below.
  - A. Combustion units, with the exception of flares, at this site are exempt from NO<sub>x</sub>, CO, and NH<sub>3</sub> operating requirements identified in special conditions in this permit during planned startup and shutdown if the following criteria are satisfied.
    - i. The maximum allowable emission rates in the permit authorizing the facility are not exceeded.
    - ii. The startup period does not exceed 8 hours in duration and the firing rate does not exceed 75 percent of the design firing rate. The time it takes to complete the shutdown does not exceed 4 hours.
    - iii. Control devices are started and operating properly when venting a waste gas stream.
  - B. The limits identified below apply to the operations of the specified facilities during startup and shutdown.
    - i. FCCU and WGS OPERATION
      - a. During start-up or shutdown of the FCCU, the minimum pressure drop (delta P) across the WGS requirement in Special Condition 43 can not be met because this parameter is flue gas flow rate dependent. The two parametric (delta P and ratio of scrubbing liquid to flue gas treated [L:G ratio]) requirements are BACT particulate matter (PM) control for an FCCU. Since, the L:G ratio requirement can be met and is actually the parameter that controls PM, it will be maintained during start-up, shutdown, and normal operations. For the 36-hours after start-up and prior to shutdown, the delta P will not be met but the hours will be minimized to the extent practicable.
    - ii. SULFUR RECOVERY UNITS
      - a. In lieu of Special Condition 31, emissions of CO from the 435 and 440 TGTOs shall not exceed 500 ppmv each on a one-hour average basis for no more than 12-hours after start-up or prior to shutdown.

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- b. In lieu of Special Condition 36, emissions of SO<sub>2</sub> from the 435 and 440 TGTOs shall not exceed 750 ppmv each on a one-hour average basis for no more than 12-hours after start-up or prior to shutdown.
  - c. The minimum sulfur recovery efficiency in Special Condition 32 does not apply during periods of startup or shutdown.
- C. A record shall be maintained indicating that the start and end times each of the activities identified above occur and documentation that the requirements for each have been satisfied. (8/09)
65. The VOC control devices required by this permit for emissions from MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.

Controlled recovery systems identified in this permit shall be directed to an operating refinery process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

A. Dual Carbon Adsorption or Scrubber System (CAS).

- i. The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.
- ii. The CAS shall be sampled down stream on the first can and the concentration recorded at least once every hour of CAS run time to determine breakthrough of the VOC. The sampling frequency may be extended using either of the following methods:
  - a. CAS systems equipped with an upstream liquid scrubber may be sampled once every 12 hours of CAS run time to determine breakthrough.
  - b. Sampling frequency may be extended to up to 30 percent of the minimum potential saturation time for a new can of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.
  - c. The carbon sampling frequency may be extended to longer periods based on previous experience with carbon control of a MSS waste gas stream. The past experience must be with the same VOC, type of facility, and MSS activity. The basis for the sampling frequency shall be recorded. If breakthrough is monitored on the initial sample of the upstream can when the polishing can is put in place, a permit deviation shall be recorded.

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- iii. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 57.
- iv. Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background and 2% of the system inlet concentration. Monitoring must be done upstream of the carbon when demonstrating collection efficiency. When the condition of breakthrough of VOC from the initial saturation canister occurs, the waste gas flow shall be switched to the second canister and a fresh canister shall be placed as the new final polishing canister within twenty-four hours. In lieu of replacing canisters, the flow of waste gas may be discontinued until the canisters are switched. Sufficient new activated carbon canisters shall be maintained at the site to replace spent carbon canisters such that replacements can be done in the above specified time frame.
- v. Records of CAS monitoring shall include the following:
  - a. Sample time and date.
  - b. Monitoring results (ppmv).
  - c. Canister replacement log.
- vi. Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30% of the minimum potential saturation time. The permit holder shall maintain records for these systems, including the calculations performed to determine the saturation time. The time limit on carbon canister service shall be recorded and the expiration date attached to the carbon can.
- vii. Liquid scrubbers may be used upstream of carbon canisters to enhance VOC capture provided such systems are closed systems and the spent absorbing solution is discharged into a closed container, vessel, or system.

### B. Single Carbon Adsorption or Scrubber System

A single liquid scrubbing or single carbon adsorption system may be used as a sole control device if the requirements below are satisfied.

- i. The exhaust to atmosphere shall be continuously monitored with a CEM. The VOC concentration shall be recorded at least once every 15 minutes when waste gas is directed to the CAS or scrubber.
- ii. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 57 except 57.C.

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- iii. An alarm shall be installed such that an operator is alerted when outlet VOC concentration exceeds 100 ppmv above background. The MSS activity shall be stopped as soon as possible when the VOC concentration exceeds 100 ppmv above background and 2% of the system inlet concentration for more than one minute. Monitoring must be done upstream of the carbon when demonstrating collection efficiency. The date and time of all alarms and the actions taken shall be recorded.

### C. Thermal Oxidizer

- i. The thermal oxidizer firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.
- ii. The thermal oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency.

The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of  $\pm 0.75$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 2.5^\circ\text{C}$ .

- iii. As an alternative to Special Condition 65.C.i., the thermal oxidizer may be tested to confirm a minimum 99 wt% destruction efficiency. The results of the test will be used to determine the minimum operating temperature and residence time. Stack Test must have been performed within the last 12 months. Stack VOC concentrations and flow rates shall be measured in accordance with applicable United States Environmental Protection Agency (EPA) Reference Methods. A copy of the test report shall be maintained with the thermal oxidizer and a summary of the testing results shall be included with the emission calculations.
- iv. As an alternative to Special Condition 65.C.i-ii, the thermal oxidizer may be equipped with continuous VOC monitors (inlet and outlet). The VOC monitors shall be calibrated and maintained according to Special Condition No. 57, except 57.C. In order to demonstrate compliance with this requirement, inlet VOC and outlet VOC concentrations shall be measured and inlet and outlet VOC mass rates shall be calculated on an hourly basis to confirm a minimum 99 wt% destruction efficiency or an exhaust concentration not greater than 20 ppmv.

### D. Internal Combustion Engine

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- i. The internal combustion engine shall have a VOC destruction efficiency of at least 99 percent.
- ii. The engine must have been stack tested with butane to confirm the required destruction efficiency within the past 12 months. VOC shall be measured in accordance with the applicable United States Environmental Protection Agency (EPA) Reference Method during the stack test and the exhaust flow rate may be determined from measured fuel flow rate and measured oxygen concentration. A copy of the stack test report shall be maintained with the engine. There shall also be documentation of acceptable VOC emissions within the first 24-hours of operation for each MSS activity. Stain tube indicators specifically designed to measure VOC concentration shall be acceptable for this documentation, provided a hot air probe or equivalent device is used to prevent error due to high stack temperature, and three sets of concentration measurements are made and averaged. Portable VOC analyzers meeting the requirements of Special Condition 57 are also acceptable for this documentation.
- iii. The engine shall be operated with an oxygen sensor-based air-to-fuel ratio (AFR) controller. Documentation for each AFR controller that the manufacturer's or supplier's recommended maintenance has been performed, including replacement of the oxygen sensor as necessary for oxygen sensor-based controllers shall be maintained with the engine. The oxygen sensor shall be replaced at least quarterly in the absence of a specific written recommendation.
- iv. As an alternative to Special Condition 65.D.i-iii, the engine may be equipped with continuous VOC monitors (inlet and outlet). The VOC monitors shall be calibrated and maintained in accordance with Special Condition 57, except 57.C. In order to demonstrate compliance with this requirement, inlet VOC and outlet VOC shall be measured and inlet and outlet VOC mass rates shall be calculated on an hourly basis to confirm a minimum 99 wt% destruction efficiency or an exhaust concentration not greater than 20 ppmv.

### E. The plant flare system

All flares must follow the requirements outlined in Special Condition No. 28 and Special Condition No. 10 B.

### F. A closed loop refrigerated vapor recovery system

- i. The vapor recovery system shall be installed on the facility to be degassed using good engineering practice to ensure air contaminants are flushed from the facility through the refrigerated vapor condensers and back to the facility being degassed. The vapor recovery system and facility being degassed shall be enclosed except as necessary to insure structural integrity (such as roof vents on a floating roof tank).

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- ii. VOC concentration in vapor being circulated by the system shall be sampled and recorded at least once every 4 hours at the inlet of the condenser unit with an instrument meeting the requirements of Special Condition 57.
- iii. The quantity of liquid recovered from the tank vapors and the tank pressure shall be monitored and recorded each hour. The liquid recovered must increase with each reading and the tank pressure shall not exceed one inch water pressure while the system is operating.

66. The following requirements apply to capture systems for the plant flare system.

A. All components will be monitored per the requirements in Special Condition No. 14.

B. The control device shall not have a bypass or if there is a bypass for the control device, comply with either of the following requirements:

- i. Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
- ii. Once a month, inspect the valves, verifying the position of the valves and the condition of the car seals that prevent flow out the bypass.

These requirements do not apply to high point vent and low point drain valves. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when required to be in service per this permit.

C. If any of the above inspections is not satisfactory, the permit holder shall promptly take necessary corrective action. **(8/09)**

67. If spray guns are used to apply paint, they shall be airless, high volume low pressure (HVLP), or have the same or higher transfer efficiency as airless or HVLP spray guns. **(8/09)**

68. Emissions from all painting activities at this site must satisfy the criteria below. New compounds may also be added through the use of the procedure below.

A. Short-term (lb/hr) and annual (TPY) emissions shall be determined for each chemical in the paint as documented in the permit application. The calculated emission rate shall not exceed the maximum allowable emissions rate at any emission point.

B. The Effect Screening Level (ESL) for the material shall be obtained from the current TCEQ ESL list or by written request to the TCEQ Toxicology Section.

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- C. The total painting emissions of any compound must satisfy one of the following conditions:
- i. The total emission rate is less than 0.1 lb/hr and the ESL greater than or equal to 2 ug/m<sup>3</sup>; or
  - ii. The emission rate of the compound in pounds per hour is less than the ESL for the compound divided by 1000 ( $ER < ESL/1000$ ).
- D. The permit holder shall maintain records of the information below and the demonstrations in steps A through C above. The following documentation is required for each compound:
- i. Chemical name(s), composition, and chemical abstract registry number if available.
  - ii. Material Safety Data Sheet.
  - iii. Maximum concentration of the chemical in weight percent
  - iv. Paint usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated. **(8/09)**
69. No visible emissions shall leave the property due to painting or abrasive blasting. **(8/09)**
70. Black Beauty and Garnet Sand may be used for dry abrasive blasting. The permit holder may also use blast media that meet the criteria below:
- A. The media shall not contain asbestos or greater than 1.0 weight percent crystalline silica.
  - B. The weight fraction of any metal in the blast media with a short term effects screening level (ESL) less than 50 micrograms per cubic meter as identified in the most recently published TCEQ ESL list shall not exceed the  $ESL_{metal}/1000$ .
  - C. The MSDS for each media used shall be maintained on site.

