UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

IN THE MATTER OF	§	PETITION FOR OBJECTION
	§	
Clean Air Act Title V Permit No. O3764	§	
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Issued to Kinder Morgan Crude & Condensate LLC	§	Permit No. O3764
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	§	
Issued by the Texas Commission on Environmental Quality	§	
	§	
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PETITION TO OBJECT TO TITLE V PERMIT NO. O3764 ISSUED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Pursuant to section 42 U.S.C. § 7661d(b)(2), Environmental Integrity Project, Texas Environmental Justice Advocacy Services, Sierra Club, Environment Texas, Air Alliance Houston, and Patricia Gonzales ("Petitioners") hereby petition the Administrator of the U.S. Environmental Protection Agency ("Administrator" or "EPA") to object to Proposed Federal Operating Permit No. O3764 issued by the Texas Commission on Environmental Quality ("TCEQ" or "Commission") authorizing operation of a crude condensate splitter and related equipment located at Kinder Morgan's Galena Park Terminal in Harris County, Texas.

I. PETITIONERS

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

environmental laws. The Environmental Integrity Project has offices and programs in Austin, Texas and Washington, D.C.

Texas Environmental Justice Advocacy Services ("TEJAS") is a non-profit organization dedicated to providing communities in the Houston area with the tools necessary to create sustainable, environmentally healthy communities. TEJAS's goal is to promote environmental protection through education, policy development, community awareness, and legal action. TEJAS's guiding principle is that everyone, regardless of race or income, has the right to live in a clean environment.

The Sierra Club is a national nonprofit organization with 67 chapters and over 635,000 members dedicated to exploring, enjoying, and protecting the wild places of earth; to practicing and promoting the responsible use of earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Lone Star Chapter of the Sierra Club has members who live, work, and recreate in areas affected by air pollution from the Deer Park Complex.

Environment Texas is a statewide non-profit environmental organization that advocates for clean air, clean water, and preservation of Texas's natural areas on behalf of its approximately 5,000 members across the state of Texas. Environment Texas researches and distributes analytical reports on environmental issues, advocates before legislative and administrative bodies, conducts public education, and pursues public interest litigation on behalf of its members.

Air Alliance Houston is a 501(c)(3) non-profit organization whose mission is to reduce air pollution in the Houston region and to protect public health and environmental integrity through research, education, and advocacy. Air Alliance Houston is active throughout the greater Houston

area, with a particular focus on the communities and industrial sources located along the Houston Ship Channel.

Patricia Gonzales lives in Pasadena, Texas near Galena Park and the Houston Ship Channel. Ms. Gonzales is concerned that the Proposed Permit's failure to assure compliance with all public health protections that apply to the Galena Park Terminal could contribute to the State's ongoing noncompliance with ambient ozone standards and that flaring at the Terminal may increase her exposure to dangerous air pollutants, including Volatile Organic Compounds and Particulate Matter.

II. PROCEDURAL BACKGROUND

This petition addresses the TCEQ's initial issuance of Permit No. O3764 authorizing operation of a condensate splitter at Kinder Morgan's Galena Park Terminal, which now consists of a terminal, a condensate splitter, a warehouse, and a storage area.[1] The Galena Park Terminal is located in the Houston, Galveston, Brazoria ("HGB") severe ozone nonattainment area and is a major source of criteria air pollutants and hazardous air pollutants that contribute to the condition of air pollution that plagues neighborhoods near the Houston Ship Channel.

Kinder Morgan filed its application for Permit No. O3764 on November 12, 2014. The Executive Director conducted his technical review of Kinder Morgan's application from May 27, 2015 until September 1, 2015. The Executive Director proposed to approve Kinder Morgan's application and issued Draft Permit No. O3764 ("Draft Permit"), notice of which was published on October 29, 2015. (Exhibit A), Draft Permit No. O3764 ("Draft Permit"). Bilingual notice of the Draft Permit was published on November 1, 2015. Petitioner groups timely-filed comments

[1] Permit No. O988 authorizes operation of other equipment at the Galena Park Terminal.

with the TCEQ identifying several deficiencies in the Draft Permit. (Exhibit B), Public Comments on Draft Permit No. O3764 ("Public Comments").

On May 10, 2017, the TCEQ's Executive Director issued notice of Proposed Permit No. O3764 along with his response to public comments on the Draft Permit. (Exhibit C), Notice of Proposed Permit and the Executive Director's Response to Public Comment ("Response to Comments"); (Exhibit D), Proposed Permit No. O3764 ("Proposed Permit"); (Exhibit E); Statement of Basis, Permit No. O3764.

EPA's 45-day review period for the Proposed Permit began on May 16, 2017 and ended on June 30, 2017. Because the Administrator did not object to the Proposed Permit during his 45-day review period, members of the public have 60-days from the close of the review period to petition the Administrator to object to the Proposed Permit. This petition for objection is timely filed.

III. LEGAL REQUIREMENTS

Title V permits are the primary method for enforcing and assuring compliance with the Clean Air Act's pollution control requirements for major sources of air pollution. *Operating Permit Program*, 57 Fed. Reg. 32,250, 32,258 (July 21, 1992). Prior to enactment of the Title V permitting program, regulators, operators, and members of the public often had difficulty determining which requirements applied to each major source and whether sources were complying with applicable requirements. This was a problem because applicable requirements for each major source were spread across many different rules and orders, some of which did not make it clear how general requirements applied to specific sources.

The Title V permitting program was created to resolve this problem by requiring each major source to obtain an operating permit that (1) lists all applicable federally-enforceable requirements, (2) contains enough information for readers to determine how applicable

requirements apply to units at the permitted source, and (3) establishes monitoring requirements that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a) and (c); *Virginia v. Browner*, 80 F.3d 869, 873 (4th Cir. 1996) ("The permit is crucial to implementation of the Act: it contains, in a single, comprehensive set of documents, all CAA requirements relevant to the particular source."); *Sierra Club v. EPA*, 536 F.3d 673, 674-75 (D.C. Cir. 2008) ("But Title V did more than require the compilation in a single document of existing applicable emission limits . . . . It also mandated that each permit . . . shall set forth monitoring requirements to assure compliance with the permit terms and conditions").