Blasting media usage and the associated emissions shall be recorded each month and the rolling 12 month total emissions updated.

This special condition does not apply to wet blasting or dry abrasive blasting inside vessels/tanks/equipment. **(8/09)**

71. With the exception of the MAERT emission limits, these permit conditions become effective November 1, 2009. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining

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the quantity of air contaminants to be emitted shall be recorded. During this period, monitoring and recordkeeping shall satisfy the following requirements. The permit holder may maintain abbreviated records of emissions from Level 1 and 2 activities as allowed in Special Condition No. 55 rather than documenting all the information required below.

- A. The physical location at which emissions from the MSS activity occurred, including the emission point number and common name for the point at which the emissions were released into the atmosphere;
- B. The type of planned MSS activity and the reason for the planned activity;
- C. The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
- D. The start date and time of the MSS activity and its duration. **(8/09)**

Dated

Attachment 1

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List of Tanks without VOC Emissions

Tank No. 335TK0069	Tank No. 134TK0642	Tank No. 430TK0871
Tank No. 335TK0070	Tank No. 134TK0643	Tank No. 136TK0901
Tank No. 138TK0094	Tank No. 137TK0645	Tank No. 136TK0902
Tank No. 117TK0144	Tank No. 335TK0647	Tank No. 340TK0904
Tank No. 138TK0252	Tank No. 535TK0648	Tank No. 339TK0905
Tank No. 430TK0317	Tank No. 134TK0676	Tank No. 430TK0906
Tank No. 233TK0430	Tank No. 137TK0678	Tank No. 430TK0907
Tank No. 136TK0438	Tank No. 138TK0713	Tank No. 430TK0908
Tank No. 136TK0439	Tank No. 138TK0714	Tank No. 430TK0909
Tank No. 136TK0440	Tank No. 432TK0724	Tank No. 341TK0910
Tank No. 137TK0468	Tank No. 336TK0744	Tank No. 341TK0838
Tank No. 137TK0501	Tank No. 117TK0758	Tank No. 234TK0001
Tank No. 137TK0509	Tank No. 432TK0820	Tank No. 435D0007
Tank No. 632TK0585	Tank No. 535TK0824	Tank No. 439D2008
Tank No. 137TK0586	Tank No. 430TK0828	Tank No. 732TK0016
Tank No. 136TK0587	Tank No. 430TK0829	Tank No. 732TK0032
Tank No. 632TK0588	Tank No. 134TK0830	Tank No. 732TK0064
Tank No. 136TK0589	Tank No. 134TK0831	Tank No. 732TK0066
Tank No. 136TK0590	Tank No. 134TK0832	Tank No. 736TK1101
Tank No. 136TK0591	Tank No. 134TK0833	Tank No. 736TK0101
Tank No. 134TK0622	Tank No. 138TK0845	Tank No. 737TK0001
Tank No. 134TK0623	Tank No. 138TK0846	Tank No. 137TK0457A
Tank No. 134TK0624	Tank No. 138TK0847	Tank No. 137TK0457B
Tank No. 134TK0625	Tank No. 535TK0848	Tank No. 137TK0458
Tank No. 134TK0626	Tank No. 430TK0858	Tank No. 137TK0459
Tank No. 134TK0627	Tank No. 430TK0859	
	Tank No. 430TK0870	

Dated

Attachment 2

Flexible Permit Numbers 2167 and PSDTX985

Heaters/Boilers with Firing Rates  $\geq$  100 MMBtu/hr

<u>EPN</u>	<u>Source Name</u>
537F0001	Crude Heater No. 1
537F0002	Vacuum Heater No. 1
737F0001	Heater F0001
737F0002	Heater F0002
736F0101A	736 Coker E. Heater H-101A
736F0101B	736 Coker W. Heater H-101B
934F0002	Orthoxylene II Heater
735F0010	735 Reactor Charge Heater
932F0001	Isom II W. Reactor Feed Heater
536F0001A	Atmospheric Tower Heater
536F0001B	Atmospheric Tower Heater
536F0002	Vacuum Tower Heater
733F0005	Heater B5 – 733 LEF Reboiler
637F0001	637 Reactor Feed Heater

Dated

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Flexible Permit Numbers 2167 and PSDTX985

This table lists the maximum allowable emission caps and individual emission limitations for all sources of air contaminants on the applicant's property covered by this permit. The emissions rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

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SOURCES NOT INCLUDED IN EMISSION CAPS - INDIVIDUAL EMISSION LIMITATIONS .....Page 12

EMISSION CAPS

Air Contaminant Name (3)	Emission Rates*	
	lb/hr	TPY**
NO <sub>x</sub>	474.14	1743.86
CO	1273.71	2457.74
SO <sub>2</sub>	1461.97	2158.63
PM/PM <sub>10</sub>	212.74	620.17
VOC	2718.12	2583.50
Benzene	138.54	39.74
Ammonia	17.89	70.60
Hydrogen Sulfide	20.75	21.62
<u>MSS SUB CAPS</u>		
NO <sub>x</sub>	38.98	8.36
CO	35.66	5.63
SO <sub>2</sub>	51.74	8.14
PM	54.08	2.09
PM <sub>10</sub>	34.55	1.25
VOC	918.43	38.51
Benzene	115.03	5.70
Hydrogen Sulfide	0.82	0.04
Hydrogen Chloride	0.29	0.01

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
117TK0071	Fixed-Roof Tank No. 117TK0071					×	×		×
117TK0073	Fixed-Roof Tank No. 117TK0073					×	×		×
117TK0137	Fixed-Roof Tank No. 117TK0137					×	×		×
117TK0138	Fixed-Roof Tank No. 117TK0138					×	×		×
117TK0139	Fixed-Roof Tank No. 117TK0139					×	×		×
117TK0140	Fixed-Roof Tank No. 117TK0140					×	×		×
117TK0759	Fixed-Roof Tank No. 117TK0759					×	×		×
117TK0760	Fixed-Roof Tank No. 117TK0760					×	×		×
117TK0762	Fixed-Roof Tank No. 117TK0762					×	×		×
117TK0763	Fixed-Roof Tank No. 117TK0763					×	×		×
117TK0764	Fixed-Roof Tank No. 117TK0764					×	×		×
117TK0778	Fixed-Roof Tank No. 117TK0778					×	×		×
117TK0779	Fixed-Roof Tank No. 117TK0779					×	×		×
117TK0780	Fixed-Roof Tank No. 117TK0780					×	×		×
117TK0781	Fixed-Roof Tank No. 117TK0781					×	×		×
117TK0782	Fixed-Roof Tank No. 117TK0782					×	×		×
117TK0783	Fixed-Roof Tank No. 117TK0783					×	×		×
130-LD-TT, 130-LD-TC	Tank Truck/Railcar Loading Losses					×	×		
130-LD-TT, 130-LD-TC	Sulfur Tank Truck Loading								×
133TK0866	Fixed Roof Tank No. 133TK0866 (Hz)					×	×		×
133TK0876	IFR Tank No. 133TK0876					×	×		×
133TK0878	IFR Tank No. 133TK0878					×	×		×
133TK0879	IFR Tank No. 133TK0879					×	×		×
133TK0880	IFR Tank No. 133TK0880					×	×		×
133TK0881	IFR Tank No. 133TK0881					×	×		×
133TK0882	IFR Tank No. 133TK0882					×	×		×
133TK0883	IFR Tank No. 133TK0883					×	×		×
133TK0884	IFR Tank No. 133TK0884					×	×		×
133TK0885	EFR Tank No. 133TK0885					×	×		×
133TK0886	EFR Tank No. 133TK0886					×	×		×
133TK0887	EFR Tank No. 133TK0887					×	×		×
133TK0890	EFR Tank No. 133TK0890					×	×		×
133TK0894	Fixed-Roof Tank No. 133TK0894					×	×		×
133TK0896	Fixed-Roof Tank No. 133TK0896					×	×		×
133TK0897	Fixed-Roof Tank No. 133TK0897					×	×		×
133TK0898	Fixed-Roof Tank No. 133TK0898					×	×		×

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
134TK0011	EFR Tank No. 134TK0011					×	×		×
134TK0012	Fixed-Roof Tank No. 134TK0012					×	×		×
134TK0017	EFR Tank No. 134TK0017					×	×		×
134TK0601	Fixed-Roof Tank No. 134TK0601					×	×		×
134TK0604	Fixed-Roof Tank No. 134TK0604					×	×		×
134TK0609	Fixed-Roof Tank No. 134TK0609					×	×		×
134TK0613	IFR Tank No. 134TK0613					×	×		×
134TK0618	EFR Tank No. 134TK0618					×	×		×
134TK0619	EFR Tank No. 134TK0619					×	×		×
134TK0688	IFR Tank No. 134TK0688					×	×		×
134TK0774	EFR Tank No. 134TK0774					×	×		×
134TK0775	EFR Tank No. 134TK0775					×	×		×
134TK0776	EFR Tank No. 134TK0776					×	×		×
134TK0777	EFR Tank No. 134TK0777					×	×		×
134TK0801	Fixed-Roof Tank No. 134TK0801					×	×		×
134TK0802	EFR Tank No. 134TK0802					×	×		×
134TK0813	Fixed-Roof Tank No. 134TK0813					×	×		×
134TK0814	Fixed-Roof Tank No. 134TK0814					×	×		×
134TK0834	IFR Tank No. 134TK0834					×	×		×
134TK0850	EFR Tank No. 134TK0850					×	×		×
134TK0867	IFR Tank No. 134TK0867					×	×		×
134TK0891	Fixed-Roof Tank No. 134TK0891					×	×		×
134TK0911	Fixed-Roof Tank No. 134TK0911					×	×		×
134TK0912	Fixed-Roof Tank No. 134TK0912					×	×		×
135TK0176	Fixed-Roof Tank No. 135TK0176					×	×		×
135TK0560	EFR Tank No. 135TK0560					×	×		×
135TK0561	EFR Tank No. 135TK0561					×	×		×
135TK0562	EFR Tank No. 135TK0562					×	×		×
135TK0563	EFR Tank No. 135TK0563					×	×		×
135TK0564	EFR Tank No. 135TK0564					×	×		×
135TK0565	EFR Tank No. 135TK0565					×	×		×
135TK0570	EFR Tank No. 135TK0570					×	×		×
135TK0571	Fixed-Roof Tank No. 135TK0571					×	×		×
135TK0572	Fixed-Roof Tank No. 135TK0572					×	×		×
135TK0573	EFR Tank No. 135TK0573					×	×		×
135TK0574	Fixed-Roof Tank No. 135TK0574					×	×		×
135TK0576	EFR Tank No. 135TK0576					×	×		×
135TK0577	EFR Tank No. 135TK0577					×	×		×
135TK0578	EFR Tank No. 135TK0578					×	×		×