The Title V permitting program provides a process for stakeholders to resolve disputes about which requirements should apply to each major sources outside of the enforcement context. 57 Fed. Reg. 32,266 ("Under the [Title V] permit system, these disputes will no longer arise because any differences among the State, EPA, the permittee, and interested members of the public as to which of the Act's requirements apply to the particular source will be resolved during the permit issuance and subsequent review process."). Accordingly, federal courts do not generally second guess Title V permitting decisions and will not enforce otherwise-applicable requirements that have been omitted from or displaced by conditions in a Title V permit. *See*, 42 U.S.C. § 7607(b)(2); *see also, Sierra Club v. Otter Tail*, 615 F.3d 1008 (8th Cir. 2008) (holding that enforcement of New Source Performance Standard omitted from a source's Title V permit was barred by 42 U.S.C. § 7607(b)(2)). Because courts rely on Title V permits to determine which requirements may be enforced and which requirements may not be enforced against each major source, state-permitting agencies and EPA must exercise care to ensure that each Title V permit includes a clear, complete, and accurate account of the requirements that apply to each permitted source.

The Act requires the Administrator to object to a state-issued Title V permit if he determines that it fails to include and assure compliance with all applicable requirements. 42 U.S.C. § 7661d(b)(1); 40 C.F.R. § 70.8(c). If the Administrator does not object to a Title V permit, "any person may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection." 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d); 30 Tex. Admin. Code § 122.360. The Administrator "shall issue an objection . . . if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the . . . [Clean Air Act]." 42 U.S.C. § 7661d(b)(2); *see also,* 40 C.F.R. § 70.8(c)(1). The Administrator must grant or deny a petition to object within 60 days of its filing. 42 U.S.C. § 7661d(b)(2).

IV. GROUNDS FOR OBJECTION

A. The Proposed Permit Fails to Assure Compliance with Applicable Requirements in Kinder Morgan's Major Nonattainment New Source Review Permit (Monitoring)

1. Specific Grounds for Objection, Including Citation to Permit Term

The Proposed Permit is deficient because it fails to specify monitoring and testing requirements that assure compliance with performance standards, emission limits, and operating requirements established by Permit No. 101199/N158 ("Nonattainment Permit").

Proposed Permit, Special Condition No. 14 provides that (1) Kinder Morgan must comply with the requirements of NSR permits referenced in the Proposed Permit's New Source Review Authorization References attachment, and (2) that listed NSR permits are incorporated into the Title V permit by reference.

The Proposed Permit's New Source Review Authorization References attachment identifies the Nonattainment Permit as an authorization incorporated by reference into the Proposed Permit. Proposed Permit at 72.

The Statement of Basis includes the following statement regarding the sufficiency of monitoring in the Proposed Permit:

> Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).
>
> With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Statement of Basis at 26.

None of the Periodic Monitoring or CAM Summaries in the Proposed Permit address requirements in Kinder Morgan's Nonattainment Permit, *see* Proposed Permit at 62-63, and the Statement of Basis does not provide a reasoned justification for the Executive Director's determination that provisions in Kinder Morgan's Nonattainment Permit assure compliance with applicable emission limits and operating requirements.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *In the Matter of Wheelabrator Baltimore, L.P.* ("Wheelabrator Order"), Permit No. 24-510-01886 at 10 (April 14, 2010). Emission limits in NSR permits incorporated by

reference into the Proposed Permit are applicable requirements. 40 C.F.R. § 70.2. The rationale for the selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *In the Matter of United States Steel, Granite City Works* ("Granite City I Order"), Order on Petition No. V-2009-03 at 7-8 (January 31, 2011).

As explained below, the Proposed Permit is deficient because (1) it fails to specify monitoring and emission calculation methods that assure compliance with emission limits and operating requirements in incorporated the Nonattainment Permit; and (2) the permit record does not contain a reasoned justification for the Executive Director's determination that monitoring methods included in the Proposed Permit assures compliance with emission limits in the Nonattainment Permit.

3. Inadequacy of the Permit Term

According to the Proposed Permit's Major NSR Summary Table, Kinder Morgan's Nonattainment Permit does not contain any monitoring, testing, recordkeeping, or reporting requirements that assure compliance with annual emission caps for Kinder Morgan's two heaters and the permit's site-wide annual benzene limit. Proposed Permit at 78 and 80. Accordingly, the Proposed Permit fails to specify minimum testing and monitoring requirements that assure compliance with federally-enforceable emission limits in Kinder Morgan's Nonattainment Permit.

Table 1: Site-wide Benzene Limit and Heater Emission Caps Established by Kinder Morgan's Nonattainment Permit

Units	**Pollutant**	**Limit (TPY)**
F-101 and F-202 (Heater Annual Emission Cap)	CO	72.84
	NO_x	11.83
	VOC	10.63
	SO_2	11.83
	PM	8.87
	PM_{10}	8.87
	$PM_{2.5}$	8.87

	Ammonia	14.57
All Units Authorized by Permit	Benzene	0.30

Proposed Permit at 79-80.

4. Issue Raised in Public Comments

Commenters raised this issue on page 7 of their Public Comments.

5. Analysis of State's Response

The Executive Director does not dispute Petitioners' claim that the Proposed Permit's Major NSR Summary Table indicates that Kinder Morgan's Nonattainment Permit does not include any monitoring, testing, recordkeeping, or reporting requirements that assure compliance with annual emission caps for Kinder Morgan's two heaters and the permit's site-wide annual benzene limit. Response to Comments at 8. Instead, the Executive Director contends that special conditions in the Proposed Permit and Kinder Morgan's Nonattainment Permit that are not identified in the Proposed Permit's Major NSR Summary Table are sufficient to assure compliance with the heater emission caps and site-wide benzene limit. *Id.*

With respect to the site-wide benzene limit, the Executive Director claims:

> Special Term and Conditions 9 and 10, Proposed Permit at page 8, contain various monitoring, testing recordkeeping and reporting requirements to demonstrate compliance with the site-wide benzene emission limit. Specifically, monitoring and testing requirements are specified in 40 CFR §§ 61.13, 61.14, 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3). Recordkeeping requirements are stated in 40 CFR §§ 61.356(a), 61.356(b), and 61.356(b)(1). Reporting requirements are stated in 40 CFR §§ 61.357(a) and 61.357(b).

Id.

This response does not rebut Petitioners' demonstration that the Proposed Permit fails to include monitoring and testing requirements that assure compliance with the site-wide benzene limit established by Kinder Morgan's Nonattainment Permit, because (1) the monitoring and

testing provisions cited by the Executive Director only apply to waste-streams and do not account for benzene emitted during condensate processing and storage, *see*, 40 C.F.R. § 61.340;[2] (2) the Proposed Permit's Major NSR Summary Table fails to require Kinder Morgan to apply methodologies identified in the cited rules to determine compliance with Kinder Morgan's site-wide benzene limit; and (3) none of the benzene waste rules cited by the Executive Director are actually listed as applicable requirements for any unit at the Galena Park Terminal in the Proposed Permit's Applicable Requirements Summary table. Proposed Permit at 20-61. *See, e.g., In the Matter of Shell Chemical and Shell Oil Company, Deer Park Chemical Plant and Refinery* ("Deer Park Order"), Order on Petition Nos. VI-2014-04 and VI-2014-05 at 25 (September 24, 2015) ("If the TCEQ determines that elements of the monitoring already set forth in . . . [the] permit are capable of providing an adequate means to assure compliance with the title V . . . limits . . . originally in the underlying PSD permit, then the TCEQ should clearly identify this monitoring in the title V permit and explain the rationale for the selected monitoring."). Accordingly, the Executive Director has not only failed to explain how the cited rules assure compliance with the site-wide benzene limit established by the Nonattainment Permit, he has also failed to identify units at the Galena Park Terminal that are subject to requirements in the cited rules.

With respect to the emission caps for Kinder Morgan's two heaters, the Executive Director states:

> Permit No. 101199/N158, Special Conditions 8, 9, 10 and 11 also contain various monitoring, testing[,] recordkeeping and reporting requirements to demonstrate compliance with annual emission caps for heater units (EPNs F-101 and F-201). Specifically, Special Conditions 10 and 11 require a continuous emission

[2] The General Provisions and Monitoring Requirements rules at 40 C.F.R. §§ 61.13 and 61.14 require testing and monitoring as required by applicable Part 61 subparts. They do not identify specific monitoring and testing requirements that assure compliance with the site-wide benzene limit established by Kinder Morgan's Nonattainment Permit.

monitoring system (CEMS) to monitor NO_x, CO and ammonia emissions from EPNs F-101 and F-201.

Response to Comments at 8.

If these monitoring and testing requirements assure compliance with heater annual emission caps, they should be listed as applicable compliance determination method for the heater caps in the Proposed Permit's Major NSR Summary table. The fact that the Proposed Permit's Major NSR Summary table states that there are no applicable monitoring, testing, recordkeeping, or reporting requirements that apply to the heater annual emission caps suggests that the special conditions identified by the Executive Director do not necessarily apply to the heater annual emission caps. To clarify that the listed special conditions do in fact establish compliance determination requirements for the Nonattainment Permit's heater annual emission caps, all the Executive Director needed to do in response to the public comments on this issue is to revise the Proposed Permit's Major NSR Summary table to identify the relevant special conditions.[3] He declined to do so, and his decision to issue the Proposed Permit with an incomplete and misleading Major NSR Summary table undermines the enforceability of the caps. *Deer Park Order* at 25.

Moreover, none of the special conditions listed in the Executive Director's Response to Comments identifies monitoring or testing requirements that assure compliance with the VOC, PM, PM_{10}, and $PM_{2.5}$ heater emission caps established by Kinder Morgan's Nonattainment Permit. Accordingly, even if the Proposed Permit tacitly requires Kinder Morgan to apply special conditions listed in the Executive Director's Response to Comments to determine compliance with the Nonattainment Permit's heater emission caps, the Proposed Permit still fails to assure compliance with the VOC, PM, PM_{10}, and $PM_{2.5}$ caps.

[3] Indeed, the Public Comments requested that the Executive Director revise the Draft Permit to do just this. Public Comments at 7 ("The Executive Director must revise the Draft Permit to identify monitoring, recordkeeping, and reporting requirements that assure compliance with Permit No. 101199/N158 heater emission caps and site-wide benzene limit.").

Finally, with respect to both the site-wide benzene limit and the heater annual emission caps, the Executive Director argues:

> In addition, the Applicant must periodically submit the Permit Compliance Certification (PCC) form (TCEQ 10490) and deviation reports to assure compliance with the requirements of the Proposed Permit, Special Term and Condition 17 at page 10; including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68. The annual PCCs are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request. Therefore, compliance and enforceability of the Proposed Permit requirements (including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68) is assured.

Id. at 8.

The Executive Director, however, does not explain how the compliance certification process satisfies the requirement that each Title V permit specify monitoring sufficient to assure compliance with applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1). While Title V's monitoring requirements and compliance certification requirements are clearly related, they are separate requirements that must be independently met, and one does not obviate the need for the other. *Compare Id*. at § 70.6 (a)(3) and (c)(1) (monitoring requirements) with § 70.6(c)(5) (compliance certification requirements).

The Proposed Permit's compliance certification requirement cannot assure compliance with the site-wide benzene limit and heater emission caps established by Kinder Morgan's Nonattainment Permit, because, as explained above, the Proposed Permit indicates that there are no applicable monitoring or testing requirements for these limits and the special conditions identified in the Executive Director's response fail to address benzene emissions from process activities and do not identify any monitoring or testing for VOC, PM, PM_{10}, and $PM_{2.5}$ emissions from Kinder Morgan's heaters.

The Executive Director's response is incomplete, misconstrues Title V permitting requirements, and fails to rebut Petitioners' demonstration. Accordingly, the Administrator must object to the Proposed Permit.

B. The Proposed Permit Fails to Assure Compliance with Emission Limits and Operating Requirements Established by Permits by Rule Claimed by Kinder Morgan

1. Specific Grounds for Objection, Including Citation to Permit Term

The Proposed Permit is deficient because it fails to establish monitoring, reporting, and recordkeeping requirements that assure ongoing compliance with emission limits and operating requirements in Permits by Rule ("PBRs") claimed by Kinder Morgan.

Proposed Permit, Special Condition No. 14 provides that NSR permits—including PBRs—listed in the Proposed Permit's New Source Review Authorization References attachment are incorporated by reference into the Proposed Permit as applicable requirements.

Incorporated PBRs establish emission limits and operating requirements that apply for equipment and projects authorized by PBR at the Galena Park facility. Texas's general PBR rule at 30 Tex. Admin. Code § 106.4(a) also establishes emission limits that apply to the Galena Park facility.

Proposed Permit, New Source Authorization References attachment incorporates the following four PBRs claimed by Kinder Morgan to authorize emissions from five units in the permit area: 106.261 (11/01/2003), 106.263 (11/01/2001), 106.454 (11/01/2001), and 106.472 (09/04/2000). Proposed Permit at 72-74.

The PBRs at 106.261 and 106.472 do not specify any monitoring or testing requirements that operators must apply to demonstrate compliance with emission limits and operating requirements for projects authorized under those PBRs.