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
135TK0579	EFR Tank No. 135TK0579					×	×		×
135TK0806	EFR Tank No. 135TK0806					×	×		×
135TK0807	EFR Tank No. 135TK0807					×	×		×
135TK0808	EFR Tank No. 135TK0808					×	×		×
135TK0809	EFR Tank No. 135TK0809					×	×		×
135TK0836	Fixed-Roof Tank No. 135TK0836					×	×		×
135TK0839	Fixed-Roof Tank No. 135TK0839					×	×		×
135TK0841	Fixed-Roof Tank No. 135TK0841					×	×		×
135TK0842	Fixed-Roof Tank No. 135TK0842					×	×		×
135TK0843	Fixed-Roof Tank No. 135TK0843					×	×		×
136TK0030A	IFR Tank No. 136TK0030A					×	×		×
136TK0100	IFR Tank No. 136TK0100					×	×		×
136TK0441	EFR Tank No. 136TK0441					×	×		×
136TK0442	EFR Tank No. 136TK0442					×	×		×
136TK0558	EFR Tank No. 136TK0558					×	×		×
136TK0559	EFR Tank No. 136TK0559					×	×		×
136TK0582	EFR Tank No. 136TK0582					×	×		×
136TK0583	EFR Tank No. 136TK0583					×	×		×
136TK0584	EFR Tank No. 136TK0584					×	×		×
136TK0594	EFR Tank No. 136TK0594					×	×		×
136TK0597A	EFR Tank No. 136TK0597A					×	×		×
136TK0600	EFR Tank No. 136TK0600					×	×		×
136TK0674	EFR Tank No. 136TK0674					×	×		×
137TK0402	EFR Tank No. 137TK0402					×	×		×
137TK0410	Fixed-Roof Tank No. 137TK0410					×	×		×
137TK0412	IFR Tank No. 137TK0412					×	×		×
137TK0414	EFR Tank No. 137TK0414					×	×		×
137TK0416	EFR Tank No. 137TK0416					×	×		×
137TK0418	EFR Tank No. 137TK0418					×	×		×
137TK0420	EFR Tank No. 137TK0420					×	×		×
137TK0422	Fixed-Roof Tank No. 137TK0422					×	×		×
137TK0423	EFR Tank No. 137TK0423					×	×		×
137TK0424	EFR Tank No. 137TK0424					×	×		×
137TK0425	EFR Tank No. 137TK0425					×	×		×
137TK0445	Fixed-Roof Tank No. 137TK0445					×	×		×
137TK0446	Fixed-Roof Tank No. 137TK0446					×	×		×
137TK0541	Fixed-Roof Tank No. 137TK0541					×	×		×
137TK0543	Fixed-Roof Tank No. 137TK0543					×	×		×
137TK0553	Fixed-Roof Tank No. 137TK0553					×	×		×

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
137TK0554	EFR Tank No. 137TK0554					x	x		x
137TK0555	EFR Tank No. 137TK0555					x	x		x
137TK0580	EFR Tank No. 137TK0580					x	x		x
137TK0581	EFR Tank No. 137TK0581					x	x		x
137TK0667	IFR Tank No. 137TK0667					x	x		x
137TK0668	IFR Tank No. 137TK0668					x	x		x
137TK0687	IFR Tank No. 137TK0687					x	x		x
137TK0691	IFR Tank No. 137TK0691					x	x		x
137TK0692	IFR Tank No. 137TK0692					x	x		x
137TK0793	EFR Tank No. 137TK0793					x	x		x
137TK0794	EFR Tank No. 137TK0794					x	x		x
137TK0797	EFR Tank No. 137TK0797					x	x		x
137TK0798	EFR Tank No. 137TK0798					x	x		x
137TK0799	EFR Tank No. 137TK0799					x	x		x
137TK0800	EFR Tank No. 137TK0800					x	x		x
137TK0803	EFR Tank No. 137TK0803					x	x		x
137TK0804	EFR Tank No. 137TK0804					x	x		x
137TK0805	EFR Tank No. 137TK0805					x	x		x
137TK0815	IFR Tank No. 137TK0815					x	x		x
137TK0816	IFR Tank No. 137TK0816					x	x		x
137TK0821	IFR Tank No. 137TK0821					x	x		x
137TK0822	IFR Tank No. 137TK0822					x	x		x
137TK0861	IFR Tank No. 137TK0861					x	x		x
137TK0865	IFR Tank No. 137TK0865					x	x		x
137TK0873	IFR Tank No. 137TK0873					x	x		x
137TK0874	IFR Tank No. 137TK0874					x	x		x
137TK0875	IFR Tank No. 137TK0875					x	x		x
137TK0920	IFR Tank No. 137TK0920					x	x		x
138TK0001	Fixed-Roof Tank No. 138TK0001					x	x		x
138TK0006	EFR Tank No. 138TK0006					x	x		x
138TK0026	EFR Tank No. 138TK0026					x	x		x
138TK0027	Fixed-Roof Tank No. 138TK0027					x	x		x
138TK0078	Fixed-Roof Tank No. 138TK0078					x	x		x
138TK0091	Fixed-Roof Tank No. 138TK0091					x	x		x
138TK0092	Fixed-Roof Tank No. 138TK0092					x	x		x
138TK0095	Fixed-Roof Tank No. 138TK0095					x	x		x
138TK0096	Fixed-Roof Tank No. 138TK0096					x	x		x
138TK0097	Fixed-Roof Tank No. 138TK0097					x	x		x
138TK0098	Fixed-Roof Tank No. 138TK0098					x	x		x

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
138TK0099	Fixed-Roof Tank No. 138TK0099					x	x		x
138TK0110	Fixed-Roof Tank No. 138TK0110					x	x		x
138TK0111	Fixed-Roof Tank No. 138TK0111					x	x		x
138TK0112	Fixed-Roof Tank No. 138TK0112					x	x		x
138TK0113	Fixed-Roof Tank No. 138TK0113					x	x		x
138TK0114	Fixed-Roof Tank No. 138TK0114					x	x		x
138TK0115	Fixed-Roof Tank No. 138TK0115					x	x		x
138TK0116	Fixed-Roof Tank No. 138TK0116					x	x		x
138TK0117	Fixed-Roof Tank No. 138TK0117					x	x		x
138TK0118	Fixed-Roof Tank No. 138TK0118					x	x		x
138TK0119	Fixed-Roof Tank No. 138TK0119					x	x		x
138TK0163	Fixed-Roof Tank No. 138TK0163					x	x		x
138TK0164	Fixed-Roof Tank No. 138TK0164					x	x		x
138TK0165	Fixed-Roof Tank No. 138TK0165					x	x		x
138TK0166	Fixed-Roof Tank No. 138TK0166					x	x		x
138TK0167	Fixed-Roof Tank No. 138TK0167					x	x		x
138TK0168	Fixed-Roof Tank No. 138TK0168					x	x		x
138TK0169	Fixed-Roof Tank No. 138TK0169					x	x		x
138TK0170	Fixed-Roof Tank No. 138TK0170					x	x		x
138TK0171	Fixed-Roof Tank No. 138TK0171					x	x		x
138TK0172	Fixed-Roof Tank No. 138TK0172					x	x		x
138TK0180	Fixed-Roof Tank No. 138TK0180					x	x		x
138TK0181	Fixed-Roof Tank No. 138TK0181					x	x		x
138TK0182	Fixed-Roof Tank No. 138TK0182					x	x		x
138TK0183	Fixed-Roof Tank No. 138TK0183					x	x		x
138TK0193	Fixed-Roof Tank No. 138TK0193					x	x		x
138TK0194	Fixed-Roof Tank No. 138TK0194					x	x		x
138TK0195	Fixed-Roof Tank No. 138TK0195					x	x		x
138TK0200	Fixed-Roof Tank No. 138TK0200					x	x		x
138TK0201	Fixed-Roof Tank No. 138TK0201					x	x		x
138TK0202	Fixed-Roof Tank No. 138TK0202					x	x		x
138TK0203	Fixed-Roof Tank No. 138TK0203					x	x		x
138TK0204	Fixed-Roof Tank No. 138TK0204					x	x		x
138TK0244	Fixed-Roof Tank No. 138TK0244					x	x		x
138TK0263	Fixed-Roof Tank No. 138TK0263					x	x		x
138TK0264	Fixed-Roof Tank No. 138TK0264					x	x		x
138TK0265	Fixed-Roof Tank No. 138TK0265					x	x		x
138TK0266	Fixed-Roof Tank No. 138TK0266					x	x		x
138TK0267	Fixed-Roof Tank No. 138TK0267					x	x		x

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
138TK0269	Fixed-Roof Tank No. 138TK0269					×	×		×
138TK0270	Fixed-Roof Tank No. 138TK0270					×	×		×
138TK0271	Fixed-Roof Tank No. 138TK0271					×	×		×
138TK0272	Fixed-Roof Tank No. 138TK0272					×	×		×
138TK0273	Fixed-Roof Tank No. 138TK0273					×	×		×
138TK0274	Fixed-Roof Tank No. 138TK0274					×	×		×
138TK0275	Fixed-Roof Tank No. 138TK0275					×	×		×
138TK0276	Fixed-Roof Tank No. 138TK0276					×	×		×
138TK0282	Fixed-Roof Tank No. 138TK0282					×	×		×
138TK0283	Fixed-Roof Tank No. 138TK0283					×	×		×
138TK0633	Fixed-Roof Tank No. 138TK0633					×	×		×
138TK0649	Fixed-Roof Tank No. 138TK0649					×	×		×
138TK0650	Fixed-Roof Tank No. 138TK0650					×	×		×
138TK0651	Fixed-Roof Tank No. 138TK0651					×	×		×
138TK0652	Fixed-Roof Tank No. 138TK0652					×	×		×
138TK0653	Fixed-Roof Tank No. 138TK0653					×	×		×
138TK0658	Fixed-Roof Tank No. 138TK0658					×	×		×
138TK0659	Fixed-Roof Tank No. 138TK0659					×	×		×
138TK0660	Fixed-Roof Tank No. 138TK0660					×	×		×
138TK0661	Fixed-Roof Tank No. 138TK0661					×	×		×
138TK0662	Fixed-Roof Tank No. 138TK0662					×	×		×
138TK0663	Fixed-Roof Tank No. 138TK0663					×	×		×
138TK0664	Fixed-Roof Tank No. 138TK0664					×	×		×
138TK0665	Fixed-Roof Tank No. 138TK0665					×	×		×
138TK0666	Fixed-Roof Tank No. 138TK0666					×	×		×
138TK0675	Fixed-Roof Tank No. 138TK0675					×	×		×
138TK0697	Fixed-Roof Tank No. 138TK0697					×	×		×
138TK0698	Fixed-Roof Tank No. 138TK0698					×	×		×
138TK0699	Fixed-Roof Tank No. 138TK0699					×	×		×
138TK0726	Fixed-Roof Tank No. 138TK0726					×	×		×
138TK0729	Fixed-Roof Tank No. 138TK0729					×	×		×
138TK0732	Fixed-Roof Tank No. 138TK0732					×	×		×
138TK0767	Fixed-Roof Tank No. 138TK0767					×	×		×
138TK0768	Fixed-Roof Tank No. 138TK0768					×	×		×
138TK0769	Fixed-Roof Tank No. 138TK0769					×	×		×
138TK0771	Fixed-Roof Tank No. 138TK0771					×	×		×
138TK0772	Fixed-Roof Tank No. 138TK0772					×	×		×
138TK0812	Fixed-Roof Tank No. 138TK0812					×	×		×
138TK0851	Fixed-Roof Tank No. 138TK0851					×	×		×

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
138TK0856	Fixed-Roof Tank No. 138TK0856					×	×		×
138TK0857	Fixed-Roof Tank No. 138TK0857					×	×		×
138TK0862	Fixed-Roof Tank No. 138TK0862					×	×		×
138TK0863	Fixed-Roof Tank No. 138TK0863					×	×		×
138TK0892	EFR Tank No. 138TK0892					×	×		×
138TK0893	EFR Tank No. 138TK0893					×	×		×
138TK7601	Fixed-Roof Tank No. 138TK7601					×	×		×
139-LD-A, 139-LD-B, 139-LD-C	Marine Loading Losses					×	×		
139-LD-D	Sulfur Barge Loading								×
139SP1700A	Marine Vapor Combustor	×	×	×	×	×	×		
233CT3701	BRU Cooling Tower					×	×		
338K0001	No. 1 Plant Flare	×	×	×		×	×	×	×
338K0002	No. 2 Plant Flare	×	×	×		×	×	×	×
338K0005	Houston Street Flare	×	×	×		×	×	×	×
338K0007	No. 3 Plant Flare	×	×	×		×	×	×	×
338K0008	No. 4 Plant Flare	×	×	×		×	×	×	×
343CT3701	ARU Cooling Tower					×	×		
430CT3701	SRU Cooling Tower (439 TGU)					×	×		
430CT3791	SRU Cooling Tower (439 Claus)					×	×		
430TK0817	IFR Tank No. 430TK0817					×	×		×
430TK0860	Fixed-Roof Tank No. 430TK0860					×	×		×
430TK0870	Fixed-Roof Tank No. 430TK0870					×	×		×
430TK0871	Fixed-Roof Tank No. 430TK0871					×	×		×
430TK0872	IFR Tank No. 430TK0872					×	×		×
430TK4001	IFR Tank No. 430TK4001					×	×		×
430TK4002	IFR Tank No. 430TK4002					×	×		×
432-SEWER	Wastewater Unit Fugitives					×	×		
432TK0005	API Separator					×	×		
432TK0008	GCWDA Lift Station					×	×		
432TK0810	EFR Tank No. 432TK0810					×	×		×
432TK0811	EFR Tank No. 432TK0811					×	×		×
432TK0818	EFR Tank No. 432TK0818					×	×		×
432TK0819	EFR Tank No. 432TK0819					×	×		×
432TK0835	EFR Tank No. 432TK0835					×	×		×
432TK0838	EFR Tank No. 432TK0838					×	×		×
432TK0854	IFR Tank No. 432TK0854					×	×		×
432TK0855	IFR Tank No. 432TK0855					×	×		×





## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Emission Point No. (1)	Source Name (2)	Sources Included in Emission Caps for Identified Air Contaminant (3)							
		NO <sub>x</sub>	CO	SO <sub>2</sub>	PM	VOC	BZ	NH <sub>3</sub>	H <sub>2</sub> S
930TK0784	Fixed-Roof Tank No. 930TK0784					×	×		×
930TK0786	Fixed-Roof Tank No. 930TK0786					×	×		×
930TK0787	Fixed-Roof Tank No. 930TK0787					×	×		×
930TK0788	Fixed-Roof Tank No. 930TK0788					×	×		×
930TK0789	Fixed-Roof Tank No. 930TK0789					×	×		×
930TK0791	EFR Tank No. 930TK0791					×	×		×
932F0001	Isom II West Reactor Feed Heater	×	×	×	×	×	×		
932F0002	Isom II Combination Splitter Heater	×	×	×	×	×	×		
932F0005	Isom II East Reactor Feed Heater	×	×	×	×	×	×		
933F0001	Orthoxylene I Heater	×	×	×	×	×	×		
933TK0689	IFR Tank No. 933TK0689					×	×		×
933TK0690	IFR Tank No. 933TK0690					×	×		×
934F0002	Orthoxylene II Heater	×	×	×	×	×	×	×	
934F0003	Isom II Xylene Rerun Tower Heater	×	×	×	×	×	×		
934TK0685	IFR Tank No. 934TK0685					×	×		×
934TK0686	IFR Tank No. 934TK0686					×	×		×
935TK0790	EFR Tank No. 935TK0790					×	×		×
935TK0792	Fixed-Roof Tank No. 935TK0792					×	×		×
939TK0693	IFR Tank No. 939TK0693					×	×		×
939TK0694	IFR Tank No. 939TK0694					×	×		×
940TK0669	IFR Tank No. 940TK0669					×	×		×
940TK0670	IFR Tank No. 940TK0670					×	×		×
940TK0795	EFR Tank No. 940TK0795					×	×		×
940TK0796	EFR Tank No. 940TK0796					×	×		×
FUGITIVES	Process Fugitives (4)					×	×	×	×
P-FL-5	No. 5 Plant Flare	×	×	×		×	×	×	×

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

SOURCES NOT INCLUDED IN EMISSION CAPS - INDIVIDUAL EMISSION LIMITATIONS

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
430D3702	Sulfuric Acid Storage Tank	H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
736D3703	Sulfuric Acid Storage Tank	H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
430-UNIT	Sulfur Plant Fugitives (4)	COS	<0.01	<0.01
430-UNIT	Sulfur Plant Fugitives (4) Unit Fugitives (4)	CS <sub>2</sub>	<0.01	<0.01
732B0002	FCCU CO Boiler Wet Gas Scrubber	Antimony	0.02	0.10

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) NO<sub>x</sub> - nitrogen oxides  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>  
PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
H<sub>2</sub>SO<sub>4</sub>- sulfuric acid  
COS - carbon sulfide  
CS<sub>2</sub> - carbon disulfide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) H<sub>2</sub>S emissions from crude oil are an estimate only and should not be considered as a maximum allowable emission rate. However, at no time shall the emissions cause a nuisance condition.

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

8,760 Hrs/year

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

\*\* Compliance with annual emission caps and annual individual emission limitations is based on a rolling 12-month period. Compliance with emission caps during calendar years in which the cap changes shall be determined accordingly.

Dated

## Permit Renewal & Amendment Source Analysis & Technical Review

Company	Houston Refining- LP	Permit Number	2167
City	Houston	Project Numbers	140155 and 140153
County	Harris	Account Number	HG-0048-L
Project Types	Renewal and Amendment	Regulated Entity Number	RN100218130
Project Reviewer	Mr. John Barrientez	Customer Reference Number	CN601313083
Site Name	Houston Refinery		

### Project Overview

Houston Refining has applied for an amendment/renewal application. The primary purpose of the amendment is to:

- Update calculations for currently-permitted sources to reflect the latest calculation methodologies.
- Update source EPN names to match the site's title V permit and Emission Inventories.
- Incorporate Several PBR's.
- Update SO2 and PM/PM10 emissions factors for MVC.
- Update cooling water circulation rates.
- Update marine vapor combustor performance based on actual test data.
- Implement 28 MID fugitive monitoring program for components previously under 28 VHP.
- Improve fittings for numerous external floating roof storage tanks.
- Remove shutdown and demolished sources from the permit.
- Adjust benzene emission factor for heater and boiler emissions to match test data.
- Remove the ammonia and ammonium sulfate byproduct emissions for several sources that are no longer expected to be retrofitted with Selective Catalytic Reduction.

The following requests were withdrawn by Houston Refining:

- Create emission caps for H2S. H2S cap was already added during MSS amendment review.
- Add allowable H2S emissions to several storage tanks.
- Add allowable NH3 emissions to flares.

The following are the reductions associated with this project. There is an overall decrease associated with this project for both short term and annual emissions. The following are the decreases in the flexible caps:

Pollutant	Pound per Hour Decrease	Tons Per Year Decrease
NOx	76.3	99.7
CO	138.7	281.0
SO2	86.0	56.4
PM	35.4	91.7
VOC	732.3	941.1
Benzene	127.0	17.9
NH3	20.9	97.4
H2S	.2	1.4

### Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:

October 9, 2009

Compliance period:

August 7, 2003 to August 7, 2008

Site rating & classification:

13.60

Company rating & classification:

13.60

If the rating is 40<RATING<45, what was the outcome, if any, based on the findings in the formal report:

Not needed

Has the permit changed on the basis of the compliance history or

No

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rating?