The PBR at 106.263 establishes general recordkeeping requirements consistent with Proposed Permit, Special Condition No. 16 (discussed below), but does not identify any specific monitoring or testing that Kinder Morgan must use to assure compliance with emission limits and operating requirements for projects authorized under that PBR. *See*, 30 Tex. Admin. Code § 106.263(g).

The PBR at 106.454 incorporates by reference testing methods required for degreasers under 30 Tex. Admin. Code § 115.415. *Id*. at § 106.454(1)(F). According to § 115.415(1) and (2), compliance with applicable Chapter 115 control requirements must be determined using one of several listed methods. 30 Tex. Admin. Code § 115.415(3) also allows the Executive Director to authorize an alternative method for determining compliance with applicable requirements. The Proposed Permit does not specify which of the testing methods, if any, identified in § 115.415(1) and (2) that Kinder Morgan must use to assure compliance with emission limits and operating requirements for projects authorized under the PBR at 106.454.

The Proposed Permit also includes the following recordkeeping requirement for emission units authorized by PBR:

> The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Proposed Permit, Special Condition No. 16.

The Proposed Permit also incorporates by reference "the general requirements of 30 TAC Chapter 106, subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR. *Id*. at Special Condition No. 15. While 30 Tex. Admin. Code § 106.8 establishes general recordkeeping requirements consistent with Proposed Permit, Special Condition No. 16, the rule does not specify any particular monitoring or testing requirements a source must use to determine and demonstrate compliance with applicable PBR emission limits and operating requirements.

The Statement of Basis provides the following statement regarding the sufficiency of monitoring in the Proposed Permit:

> Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).
>
> With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Statement of Basis at 26.

None of the Periodic Monitoring or CAM Summaries in the Proposed Permit address requirements in PBRs claimed by Kinder Morgan, *see* Proposed Permit at 62-63, and the Statement of Basis does not provide a reasoned justification for the Executive Director's determination that

existing provisions in PBRs claimed by Kinder Morgan assure compliance with applicable emission limits and operating requirements.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain monitoring, recordkeeping, and reporting conditions that assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1); *Wheelabrator Order* at 10. Emission limits and operating requirements in PBRs incorporated by reference into the Proposed Permit are applicable requirements. 40 C.F.R. § 70.2. The rationale for selected monitoring requirements must be clear and documented in the permit record. 40 C.F.R. § 70.7(a)(5); *Granite City I Order* at 7-8.

As explained below, the Proposed Permit is deficient because (1) it fails to specify monitoring methods that assure compliance with emission limits and operating requirements established by PBRs claimed by Kinder Morgan; and (2) the permit record does not contain a reasoned justification for the Executive Director's determination that monitoring methods included in the Proposed Permit assure compliance with emission limits and operating requirements in PBRs claimed by Kinder Morgan.

3. Inadequacy of the Permit Term

Neither the Proposed Permit nor the PBR rules listed in the Proposed Permit's New Source Review Authorization References attachment specify monitoring methods that assure compliance with applicable PBR emission limits and operating requirements. While the Proposed Permit does identify the TCEQ's general PBR rules at 30 Tex. Admin. Code, Subchapter A as applicable requirements, and includes Special Condition Nos. 15 and 16, which are related to PBR recordkeeping, these provisions do not specify which monitoring methods—*if any*—are necessary to assure compliance with PBR emission limits and operating requirements. Rather, these provisions provide a non-exhaustive menu of options that Kinder Morgan may pick at choose from

at its discretion to demonstrate compliance with PBR emission limits and operating requirements. The laundry list of option for monitoring compliance contained in Proposed Permit, Special Condition No. 16 is so vague as to be meaningless.

The Proposed Permit allows Kinder Morgan to determine which records and monitoring provide sufficiently "reliable data," effectively outsourcing the Executive Director's obligation to specify the monitoring method(s) that will assure compliance with each emission limit or standard established by PBRs incorporated by reference into the Proposed Permit. This vagueness also prevents EPA and the public from effectively evaluating whether the monitoring methods—if any—that Kinder Morgan uses to determine compliance with PBR requirements are consistent with Title V. For example, Petitioners would likely challenge monitoring that relies upon undefined "engineering calculations" to determine compliance, unless the permit record contained information show that such calculations actually assure compliance with applicable PBR emission limits and operating requirements.

Neither the Proposed Permit, nor the accompanying Statement of Basis provide support for the Executive Director's determination that the Proposed Permit specifies monitoring methods that assure compliance with PBR requirements. Because this is so, the Proposed Permit is deficient. *Wheelabrator Order* at 10.

4. Issues Raised in Public Comments

Commenters raised this issue on pages 8-10 of the Public Comments.

5. Analysis of State's Response

Petitioners demonstrated that the Proposed Permit fails to comply with 42 U.S.C. § 7661c(a) and (c) and 40 C.F.R. § 70.6(a) and (c) because it fails to specify monitoring methods that assure compliance with emission limits and operating requirements established by PBRs claimed by Kinder Morgan. The Executive Director responds (1) that he "disagrees that specific

monitoring has to be included for every PBR held at the site to assure compliance" and (2) that provisions in the Proposed Permit and other actions taken by Kinder Morgan are sufficient to assure compliance with PBR emission limits and operating requirements, even though the Proposed Permit does not identify specific monitoring and/or testing methods that assure compliance with those requirements. Response to Comments at 12-13. This response does not rebut Petitioners' demonstration that the Proposed Permit is deficient.

The Executive Director's blunt contention that the Proposed Permit needn't include monitoring methods that assure compliance with each PBR claimed by Kinder Morgan is incorrect. The Executive Director "does not have discretion to issue a permit without specifying the monitoring methodology needed to assure compliance with applicable requirements in the title V permit." *Wheelabrator Order* at 10; *see also*, 40 C.F.R. § 70.6(a)(3)(i).

Next, the Executive Director contends "that a combination of monitoring, recordkeeping, and reporting requirements (and not monitoring requirements by themselves) are often used to assure compliance with applicable state and federal regulations and terms and conditions of the permit. Response to Comments at 12. While it is true that monitoring and testing requirements may not assure compliance with applicable requirements in the absence of recordkeeping and reporting practices, it does not follow that monitoring and/or testing conditions are merely optional components of a Title V permit. The Clean Air Act is clear that Title V permits must contain monitoring and testing provisions that assure compliance with applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1). Moreover, the Executive Director has not demonstrated that the provisions he identifies in his Response to Comments assure compliance with emission limits and operating requirements in PBRs claimed by Kinder Morgan.