**Public Notice Information - 30 TAC Chapter 39 Rules**

Rule Citation	Requirement	Renewal	Amendment
39.403	Is Public Notice Required?	Yes	No
	If no, give reason:	N/A	No emission increase
	Date Application Received:	August 7, 2008	August 7, 2008
	Date Administratively Complete:	August 22, 2008	August 22, 2008
	Small Business Source?		No
	Date Leg Letters mailed:	August 22, 2008	N/A
39.603	Date Published:	September 2, 2008	N/A
	Publication Name:	Houston Chronicle	N/A
	Pollutants:	NOx, CO,SO2, PM, Ammonia, H2S, VOC	N/A
	Date Affidavits/Copies Received:	October 6, 2008	N/A
	Is bilingual notice required?	Yes	N/A
	Language:	Spanish	N/A
	Date Published:	September 3, 2008	N/A
	Publication Name:	La Voz	N/A
	Date Affidavits/Copies Received:	October 6, 2008	N/A
	Date Certification of Sign Posting / Application Availability Received:	September 25, 2008	N/A
	39.604	Public Comments Received?	Yes
Hearing Requested?		Yes	N/A
Meeting Request?		Yes	N/A
Date Meeting Held:		(Informational Meeting) January 22, 2009	N/A
Date Response to Comments sent to OCC:		December 16, 2008	N/A
Request(s) withdrawn?		No	N/A
Date Withdrawn:		N/A	N/A
Consideration of Comments:			N/A
Is 2nd Public Notice required?	No	N/A	
39.419	If no, give reason:	No second notice required for no increase renewal.	N/A
39.421	Request for Reconsideration Received?	No	N/A
	Final Action:	Will go to Commissioner's agenda	N/A
	Are letters Enclosed?	Yes	N/A

**Renewal Requirements - 30 TAC Chapter 116 Rules**

Rule Citation	Requirement	
116.315(a)	Date of permit expiration:	February 3, 2009
116.310	Date written notice of review was mailed:	January 16, 2008

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<b>Rule Citation</b>	<b>Requirement</b>	
116.315(a)	Date application for Renewal (PI-1R) received:	<b>August 7, 2008</b>
116.311(a)(1)	Do dockside vessel emissions associated with the facility comply with all regulations?	<b>No dockside emissions associated with this action</b>
116.311(a)(2)	Is the facility being operated in accordance with all requirements and conditions of the existing permit, including representations in the application for permit to construct and subsequent amendments, and any previously granted renewal, unless otherwise authorized for a qualified facility? If no, explain:	<b>Yes</b>
116.311(a)(3)	Subject to NSPS? Subparts <b>A, J, K, Ka, Kb, and QQQ</b>	<b>Yes</b>
116.311(a)(4)	Subject to NESHAPS? Subparts <b>A, J, V, Y, BB and FF.</b>	<b>Yes</b>
116.311(a)(5)	Subject to NESHAPS (MACT) for source categories? Subparts <b>A, F, G, H, Y and CC.</b>	<b>Yes</b>
116.311(a)(6)	Does this project require case-by-case MACT?	<b>No</b>
116.311(b)	Was there a condition of air pollution that had to be addressed during this project review? If yes, explain:	<b>No</b>
116.314(a)	Does the facility meet all permit renewal requirements?	<b>Yes</b>
116.313	Permit Renewal Fee: \$ <b>10,000</b> Fee certification: Applicable Outstanding Fees:	<b>August 11, 2008</b> <b>No</b>

**Amendment Requirements - 30 TAC Chapter 116 Rules**

<b>Rule Citation</b>	<b>Requirement</b>	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	<b>Yes</b>
116.111(a)(2)(A)(i)	Are emissions from this facility expected to comply with all TCEQ air quality Rules & Regulations, and the intent of the Texas Clean Air Act?	<b>Yes</b>
116.111(a)(2)(B)	Emissions will be measured using the following method: Comments on emission verification:	<b>SC #'s 6,7,8 and 9 for FCCU wet gas scrubbers, tail gas thermal oxidizers, and all heaters and boilers greater than 100 MM BTU/hr in size.</b>
116.111(a)(2)(D)	Subject to NSPS? Subparts <b>A, J, K, Ka, Kb, VV, GGG, and QQQ</b>	<b>Yes</b>
116.111(a)(2)(E)	Subject to NESHAP? Subparts <b>A, J, V, Y, BB and FF.</b>	<b>Yes</b>
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories? Subparts <b>A, F, G, H, Y and CC.</b>	<b>Yes</b>
116.111(a)(2)(H)	<b>Nonattainment review applicability: No</b> No modification with respect to this renewal/amendment. All emission rates are decreasing.	
116.111(a)(2)(I)	<b>PSD review applicability: No</b> No modification with respect to this renewal/amendment. All emission rates are decreasing.	
116.111(a)(2)(L)	Is Mass Emissions Cap and Trade applicable to the new or modified facilities? If yes, did the proposed facility, group of facilities, or account obtain allowances to operate:	<b>No new or modified facilities.</b>
116.140 - 141	Permit Fee: \$ <b>900</b> Fee certification:	<b>August 11, 2008</b>

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**Title V Applicability - 30 TAC Chapter 122 Rules**

<b>Rule Citation</b>	<b>Requirement</b>
122.10(13)	Title V applicability: Yes
122.602	Periodic Monitoring (PM) applicability: yes, already covered in Title V permit.
122.604	Compliance Assurance Monitoring (CAM) applicability: yes, already covered in their title V permit.

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**Request for Comments**

Received From	Program/Area Name	Reviewed By	Comments
Region:	12	Sharareh Rafati	O.K.
City:	Houston	Isaac Desouza	Several Comments see below
County:	Harris	no comment	

**Legal:**

Comment resolution and/or unresolved issues:

City of Houston had a number of comments, most of which were also made in its comment letter dated 09/29/08. The following are the comments made by the city with an explanation by the permit reviewer in italics:

City commented that Houston refining has a poor compliance history. *A compliance history was performed for this facility and it was rated as "average".*

City commented that benzene emissions near and downwind from Houston Refining are too high and require verification; that this refinery emits more benzene into the air than any other refinery in the nation; that the ambient concentrations of benzene at monitors near the refinery exceed the EPA's one in a million cancer risk threshold; benzene in this area is in a TCEQ Air Pollutant Watch List. *There will be benzene emissions reductions associated with this project as detailed in the project overview. These comments are addressed in the RTC.*

City commented that there were questionable emissions representations. City commented that the permit should require verification of emissions representations from Coker Units, Flares and Fugitives, Heaters, Boilers, Storage Tanks, Cooling Towers, wastewater systems and the Fluid Catalytic Cracking Unit. *Proper TCEQ factors were used in deriving emissions.*

City commented that the draft does not include emission representations or controls for VOC and benzene from the delayed Coker Units. *The controls in place are considered RACT for Coker Units, no visible emissions and coke shall maintain at least 8% moisture.*

City commented that the permit does not reflect benzene emissions from flares. *Houston Refining has stated that HRVOC monitors indicate no measurable amount of benzene from the flares.*

City commented that fugitive benzene emissions are too low and not explained. *Correct fugitive factors are used and benzene concentrations are based on Houston Refining's lab test data.*

City commented that Houston Refining did not account for heaters and boilers using refinery fuel gas. *In AP-42 only a natural gas factor is provided and that has been accepted by TCEQ.*

City commented that benzene emissions from tanks are not reflected accurately. *According to the permit application, there are benzene emissions quantified and represented in the application.*

City commented that low benzene to VOC ratios were utilized for cooling tower emissions. *Houston Refining performs monthly sampling for VOC for their cooling towers and benzene concentrations are based on testing performed during sampling. This has been accepted by TCEQ as properly estimating benzene emissions.*

City commented that benzene emissions are too low for wastewater emissions. *Special Condition No. 10 G specifies how wastewater emissions are to be estimated. Estimated VOC concentrations are used to estimate Benzene levels. Also, the wastewater system is subject to MACT CC.*

City commented that FCCU VOC and benzene emissions are not represented. *According to Houston Refining there is not a measurable amount of benzene coming from the FCCU wet gas scrubber stack. Measured VOC emission estimates are used for VOC estimates. In addition, The FCCU does not have an individual limit. It is part of the VOC flex cap.*

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City commented on MSS conditions which were put in during MSS amendment review that was issued in August 2009. *The MSS conditions are not subject to comment for this action. MSS conditions are not changing with this action.*

City commented that fence line monitoring should be required by the permit. *Fence line monitoring is determined on a case by case basis; it was not required for this particular permit, nor required as part of this renewal.*

City listed numerous sources in the permit that should be removed since the sources were either demolished, never built or routed to a flare. *The following EPN's (flares, heaters, reboilers, cooling towers, sumps, backup engines) have been removed: FL44SRUSO, FL38, 637-SHF, 637-SHR, 638-RH, 639-RH (built and renamed 637F0001), 638-RH, 639-RH, 639-FR, 534-CT, 537-O, 537-X (537-O and 537-X were combined into 537CT3701), 733-CT, FU-EQSUMP, ENG-AIR1 through ENG-AIR5.*

*The following is a list of tanks that Houston Refining cross-checked with the City's list. "Calculate" represents whether or not Houston Refining calculated emissions for the tank and added the tank to the MAERT.*

<u>Tank</u>	<u>On COHCommentsList?</u>	<u>Calculate</u>	<u>Disposition</u>
117TK0765	Yes	No	Deleted from MAER Table
136TK0590	Yes	No	Deleted from MAER Table
136TK0591	Yes	No	Deleted from MAER Table
136TK0901	Yes	No	Deleted from MAER Table
136TK0902	Yes	No	Deleted from MAER Table
137TK0509	Yes	No	Deleted from MAER Table
137TK0826	Yes	No	Deleted from MAER Table
137TK0827	Yes	No	Deleted from MAER Table
138TK0268	Yes	No	Deleted from MAER Table
138TK0278	Yes	No	Deleted from MAER Table
335TK0069	No	No	Deleted from MAER Table
335TK0070	No	No	Deleted from MAER Table
335TK0647	Yes	No	Deleted from MAER Table
336TK0744	No	No	Deleted from MAER Table
430TK0081	Yes	No	Deleted from MAER Table
432TK0477	Yes	No	Deleted from MAER Table
432TK0724	No	No	Deleted from MAER Table
432TK0825	Yes	No	Deleted from MAER Table
432TK0852	Yes	No	Deleted from MAER Table
930TK0785	No	No	Deleted from MAER Table
133TK0866	Yes	Yes	Added Tank Calculation
137TK0793	Yes	Yes	Added Tank Calculation
138TK0267	Yes	Yes	Added Tank Calculation
138TK0649	Yes	Yes	Added Tank Calculation
138TK0650	Yes	Yes	Added Tank Calculation
138TK0651	Yes	Yes	Added Tank Calculation
138TK0652	Yes	Yes	Added Tank Calculation
138TK0653	No	Yes	Added Tank Calculation
635TK0110	No	Yes	Added Tank Calculation
734TK0671	Yes	Yes	Added Tank Calculation
734TK0672	Yes	Yes	Added Tank Calculation
734TK0673	Yes	Yes	Added Tank Calculation
930TK0784	No	Yes	Added Tank Calculation
930TK0786	No	Yes	Added Tank Calculation

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930TK0787	No	Yes	Added Tank Calculation
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*There were some tanks Houston Refining discovered that were added to the MAERT at this time. The total tank emissions from all of the discovered tanks are less than 0.5 TPY VOC.*

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### Process/Project Description

The Houston Refinery produces a variety of fuels and chemicals. Active units at the refinery include crude oil fractionation, hydro desulfurization, fluid catalytic cracking, benzene and toluene production, light ends fractionation, magnaformer, delayed coking, sulfur recovery, butane recovery, aromatics distillation, and paraxylene recovery. The refinery also includes loading/unloading facilities, boiler house, flare system, cooling towers, and wastewater collection and treatment facilities. All activities, permitted, and exempt facilities are authorized under the flexible permit.