The first provision in the Proposed Permit that the Executive Director points to in support of his determination that the Proposed Permit assures compliance with PBR emission limits and operating requirements is Proposed Permit, Special Condition No. 16. Response to Comments at 12. As Commenters explained in their Public Comments and as Petitioners explain again above, Special Condition No. 16 fails to assure compliance with applicable PBR emission limits and operating requirements, because it gives Kinder Morgan complete discretion to decide how to demonstrate compliance with such requirements. Special Condition No. 16 does not identify monitoring and testing methods Kinder Morgan must use to assure compliance with PBR emission limits and operating requirements and the Executive Director has not explained how this special condition—on its own or in conjunction with other provisions in the Proposed Permit—assures compliance with these requirements.

Next, the Executive Director argues:

> Assurance of compliance and federal enforceability of units authorized under PBRs . . . is demonstrated by listed the PBR as a pre-construction authorization for one or more units in the New Source Review Authorization References by Emissions Unit table, Proposed Permit at pages 69-70, or by using a PBR registration and certification to make the emissions authorized by the PBR federally enforceable.

Id. at 12.

This response improperly conflates two different requirements. Because PBRs are federally-enforceable authorizations and are identified as "applicable requirements" in Texas's Title V rules, the Proposed Permit must include applicable PBR requirements. 40 C.F.R. § 70.6(a)(1). Because PBR emission limits and operating requirements are federally enforceable applicable requirements, the Proposed Permit must also include monitoring and testing provisions that assure compliance with PBR emission limits and operating requirements. *Id*. at § 70.6(a)(3) and (c)(1). The Executive Director's statement that listing claimed PBRs in the Proposed Permit assures compliance with applicable requirements addresses his § 70.6(a)(1) obligation to include

all applicable requirements in the Proposed Permit, but it does not address the issue that Petitioners have raised: that the Proposed Permit fails to specify monitoring and testing requirements that assure compliance with PBR emission limits and operating requirements, as required by § 70.6(a)(3) and (c)(1).

Next, the Executive Director argues that Kinder Morgan's submission of certified PBR registrations for projects authorized under the 106.261 and 106.263 PBRs is, by itself, sufficient to "assure[] federal enforceability of units authorized under PBRs in §§ 106.261 (11/01/2003) and 106.263 (11/01/2001)." Response to Comments at 13. This response is puzzling for two reasons. First, as Commenters explained in their Public Comments on the Draft Permit, the Proposed Permit actually fails to properly incorporate requirements in Kinder Morgan's certified PBR registrations. Public Comments at 17-19.[4] Second, the fact that Kinder Morgan submitted certified PBR registrations to the TCEQ has no bearing on the question at issue here: whether, consistent with 40 C.F.R. § 70.6(a)(3) and (c)(1), the Proposed Permit specifies monitoring methods that assure compliance with PBR requirements.

Finally, the Executive Director mentions that Kinder Morgan must submit annual compliance certifications, "which provides the vehicle for certifying compliance with all Title V permit requirements, including the requirements of all PBRs listed in the Proposed Permit[.]" Response to Comments at 13. The Executive Director, however, does not explain how the compliance certification process satisfies the requirement that each Title V permit specify monitoring sufficient to assure compliance with applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a)(3) and (c)(1). While Title V's monitoring requirements and compliance certification requirements are clearly related, they are separate requirements that must

[4] This issue is addressed directly on pages 27-39 of this Petition.

be independently met, and one does not obviate the need for the other. *Compare Id*. at § 70.6 (a)(3) and (c)(1) (monitoring requirements) with § 70.6(c)(5) (compliance certification requirements). The Executive Director also fails to explain how Kinder Morgan's obligation to submit an annual compliance certification rebuts Petitioners' demonstration that the Proposed Permit fails to specify monitoring and testing methods that assure compliance with applicable PBR emission limits and operating requirements.

The Executive Director's response to Petitioners' demonstration is incorrect, incomplete, and incoherent. Accordingly, the Administrator must object to the Proposed Permit.

C. The Proposed Permit Fails to Specify How Kinder Morgan Should Quantify Emissions from Various Units at the Galena Park Terminal to Assure Compliance with Emission Limits in the Nonattainment Permit

1. Specific Grounds for Objection, Including Citation to Permit Term

The Proposed Permit is deficient because it fails to sufficiently identify the methods for calculating emissions from various units at the Galena Park Terminal that assure compliance with hourly and annual emission limits established by Kinder Morgan's Nonattainment Permit. The Proposed Permit special conditions relevant to Petitioners' demonstration of this deficiency are the same as listed above in Section IV(A)(1) of this Petition.

2. Applicable Requirement or Part 70 Requirement Not Met

Each Title V permit must contain conditions "necessary to assure compliance with applicable requirements[.]" 42 U.S.C § 7661c(a); 40 C.F.R. § 70.6(a)(3) and (c)(1). Where an applicable requirement, like Kinder Morgan's Nonattainment Permit, establishes monitoring and analysis procedures that a permitting authority relies upon to assure compliance with emission limits, such procedures must be included in the source's Title V permit. 40 C.F.R § 70.6(a)(3)(A). The permit record for each Title V permit must also explain how monitoring and testing procedures

included in the Title V permit assure compliance with applicable emission limits. 40 C.F.R. § 70.7(a)(5).

3. Inadequacy of the Permit Term

The Proposed Permit is deficient because it fails to specify and sufficiently incorporate requirements necessary to assure compliance with emission limits established by Kinder Morgan's Nonattainment Permit.

a. Tank Emissions

Nonattainment Permit, Special Condition No. 18 provides that "[e]missions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit." This special condition does not assure compliance with hourly and annual VOC limits listed in the Nonattainment Permit's MAERT, because it does not identify the methods Kinder Morgan used to calculate tank emissions in its application(s), does not identify the application(s) that contains the relevant information, does not describe how this information should be applied to determine emissions from Kinder Morgan's storage tanks, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) assure compliance with applicable emission limits. *Granite City I Order* at 43 ("In order for incorporation by reference to be used in a way that fosters public participation and results in a title V permit that assures compliance with the Act, it is important that: (1) referenced documents be specifically identified; (2) descriptive information such as the title or number of the document and the date of the document be included so that there is no ambiguity as to which version of a document is being referenced; and (3) citations, cross references, and incorporations by reference are detailed enough that the manner in which any

referenced material applies to a facility is clear and is not reasonably subject to misinterpretation.").

b. Loading Emissions

Nonattainment Permit, Special Condition Nos. 25(G) and 28 require Kinder Morgan to maintain records calculating emissions and tracking various operational parameters related to loading activities at the Galena Park Terminal. These special conditions do not, however, explain how Kinder Morgan is to calculate loading emissions or how the parametric information should be used to assure compliance with hourly and annual emission limits in the Nonattainment Permit. Instead, the special conditions only state that "emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit" without identifying the relevant methods or application(s).