### Pollution Prevention, Sources, Controls and BACT- [30 TAC 116.111(a)(2)(C)]

1. The following PBR's and standard permits are being rolled in at this time. The following is a list of the PBR's being rolled in and a BACT discussion for each PBR:

11 PBR's regarding equipment fugitives (106.261 / 106.262) All fugitives are covered under 28 MID fugitive monitoring program, thus meeting BACT.

5 PBR's for replacement-in-kind for storage tanks (106.264 and 106.472 PBR's). 1 PBR for construction of a new storage tank (106.472). All tanks are small fixed roof tanks <25,000 gal in size, thus meeting BACT.

1 PBR to authorize two sulfur degassing units (106.261/262) which are now connected the SRU Thermal Oxidizer. BACT is met.

2 PBR's for replacement and relocation of two cooling towers (106.371) . The cooling towers are subject to monthly VOC monitoring. BACT is met.

The MAERT was altered to include a table that reflects which-pollutants are associated with particular EPNs.

2. The following conditions were cleaned up as follows:

NESHAP Y does not apply and was removed from SC #4.

NSPS VV and GGG were removed from SC #2 since MACT H and CC supersede this requirement.

Sources never built were removed from SC #5, #9, #51, #54, Attachment #1 and #2.

EPN nomenclature changed in SC #8.

Removed language from SC #10 that referred to a past compliance date.

Removed 28 VHP references from SC #14. Entire facility is now covered by 28 MID, a more stringent fugitive monitoring program.

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This project is a Houston Air Toxics Project and was sent out for comment to various offices. The region responded with comments. The following changes were made:

- NESHAP "Y" was removed from SC#3 as it does not apply.
- "annual" was added to SC# 11.
- New cooling tower language was added replacing old language in SC #24.
- New flare language was added replacing old language in SC # 28.
- Flares EPN's were identified as requested by region in SC # 37.
- "liquid" was added to SC # 44.

Region also requested updated sulfur condition language , AVO language and coke pit testing requirements. It was determined that these changes were not warranted at this time, however, region can comment again on the pending SRU amendment in-house.

**Impacts Evaluation - 30 TAC 116.111(a)(2)(J)**

Was modeling conducted?	No	Type of Modeling:	N/A
Will GLC of any air contaminant cause violation of NAAQS?			No
Is this a sensitive location with respect to nuisance?			No
[§116.111(a)(2)(A)(ii)] Is the site within 3000 feet of any school?			No

Additional site/land use information: A health effects evaluation is required for PBR's rolled into the permit. There is an overall decrease in emissions for both short-term and annual emissions associated with this project. Step 1C of the MERA flowchart is satisfied with short term and annual decreases for all non-air pollutant watch list compounds. Step 3 of the MERA flowchart is used to screen out benzene that may have been authorized through PBR (benzene is an air pollutant watch list compound). Due to the fact that allowables are decreasing by more than 30 % for benzene for both short term and annual emissions and no EPN will have a benzene increase, Step 3 is satisfied.

**Summary of Modeling Results**

This project was a no increase renewal/amendment, therefore modeling was not required for this project.

**Permit Concurrence and Related Authorization Actions**

Is the applicant in agreement with special conditions?	Yes
Company representative(s):	Roel Munoz
Contacted Via:	phone
Date of contact:	October 27, 2009
Other permit(s) or permits by rule affected by this action:	None
List permit and/or PBR number(s) and actions required or taken:	49678, 50839, 54769, 56586, 71380, 71613, 74743, 75386, 78506, 76934, 80698, 81566, 84563, 84606, 85715.

	12/15/09		12/15/09
Project Reviewer	Date	Team Leader/Section Manager/Backup	Date

## Compliance History Report

Customer/Respondent/Owner-Operator: CN601313083 Houston Refining LP Classification: AVERAGE Rating: 13.60  
 Regulated Entity: RN100218130 HOUSTON REFINING Classification: AVERAGE Site Rating: 13.60

ID Number(s):	Component	Account Number	Rating
	AIR OPERATING PERMITS	ACCOUNT NUMBER	HG0048L
	AIR OPERATING PERMITS	PERMIT	1372
	PETROLEUM STORAGE TANK	REGISTRATION	78219
	REGISTRATION		
	AIR NEW SOURCE PERMITS	PERMIT	2167
	AIR NEW SOURCE PERMITS	PERMIT	3844
	AIR NEW SOURCE PERMITS	PERMIT	31955
	AIR NEW SOURCE PERMITS	PERMIT	38735
	AIR NEW SOURCE PERMITS	PERMIT	44938
	AIR NEW SOURCE PERMITS	ACCOUNT NUMBER	HG0048L
	AIR NEW SOURCE PERMITS	REGISTRATION	54769
	AIR NEW SOURCE PERMITS	REGISTRATION	55719
	AIR NEW SOURCE PERMITS	REGISTRATION	75386
	AIR NEW SOURCE PERMITS	AFS NUM	4820100040
	AIR NEW SOURCE PERMITS	EPA ID	PSDTX985
	AIR NEW SOURCE PERMITS	REGISTRATION	71613
	AIR NEW SOURCE PERMITS	REGISTRATION	74743
	AIR NEW SOURCE PERMITS	REGISTRATION	76934
	AIR NEW SOURCE PERMITS	REGISTRATION	78506
	AIR NEW SOURCE PERMITS	REGISTRATION	80698
	AIR NEW SOURCE PERMITS	REGISTRATION	43445
	AIR NEW SOURCE PERMITS	REGISTRATION	46595
	AIR NEW SOURCE PERMITS	REGISTRATION	49678
	AIR NEW SOURCE PERMITS	REGISTRATION	50839
	AIR NEW SOURCE PERMITS	REGISTRATION	56586
	AIR NEW SOURCE PERMITS	REGISTRATION	71380
	AIR NEW SOURCE PERMITS	REGISTRATION	81566
	AIR NEW SOURCE PERMITS	REGISTRATION	86815
	AIR NEW SOURCE PERMITS	REGISTRATION	87937
	AIR NEW SOURCE PERMITS	REGISTRATION	85715
	AIR NEW SOURCE PERMITS	REGISTRATION	84563
	AIR NEW SOURCE PERMITS	REGISTRATION	84606
	WASTEWATER	PERMIT	WQ0000392000
	WASTEWATER	PERMIT	TPDES0003247
	PUBLIC WATER SYSTEM/SUPPLY	REGISTRATION	1011570
	INDUSTRIAL AND HAZARDOUS WASTE	EPA ID	TXD082688979
	GENERATION		
	INDUSTRIAL AND HAZARDOUS WASTE	SOLID WASTE REGISTRATION #	30092
	GENERATION	(SWR)	
	INDUSTRIAL AND HAZARDOUS WASTE	PERMIT	50106
	STORAGE		
	WATER LICENSING	LICENSE	1011570
	IHW CORRECTIVE ACTION	SOLID WASTE REGISTRATION #	30092
		(SWR)	
	INDUSTRIAL AND HAZARDOUS WASTE	PERMIT	50106
	POST CLOSURE		
	INDUSTRIAL AND HAZARDOUS WASTE	PERMIT	50106
	COMPLIANCE PLANS		
	AIR EMISSIONS INVENTORY	ACCOUNT NUMBER	HG0048L

Location: 12000 LAWNDALE ST, HOUSTON, TX, 77017

TCEQ Region: REGION 12 - HOUSTON

Date Compliance History Prepared: October 09, 2009

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Compliance Period: August 07, 2003 to August 07, 2008

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: John Barrientez Phone: 239 - 4786

### Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? Yes
2. Has there been a (known) change in ownership/operator of the site during the compliance period? No
3. If Yes, who is the current owner/operator? N/A
4. If Yes, who was/were the prior owner(s)/operator(s) ? N/A
5. When did the change(s) in owner or operator occur? N/A
6. Rating Date: 9/1/2009 Repeat Violator: NO

**Components (Multimedia) for the Site :**

A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

- Effective Date: 08/07/2003 ADMINORDER 2002-1040-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Description: Failure to monitor 368 valves in the Benzene and Toluene Unit in VOC service.
- Effective Date: 12/05/2003 COURTOORDER  
 Classification: Major  
 Citation: 30 TAC Chapter 101, SubChapter A 101.4  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 Rqmt Prov: SC 1 PERMIT  
 Description: Emissions of sulfur dioxide and hydrogen sulfide into the air at such concentration as to adversely affect human health or welfare or as to interfere with the reasonable use and enjoyment of property.
- Effective Date: 07/01/2004 ADMINORDER 2003-1418-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Rqmt Prov: Special Condition No. 1 PERMIT  
 Description: Allowed an unauthorized release of SO2, H2S, and SO3 from the Sulfur Recovery Complex. Specifically, an emissions event occurred on December 19, 2002 which resulted in excess emissions of 85,009 lbs of SO2, 1,869 lbs of H2S, and 2,426 lbs of SO3.
- Effective Date: 04/10/2005 ADMINORDER 2004-0866-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Rqmt Prov: PSD-TX-985, Special Condition 1 PERMIT  
 Description: Exceeded VOC emissions limit for TCEQ Flexible Permit #2167 during an emissions event.
- Effective Date: 08/07/2005 ADMINORDER 2004-2002-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Rqmt Prov: Special Condition No. 1 PERMIT  
 Description: Failed to comply with permitted emissions limits.
- Classification: Minor  
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Description: Failed to submit the initial report for the reportable emission event that occurred on September 1, 2004 in a timely manner.
- Effective Date: 12/15/2005 ADMINORDER 2005-1172-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Rqmt Prov: Flexible Permit No. 2167, SC #1. PERMIT  
 Description: Failed to comply with permitted emissions limits.
- Effective Date: 02/05/2006 ADMINORDER 2005-0754-AIR-E  
 Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
 30 TAC Chapter 116, SubChapter G 116.716(a)