These special conditions do not assure compliance with the Nonattainment Permit's emission limits and conditions for loading operations, because they do not identify the methods Kinder Morgan used to calculate loading emissions in its application(s), do not identify the application(s) that contain the relevant information, do not describe how this information should be applied to determine actual emissions from loading operations, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirements in the Nonattainment Permit assure compliance with emission limits and conditions for loading operations. *Granite City I Order* at 43.

c. Tank Landing Emissions

Nonattainment Permit, Special Condition No. 37(G) requires Kinder Morgan to maintain records regarding tank landings at the Galena Park Terminal and to estimate emissions from these activities. According to the Nonattainment Permit, "[t]he emissions associated with roof landing

activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 'Compilation of Air Pollution Emission Factors, Chapter 7—Storage of Organic Liquids' dated November 2006 and the permit application." Emissions from tank landings must be calculated to determine compliance with limits in the Nonattainment Permit's MAERT as well as the 5 ton per year limit on tank transfer emissions established by Special Condition No. 20 of the same permit.

Special Condition No. 37 does not assure compliance with the Nonattainment Permit's emission limits and conditions, because it does not identify the methods Kinder Morgan used to calculate tank landing emissions in its application(s), does not identify the application(s) that contain the relevant information, does not describe how this information should be applied to determine actual emissions from loading operations, does not describe how application information should be used with the identified AP-42 method, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirement in Nonattainment Permit, Special Condition No. 37 assures compliance with the applicable conditions and emission limits. *Granite City I Order* at 43.

d. Tank Transfer Emissions

Nonattainment Permit, Special Condition No. 20 provides that "[e]missions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site . . . is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period." To demonstrate compliance with this limit, the Nonattainment Permit requires Kinder Morgan to quantify emissions associated with working losses from filling, refilling, and loading. According to the Nonattainment Permit, "[t]ank emissions shall be determined and documented in accordance with Special Conditions 18 and 37, as applicable. Loading emissions shall be determined and documented in accordance with Special Condition 28."

These provisions fail to assure compliance with this limit, because, as explained above, the Proposed Permit does not identify the calculation methods required by Special Condition Nos. 18, 28, and 37, and because the permit record does not demonstrate that these methods reliably indicate actual emissions from units at the Galena Park Terminal over any of the relevant averaging periods.

e. Planned Maintenance, Startup, and Shutdown Emissions

Nonattainment Permit, Special Condition Nos. 34-40 authorize and establish various requirements related to emissions during planned maintenance, startup, and shutdown ("MSS") activities at the Galena Park Terminal. These special conditions require Kinder Morgan to calculate emissions from planned MSS activities to demonstrate compliance with the Nonattainment Permit's emission limits and operating requirements. The Nonattainment Permit, however, does not explain how Kinder Morgan must calculate planned MSS emissions to assure compliance with the applicable limits, and instead refers to methods and information contained in Kinder Morgan's Nonattainment Permit application(s).

These special conditions do not assure compliance with the Nonattainment Permit's emission limits and operating requirements for planned MSS activities, because they do not identify the methods and information that Kinder Morgan used in its application(s), do not identify the application(s) that contains the relevant information, do not describe how this information should be applied to determine emissions from planned MSS activities, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirements in the Proposed Permit assure compliance with the applicable operating requirements and emission limits established by the Nonattainment Permit. *Granite City I Order* at 43.

4. Issues Raised in Public Comments

Commenters raised this issue on pages 10-12 of the Public Comments.

5. Analysis of State's Response

The Executive Director's Response to Comments fails to rebut Petitioners' demonstration that the Proposed Permit is deficient. First the Executive Director simply lists the special conditions in the Nonattainment Permit that establish monitoring requirements for various units at the Galena Park Terminal. Response to Comments at 13. This list of special conditions does not shed any light on the question of how Kinder Morgan must calculate emissions from storage tanks, loading activities, tank roof landings, tank transfers, or planned MSS activities; it does not explain where the applicable calculation methodologies can be found; and it does not explain why the Proposed Permit need not identify relevant emission calculation methods that assure compliance with emission limits and operating requirements for these units and activities. Nor does the Executive Director's response explain why emission calculation methods used to derive emission limits in the Nonattainment Permit are also reliable indicators of actual emissions from units at the Galena Park Terminal that assure compliance with applicable emission limits and operating requirements.

Second, the Executive Director mentions that Kinder Morgan must submit annual compliance certifications, "which provides the vehicle for certifying compliance with all Title V permit requirements." Response to Comments at 13. The Executive Director, however, does not explain how Kinder Morgan's obligation to submit an annual compliance certification rebuts Petitioners' demonstration that the Proposed Permit fails to identify the emission calculation methods Kinder Morgan must use to assure compliance with emission limits and operating requirements established by the Nonattainment Permit.

The Executive Director failed to engage Petitioners' demonstration and did not explain how monitoring and testing requirements listed in his Response to Comments assure compliance with emission limits and operating requirements in the Nonattainment Permit. The Proposed

Permit is deficient, the Executive Director's Response to Comments is incomplete, and the Administrator must object to the Proposed Permit.

D. The Proposed Permit Fails to Identify and Incorporate Certified PBR Registrations as Applicable Requirements

1. Specific Grounds for Objection, Including Citation to Permit Term

The Proposed Permit is deficient because it fails to include source-specific applicable requirements for the Galena Park Terminal. Texas's rule at 30 Tex. Admin. Code § 106.6 allows operators to certify emission rates for PBR projects that are more stringent than the generic limits established by Texas's general PBR rule at 30 Tex. Admin. Code § 106.4. Certified PBR emission rates and representations in a certified PBR registration are federally enforceable requirements. 30 Tex. Admin. Code § 106.6(a) ("An owner or operator may certify and register the maximum emission rates from facilities permitted by rule . . . in order to establish federally-enforceable emission rates which are below the limitations in § 106.4 of this title[.]"). Kinder Morgan has certified the following source-specific emission rates for units authorized by PBR at the Galena Park Terminal:[5]

Certified Registration Number 105434, PBR 106.261, 106.263, and 106.478

EPN / Emission Source	VOC		NO_x		CO		SO_2	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	Tpy
12-26/Storage Tank	0.63	0.74						
12-27/Storage Tank	0.63	0.74						
12-4/Storage Tank	0.63	0.74						
TR-10/TT/RC Rack	1.31	0.14						
VCU-1a/VCU1b/Barge and Truck Loading VCU	4.93	0.53	1.43	0.16	2.85	0.32	<0.01	<0.01

[5] The Certified PBR Registration Letters issued by the TCEQ for these authorizations are included in Public Comments, Attachment 3.

FUG	0.05	0.24						
TK-ATMDEGAS/Post Control Degassing	0.68	0.01						
Port TO/Portable Thermal Oxidizer	2.73	0.01	0.75	<0.01	1.51	0.01		
TOTAL EMISSIONS:	11.60	3.16	2.18	0.16	4.35	0.33	<0.01	<0.01

Certified Registration number 118052, PBR 106.261 and 106.262 (October 3, 2014)

EPN / Emission Source		
	lbs/hr	**Tpy**
12-29	0.04	0.027
25-18	0.068	0.027
25-4	0.023	0.027
12-05	0.047	0.044
25-13	0.031	0.044
12-12	0.052	0.055
12-09	0.015	0.001
80-13	0.039	0.084
TOTAL EMISSIONS:	0.32	0.31

Certified Registration Number 114179, PBR 106.261, 106.262, 106.472 (January 2, 2014)

EPN / Emission Source	**VOC**	
	lbs/hr	**Tpy**
RRACK (106.492)	47.68	2.69
FUG (106.261/262)	0.06	0.27
TOTAL EMISSIONS:		2.96

Certified Registration Number 130986, PBR 106.261 (April 28, 2015)

EPN / Emission Source	VOC	
	lbs/hr	Tpy
Fugitives/Truck Rack #14	0.074	0.325
TOTAL EMISSIONS:	0.074	0.325

Certified Registration Number 112072, PBR 106.262 (October 11.2013)

EPN / Emission Source	VOC	
	lbs/hr	Tpy
Tank 25-11	0.00072	0.001415
TOTAL EMISSIONS:		<0.01

Certified Registration Number 131940, PBR 106.261 (June 12, 2015)

EPN / Emission Source	VOC	
	lbs/hr	Tpy
Fug/Fugitives	0.01	0.06
TOTAL EMISSIONS:		0.06

Certified Registration Number 101674, PBR 106.261, 106.262, 106.263, and 106.478 (May 8, 2012)

Represented Emissions:	
VOCs	0.07 tpy
Acetone	0.90 tpy
NO_x	0.05 tpy
CO	0.10 tpy
SO_2	<0.01 tpy

Certified Registration Number 103829, PBR 106.261, 106.263, and 106.478 (July 19, 2012)

Represented Emissions:	
VOC	0.61 tpy
NO_x	0.31 tpy
CO	0.61 tpy
SO_2	<0.01 tpy

Certified Registration Number 136126, PBR 106.261 (February 5, 2016) (Exhibit F):

EPN / Emission Source	**VOC**	
	lbs/hr	**tpy**
FU1G-BLS / Fugitives-Butane Loading and Storage	0.03	0.13
TOTAL EMISSIONS:	0.03	0.13

The Proposed Permit, however, does not contain any condition or table that identifies Kinder Morgan's certified PBR registrations as applicable requirements. The Statement of Basis for the Proposed Permit is also silent about certified PBR registrations claimed by Kinder Morgan and does not even explain what a certified PBR registration is.

2. Applicable Requirement or Part 70 Requirement Not Met

Title V permits must include and assure compliance with all applicable requirements. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a) and (c). "Applicable requirements" include certified PBR registrations established under 30 Tex. Admin. Code § 106.6. 30 Tex. Admin. Code § 122.10(2)(H).

The Galena Park Terminal is located in the HGB severe ozone nonattainment area. Accordingly, Kinder Morgan is required to conduct netting to determine major NSR applicability for any construction or modification that has the potential to increase NO_x or VOC emissions more

than 5 tons per year. *Id*. at § 116.150(c).[6] Certified PBR emission limits established under 30 Tex. Admin. Code § 106.6 to avoid NNSR netting requirements must be practicably enforceable to effectively limit facility potential to emit and assure compliance with NNSR requirements.

3. Inadequacy of the Permit Term

a. The Proposed Permit Fails to Include All Applicable Requirements

While the Proposed Permit incorporates by reference TCEQ's general PBR rules and identifies four PBRs claimed by Kinder Morgan, it does not indicate that Kinder Morgan has certified emission rates lower than those established by Texas's PBR rules, incorporate the applicable source-specific emission limits established by applicable certified PBR registrations, explain which units are subject to source-specific certified PBR limits, or specify how compliance with these source-specific limits is assured. The Proposed Permit is deficient because it fails to identify applicable source-specific emission limits established through the PBR certification process. 42 U.S.C. § 7661c(a); 40 C.F.R. 70.6(a).

b. The Proposed Permit Does Not Assure Compliance with Major New Source Review Requirements

The Galena Park Terminal is a major source of air pollution located in the HGB severe ozone nonattainment area. Accordingly, the TCEQ's preconstruction permitting requirements for major sources in attainment or unclassified areas, 30 Tex. Admin. Code § 116, Division 6, and nonattainment areas, *Id*. at Division 5, are applicable requirements. The TCEQ's nonattainment preconstruction permitting rules require Kinder Morgan to conduct netting to determine projects that have the potential to increase NOx or VOC emissions from the Terminal by more than 5 tons per year to determine whether the projects trigger nonattainment NSR preconstruction permitting

[6] If and when Harris County is designated as attainment for the revoked 1-hour ozone standard, the netting trigger will increase to 40 tpy of NO_x or VOC, because the County is also designated as a marginal nonattainment area for the 2008 eight-hour ozone standard. *Id*. at § 116.150(c)(2).

requirements. *Id*. at § 116.150(c). Texas's general PBR requirements provide that facilities authorized by PBR may emit up to 250 tpy of NO_x and 25 tpy of VOC. *Id.* at § 106.4(a)(1). These limits exceed the applicable netting threshold for NO_x and VOC. *Id.* at § 116.150(c). To avoid netting requirements that would otherwise be triggered by potential VOC and NO_x increases authorized for PBR projects subject only to the § 106.4(a)(1) limits, Kinder Morgan has certified PBR emission rates at levels lower than the general limits.