5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: SC 1 PERMIT  
Description: Failed to comply with permitted emissions limits.  
Effective Date: 02/20/2006 ADMINORDER 2005-0359-AIR-E  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)  
30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.104(a)(1)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #2 PA  
Flexible Permit #2167, SC#26 PA  
Description: Failed to limit the hydrogen sulfide ("H2S") concentration in the fuel gas to no more than 160 parts per million ("ppm") on a three-hour rolling average basis.  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #44B PA  
Description: Failed to operate the Wet Gas Scrubber (EPN 732 COB) at a minimum pressure drop across the scrubber of 0.91 pounds per square inch ("psi") and at a minimum liquid-to-gas ratio ("L/G") of 16.0 gallons per 1,000 actual cubic feet.  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)  
30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
40 CFR Chapter 60, SubChapter C, PT 60, SubPT J 60.103(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #2 PA  
Description: Failed to maintain a maximum hourly average carbon monoxide ("CO") concentration of no more than 500 parts per million volume ("ppmv") from the FCCU Catalyst Regenerator Stack (EPN 732-COB)  
Classification: Minor  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 111, SubChapter A 111.111(a)(4)(A)(ii)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Special Condition 47 PERMIT  
Description: Failed to note daily flare observations in the Flare Observation Log and failed to maintain monitoring records for a flare's pilot flame.  
Classification: Minor  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(2)  
30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 115, SubChapter D 115.352(2)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.171(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #14.1 PA  
Description: Failed to repair three valves within 15 days of leak detection  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #37 PA  
Description: Failed to maintain the sulfur dioxide ("SO2") concentration in the exhaust gas of the #435 and #440 Tail Gas Thermal Oxidizers (EPNs TGU-ICN and TGU-ICN2) below 235 ppmv on a one-hour average basis.  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 115, SubChapter B 115.114(a)(1)  
30 TAC Chapter 115, SubChapter B 115.114(a)(2)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(a)(2)(i)  
40 CFR Chapter 63, SubChapter C, PT 63, SubPT G 63.120(b)(1)(iii)

5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: Flexible Permit #2167, SC #4 PA  
Description: Failed to conduct the required inspections for three storage tanks.  
Effective Date: 05/28/2006 ADMINORDER 2005-1985-AIR-E  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: TCEQ Flexible Permit #2167, SC #1 PERMIT  
Description: Failed to prevent unauthorized emissions.  
Effective Date: 06/15/2006 ADMINORDER 2005-2073-AIR-E  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)  
Rqmt Prov: TCEQ Permit #2167, SC#1 PERMIT  
Description: Failed to prevent unauthorized emissions.  
Effective Date: 02/05/2007 ADMINORDER 2006-0811-AIR-E  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: No. 2167, SC #1 PERMIT  
Description: Failed to prevent unauthorized emissions on November 7, 2005.  
Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: TCEQ Permit #2167, SC#1 PERMIT  
Description: Failed to prevent unauthorized emissions on March 21, 2006.  
Effective Date: 08/10/2007 ADMINORDER 2007-0440-AIR-E  
Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: Special Condition 1 PERMIT  
Description: Failed to prevent unauthorized emissions. Specifically, 10,494 pounds ("lbs") of sulfur dioxide, 126 lbs of carbon monoxide and 22 lbs of hydrogen sulfide were released from the Magnaformer Unit and the Sulfur Recovery Complex during an emissions event that began January 4, 2007 and lasted nine hours and 45 minutes.  
Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: Special Condition 1 PERMIT  
Description: Failed to prevent unauthorized emissions. Specifically, 1,431 pounds ("lbs") of propane, 510 lbs of propylene and 11 lbs of butenes were released from Unit 234 during an avoidable emissions event that began January 9, 2007 and lasted eight hours.  
Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: Special Condition 1 PERMIT  
Description: Failed to prevent unauthorized emissions. Specifically, 8,205 pounds of the Highly Reactive Volatile Organic Compound ethylene were released from the Paraxylene Recovery Unit during an avoidable emissions event that began January 16, 2007 and lasted one hour and 55 minutes.  
Classification: Minor  
Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(1)(H)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Description: Failed to properly report the amount of ethylene emissions. Specifically, the final notification reported 7,650 lbs of ethylene were released as a result of the January 16, 2007 emissions event and the investigation determined that the actual emissions released were 8,205 lbs of ethylene.  
Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, 189 lbs of propane, 530 lbs of propylene, 821 lbs of butanes, 1,064 lbs of butenes, 3,154 lbs of pentanes, 2,589 lbs of pentenes and 13,734 lbs of C6+ Hazardous Air Pollutants ("HAP") were released from the 732 Fluid Catalytic Cracking Unit ("FCCU") during

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, 72 lbs of ethylene, 2,195 lbs of propane, 7,057 lbs of propylene, 11,000 lbs of butanes, 8,990 lbs of butenes, 4,110 lbs of pentanes and 23,328 lbs of C6+ HAPs were released from the 732 FCCU during an avoidable emissions event that began March 5, 2007

Effective Date: 10/04/2007

ADMINORDER 2007-0713-AIR-E

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, Houston Refining released 1,830 lbs of SO2 from the Sulfur Recovery Complex during an avoidable emissions event that began April 3, 2007 and lasted one hour and 30 minutes.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, Exxon released 54,320 lbs of sulfur dioxide, 700 lbs of sulfur trioxide, 596 lbs of hydrogen sulfide, 304 lbs of ammonia and 76 lbs nitric oxide from the Sulfur Recovery Unit during an avoidable emissions event that began April 21, 2007 and lasted 16 hours and 45 minutes.

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)  
5C THC Chapter 382, SubChapter D 382.085(b)

Description: Failed to submit an initial notification within 24 hours of the discovery of the April 21, 2007 emissions event. Specifically, the report, which was due April 22, 2007, was not submitted until April 26, 2007.

Effective Date: 12/20/2007

ADMINORDER 2006-1948-AIR-E

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter A 382.085(b)

Rqmt Prov: TCEQ Flexible Permit #2167, SC#1 PERMIT

Description: Failed to prevent unauthorized emissions.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: Flexible Permit #2167, SC #1 PERMIT

Description: Failed to prevent unauthorized emissions.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: TCEQ Flexible Permit #2167, SC #1 PERMIT

Description: Failed to prevent unauthorized emissions.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: TCEQ Flexible Air Permit #2167, SC #1 PERMIT

Description: Failed to prevent unauthorized emissions.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: TCEQ Flexible Permit No. 2167, SC #1 PERMIT

Description: Failed to prevent unauthorized emissions on October 2, 2006, when a console operator inadvertently opened the wrong valve, resulting in an emissions event that released 2,608.50 pounds of sulfur dioxide and lasted for one hour ( Incident No. 82077)

Effective Date: 07/21/2008

ADMINORDER 2007-1954-AIR-E

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter H 115.722(c)(1)  
30 TAC Chapter 116, SubChapter G 116.715(c)  
5C THSC Chapter 382 382.085(b)

Rqmt Prov: TCEQ Flexible Permit No. 2167, SC #1 PERMIT

Description: Failed to prevent unauthorized emissions.

B. Any criminal convictions of the state of Texas and the federal government.

N/A

C. Chronic excessive emissions events.

N/A

D. The approval dates of investigations. (CEDS Inv. Track. No.)

1	08/12/2003	(294612)
2	08/18/2003	(112865)
3	09/10/2003	(294614)
4	10/14/2003	(294616)
5	11/07/2003	(21204)
6	11/12/2003	(294617)
7	12/16/2003	(294618)
8	01/05/2004	(252510)
9	01/08/2004	(294619)
10	01/30/2004	(258069)
11	02/03/2004	(252543)
12	02/09/2004	(294599)
13	02/23/2004	(4691)
14	02/24/2004	(263274)
15	02/29/2004	(262038)
16	03/09/2004	(294603)
17	04/16/2004	(294604)
18	05/14/2004	(264609)
19	05/20/2004	(351815)
20	05/27/2004	(143412)
21	06/14/2004	(351816)
22	07/22/2004	(351817)
23	08/11/2004	(286666)
24	08/11/2004	(287948)
25	08/11/2004	(288389)
26	08/16/2004	(260585)
27	08/16/2004	(260979)
28	08/16/2004	(351818)
29	08/19/2004	(261725)
30	08/24/2004	(271493)
31	08/31/2004	(271505)
32	08/31/2004	(289666)
33	08/31/2004	(292409)
34	09/01/2004	(276631)
35	09/15/2004	(351819)
36	10/15/2004	(282886)
37	10/18/2004	(351820)
38	10/19/2004	(335898)
39	10/19/2004	(336015)
40	11/11/2004	(290238)
41	11/11/2004	(291091)
42	11/11/2004	(292704)
43	11/14/2004	(271509)
44	11/18/2004	(340059)
45	11/18/2004	(351821)

46	11/22/2004	(341679)
47	12/03/2004	(269989)
48	12/07/2004	(341250)
49	12/09/2004	(342162)
50	12/14/2004	(342195)
51	12/16/2004	(285369)
52	12/27/2004	(351822)
53	12/28/2004	(278159)
54	01/18/2005	(381702)
55	01/28/2005	(345654)
56	02/02/2005	(347718)
57	02/15/2005	(381700)
58	03/16/2005	(347527)
59	03/21/2005	(381701)
60	03/29/2005	(375273)
61	04/14/2005	(372794)
62	04/14/2005	(376977)
63	04/18/2005	(419493)
64	04/19/2005	(376798)
65	04/22/2005	(349552)
66	05/02/2005	(372107)
67	05/03/2005	(376226)
68	05/20/2005	(381195)
69	05/24/2005	(419494)
70	05/25/2005	(379525)
71	05/26/2005	(337173)
72	05/26/2005	(349881)
73	06/07/2005	(395018)
74	06/20/2005	(419495)
75	06/21/2005	(379593)
76	07/07/2005	(379524)
77	07/22/2005	(400281)
78	07/25/2005	(419496)
79	08/15/2005	(404916)
80	08/18/2005	(404331)
81	08/18/2005	(404363)
82	08/24/2005	(405556)
83	08/24/2005	(405604)
84	08/24/2005	(440650)
85	08/25/2005	(404773)
86	09/19/2005	(440651)
87	10/10/2005	(431795)
88	10/10/2005	(468144)
89	10/28/2005	(432450)
90	10/31/2005	(432333)
91	11/07/2005	(468145)
92	11/23/2005	(435308)
93	12/02/2005	(431511)
94	12/28/2005	(434541)
95	01/19/2006	(468146)
96	02/01/2006	(468142)
97	02/25/2006	(456998)
98	02/25/2006	(457004)
99	02/25/2006	(457020)
100	02/28/2006	(457235)
101	03/17/2006	(468143)
102	04/10/2006	(498011)
103	04/20/2006	(437368)
104	04/27/2006	(439800)

105	05/10/2006	(498012)
106	05/31/2006	(480494)
107	05/31/2006	(480500)
108	05/31/2006	(480503)
109	05/31/2006	(480504)
110	05/31/2006	(480506)
111	06/14/2006	(479843)
112	06/15/2006	(461559)
113	06/15/2006	(481316)
114	06/15/2006	(498013)
115	06/29/2006	(458901)
116	06/30/2006	(469140)
117	07/17/2006	(485790)
118	07/26/2006	(520029)
119	07/28/2006	(463199)
120	08/08/2006	(489220)
121	08/11/2006	(520030)
122	08/18/2006	(396831)
123	09/11/2006	(489202)
124	09/11/2006	(574927)
125	10/06/2006	(489212)
126	10/12/2006	(544276)
127	10/30/2006	(511654)
128	11/21/2006	(544277)
129	12/11/2006	(574928)
130	01/08/2007	(574929)
131	01/09/2007	(532009)
132	01/25/2007	(512685)
133	02/02/2007	(435323)
134	02/02/2007	(511662)
135	02/05/2007	(536476)
136	02/08/2007	(512678)
137	02/16/2007	(574922)
138	02/22/2007	(510814)
139	02/23/2007	(511980)
140	03/16/2007	(574923)
141	03/21/2007	(539188)
142	03/21/2007	(539192)
143	03/21/2007	(539194)
144	04/04/2007	(554793)
145	04/04/2007	(554809)
146	04/13/2007	(574924)
147	04/20/2007	(556941)
148	04/24/2007	(557537)
149	04/30/2007	(554360)
150	05/04/2007	(556720)
151	05/09/2007	(554980)
152	05/15/2007	(574925)
153	05/29/2007	(559572)
154	06/14/2007	(574926)
155	07/03/2007	(563761)
156	07/12/2007	(619397)
157	07/20/2007	(561274)
158	07/25/2007	(566621)
159	08/13/2007	(601490)
160	08/17/2007	(570286)
161	08/23/2007	(570387)
162	08/28/2007	(570635)
163	09/07/2007	(573978)

164 09/14/2007 (601491)  
 165 09/27/2007 (595742)  
 166 10/08/2007 (619398)  
 167 10/10/2007 (594976)  
 168 10/17/2007 (567541)  
 169 10/18/2007 (566919)  
 170 10/19/2007 (598478)  
 171 10/25/2007 (596179)  
 172 11/06/2007 (619399)  
 173 11/09/2007 (599574)  
 174 12/04/2007 (600555)  
 175 12/10/2007 (619400)  
 176 12/21/2007 (610028)  
 177 01/15/2008 (612806)  
 178 01/15/2008 (671905)  
 179 01/18/2008 (609373)  
 180 01/25/2008 (613320)  
 181 01/28/2008 (616032)  
 182 01/29/2008 (611265)  
 183 02/11/2008 (671904)  
 184 03/03/2008 (616148)  
 185 03/24/2008 (689825)  
 186 04/07/2008 (617770)  
 187 04/08/2008 (595524)  
 188 04/14/2008 (689826)  
 189 04/22/2008 (639660)  
 190 04/22/2008 (640670)  
 191 05/15/2008 (689827)  
 192 05/30/2008 (670616)  
 193 06/23/2008 (710583)  
 194 07/11/2008 (710584)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

Date: 08/18/2003 (112865)  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 335, SubChapter A 335.6(c)  
 Description: During this investigation, it was found LCR failed to provide proper notification of all current solid waste activities to the TCEQ.

Date: 02/03/2004 (252543) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 2167, Special Condition #1 PERMIT  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Description: Lyondell failed to comply with the Special Conditions of permit 2167. Improper trim adjustment on a control valve caused temperature and pressure to increase above the PSV setpoint.

Date: 02/29/2004 (262038) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 TCEQ FLEXIBLE AIR PERMIT #2167, SC #1 PERMIT  
 Description: Lyondell exceeded permit limits during an emissions event.

Date: 05/14/2004 (264609)  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Permit #2167, Special Condition #1 PERMIT  
 Description: Exceeded VOC permit limit during an emissions event.

Date: 08/16/2004 (260585) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)

TCEQ FLEXIBLE AIR PERMIT 2167, SC #1 PERMIT  
 Description: Exceeded VOC permit limit during an avoidable emissions event.  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(8)  
 Description: Failure to submit an administratively complete final emissions event report.  
 Date: 08/16/2004 (260979) CN601313083  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(8)  
 Description: Failure to comply with emissions events reporting requirements.  
 Date: 08/18/2004 (261725) CN601313083  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(8)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 TCEQ Flexible Air Permit #2167, SC #1 PERMIT  
 Description: Failure to submit an administratively complete final emissions event report.  
 Date: 11/14/2004 (271509) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Flexible No. 2167 and PSD-TX-985, S.C. 1 PERMIT  
 Description: Exceeded VOC permit limits during an avoidable emissions event.  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 101, SubChapter F 101.201(c)  
 Description: Failure to submit a final report within 14 days of the end of an emissions event.  
 Date: 11/30/2004 (351822) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)  
 TWC Chapter 26 26.121(a)  
 Description: Failure to meet the limit for one or more permit parameter  
 Date: 12/09/2004 (342162) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 Special Conditon #1 PA  
 Description: Failure to control unauthorized emissions.  
 Date: 05/02/2005 (372107) CN601313083  
 Self Report? NO Classification: Minor  
 Citation: 30 TAC Chapter 117, SubChapter B 117.219(f)(10)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Description: Failure to record the times of operation for testing and maintenance for diesel engines subject to the restriction on hours of operation.  
 Date: 05/26/2005 (379525)  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter B 116.110(a)(1)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Description: Failure to control knockout pot level on south compressor.  
 Date: 07/06/2005 (379524) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 115, SubChapter D 115.352(4)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Special Condition 15E PERMIT  
 Description: Failed to keep a cap or plug on open-ended line ID # 501010 and open-ended valve # 614862.  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 115, SubChapter D 115.352(4)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Special Condition 15E PERMIT  
 Description: Failed to keep a cap or plug on open-ended valves ID # 501010 and # 270505.  
 Date: 07/31/2005 (440650) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)

TWC Chapter 26 26.121(a)  
 Description: Failure to meet the limit for one or more permit parameter.  
 Date: 06/13/2006 (479843)  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter D 382.085(b)  
 TCEQ Flexible Permit #2167, SC #1 PERMIT

Description: Lyondell failed to prevent the "Y Train" from overpressuring.  
 Date: 06/30/2006 (520029) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)  
 TWC Chapter 26 26.121(a)

Description: Failure to meet the limit for one or more permit parameter  
 Date: 07/31/2006 (520030) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)  
 TWC Chapter 26 26.121(a)

Description: Failure to meet the limit for one or more permit parameter  
 Date: 08/01/2006 (463199) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 2167 and PSD-TX-985, SC 15E PA  
 30 TAC Chapter 101, SubChapter A 101.20(1)  
 30 TAC Chapter 115, SubChapter D 115.352(4)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)

Description: Failure to cap/plug open-ened line  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)  
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(2)

Description: Leaking plug associated with valve #802412.  
 Self Report? NO Classification: Moderate  
 Citation: 2167 and PSD-TX-985, SC 15F PA  
 30 TAC Chapter 101, SubChapter A 101.20(1)  
 30 TAC Chapter 115, SubChapter D 115.354(2)(C)  
 30 TAC Chapter 116, SubChapter G 116.715(a)  
 40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-7(a)

Description: Failure to monitor valves  
 Date: 08/09/2006 (489220)  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter D 382.085(b)  
 TCEQ Flexible Permit #2167, SC#1 PERMIT

Description: Failure to prevent the disconnection of a pressure indication instrument.  
 Date: 08/18/2006 (396831) CN601313083  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter G 116.715(a)  
 5C THC Chapter 382, SubChapter A 382.085(b)  
 Flexible Permit No. 2167, SC #1. PERMIT

Description: The RE failed to prevent unauthorized emissions from a leaking pipe.  
 Date: 10/31/2006 (544277) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)  
 TWC Chapter 26 26.121(a)

Description: Failure to meet the limit for one or more permit parameter  
 Date: 08/31/2007 (601491) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)  
 30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter  
 Date: 09/30/2007 (619398) CN601313083  
 Self Report? YES Classification: Moderate  
 Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)  
 30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

Date: 02/29/2008 (689825)

CN601313083

Self Report? YES

Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)  
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

F. Environmental audits.

Notice of Intent Date: 01/05/2004 (263563)

No DOV Associated

Notice of Intent Date: 08/15/2007 (574133)

No DOV Associated

Notice of Intent Date: 09/05/2007 (595042)

Disclosure Date: 02/13/2008

Viol. Classification: Major

Citation: 30 TAC Chapter 115, SubChapter D 115.352(4)  
30 TAC Chapter 115, SubChapter H 115.783(5)  
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)  
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(1)

Rqmt Prov: PERMIT 2167 SC 14E, 15E,

Description: Failure to provide seals for open ended lines that contain VOCs.

Disclosure Date: 04/03/2008

Viol. Classification: Major

Citation: 30 TAC Chapter 115, SubChapter D 115.352(4)  
30 TAC Chapter 115, SubChapter H 115.783(5)  
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(1)  
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(1)

Rqmt Prov: PERMIT 2167 SC 14E, 15E,

Description: Failure to provide seals for open ended lines that contain VOCs.

Notice of Intent Date: 10/04/2007 (598208)

No DOV Associated

G. Type of environmental management systems (EMSs).

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A