To effectively limit the units' potential to emit, Kinder Morgan's certified PBR registrations must be federally and practicably enforceable. *Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and § 112 Rules and General Permits*, Katie A. Stein, Director, Air Enforcement Division ("Enforceability Guidance") (January 25, 1995). The Enforceability Guidance contains the following statement clarifying EPA's policy concerning rules, like § 106.6, which allow operators claiming a general permit to accept limits lower than provided by the general permit to avoid NNSR netting requirements:

> A rule that allows sources to submit the specific parameters and associated limits to be monitored may not be enforceable because the rule itself does not set specific technical limits. The submission of these voluntarily accepted limits on parameters or monitoring requirements would need to be federally enforceable. Absent a source-specific permit and appropriate review and public participation of the limits, such a rule is not consistent with EPA's enforceability principles.

Id. at 8.

Thus, to ensure that certified PBR registrations limiting the potential to emit of units at the Galena Park Terminal are enforceable, the Executive Director must incorporate the certified limits and operating requirements into the Proposed Permit as source-specific NSR requirements. Otherwise, the only clearly-enforceable limits for PBR units at the Galena Park Terminal under the Proposed Permit will be those established by 30 Tex. Admin. Code § 106.4(a)(1) and the claimed PBR rules (*e.g.*, §§ 106.261, 106.262, 106.263, 106.474), which are not low enough to

prevent PBR facilities from triggering major NSR netting and preconstruction permitting requirements.

4. Issues Raised in Public Comments

Commenters raised this issue on pages 17-19 of their Public Comments. Copies of applicable certified PBR registrations are included in Public Comments, Attachment 3. Commenters did not specifically identify Registration No. 136126 in their Public Comments, because this registration was issued after the close of the public comment period. Because the Proposed Permit's failure to incorporate this certified PBR registration is a deficiency that arose after the close of the public comment period, it may be raised in this Petition for the first time. 42 U.S.C. § 7661d(b)(2).

5. Analysis of State's Response

The Executive Director's Response to Comments includes an extended discussion of the TCEQ's PBR permitting practices that addresses Commenters' demonstration that the Draft Permit was deficient because it failed to incorporate Kinder Morgan's certified PBR registrations along with other concerns that Petitioners declined to include in this Petition. Response to Comments at 18-21. Because the Executive Director's response lumps different issues together without clear headings, it was difficult for Petitioners to determine which sections of the response are intended to address the present point. To ensure that Petitioners' analysis of the State's response is comprehensive, this section will address the Executive Director's entire response, point by point.

First, the Executive Director explains that Texas's Chapter 106, Subchapter A PBR rules are part of Texas's federally-approved State Implementation Plan ("SIP") and that all current and historical PBRs are available on the TCEQ website for review. *Id.* at 18-19. Petitioners do not dispute either of these claims. Texas's Chapter 106 rules, however, do not contain any information

about the source-specific certified PBR registration requirements that apply to units at the Galena Park Terminal.

Next, the Executive Director explains that a PBR is only available to sources that belong to categories for which the Commission has adopted a PBR and that a PBR cannot be used to amend an NSR permit. *Id*. at 19. While these claims are misleading, they do not—even if true—rebut Petitioners' demonstration that the Proposed Permit is deficient. The first claim—that PBRs may only be claimed for a limited category of sources—is misleading, because (1) the TCEQ allows major sources, which are not a category of source for which the TCEQ has adopted a PBR, to claim PBRs to authorize construction or modification of equipment; and (2) the TCEQ's Chapter 106, Subchapter K General PBRs are catchall permits that may be used to authorize virtually any kind of project, so long as emissions remain below the § 106.4(a)(1) limits.

The Executive Director's second claim—that PBRs may not be used to amend an NSR permit—is misleading because § 116.116(d) allows operators to obtain a PBR "in lieu of permit amendment or alteration." So, while a PBR may not be used to directly change language in an existing NSR permit, a PBR *may* be used to change requirements in an existing permit. The claim that revising permit requirements without revising the existing permit is not a "permit amendment" is a distinction without a difference.

Next, the Executive Director explains that it has "been longstanding TCEQ policy to not list specific emission units in the Title V permit where the sole applicable requirement is the underlying NSR authorization as stated under the Reading State of Texas's Federal Operating Permit section of the Statement of Basis," and that "EPA has approved the incorporation by reference for minor NSR requirements including PBRs[.]" *Id.* at 19. These claims have no bearing on Petitioners' demonstration that the Proposed Permit is deficient because it fails to incorporate

Kinder Morgan's certified PBR registrations. Nonetheless, it worth mention that EPA has already rejected the TCEQ's policy of omitting emission units subject to NSR requirements as contrary to Title V requirements. *Deer Park Order* at 15 ("The EPA does not agree with the TCEQ's interpretation that *White Paper Number 1* and *White Paper Number 2* support the practice of not listing in the title V permit those emission units to which generic requirements apply."). Additionally, while EPA has not objected to Texas's policy of incorporating minor NSR permits into Title V permits by reference, EPA *has* objected to incorporation by reference where a Title V permit fails to provide enough information to all the reader to determine how incorporated requirements apply to units at the permitted source. *Id*. at 11-16. In this case, the Proposed Permit does not actually incorporate Kinder Morgan's certified PBR registrations by reference, so EPA's tacit acceptance of the TCEQ's use of incorporation by reference has no bearing on Petitioners' demonstration.

Next, the Executive Director explains:

> However, the Proposed Permit was revised to clarify which emission units at the facility are subject to limits in the claimed PBRs and to delete unused PBRs. Specifically, the New Source Review Authorization References table (Proposed Permit at page 68), was revised to delete permit by rules (PBRs) in §§ 106.262, 106.263 (09/04/2000) and 106.511 since units authorized by these PBRs were not installed. The New Source Review Authorization References by Emissions Unit table, Proposed Permit at pages 69-70 table states which emission units at the facility are subject to limits in registered PBRs. Therefore, the New Source Review Authorization Reference table identifies all PBRs that apply to the facility, and includes PBRs that apply to specific units listed in the Proposed Permit as required. The table incorporates the requirements of all of KMCC's NSR Permits, including PBRs, by reference. All emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance are specified in the PBR, incorporated by reference, or cited in the Proposed Permit. If the emission limitation or standard is not specified in the referenced PBR, then the emissions authorized under permit by rule from the facility are specified in § 106.4(a)(1).

Response to Comments at 19.

The Executive Director's decision to remove PBRs 106.262 and 106.263 is not supported by the fact that equipment authorized by these PBRs has not been installed. As indicated above, certified PBR registrations for 106.262 and 106.263 projects remain active authorizations for the Galena Park Terminal. Whether or not the authorized equipment has been installed, the PBRs establish applicable requirements that must be included in the Proposed Permit. *In the Matter of EME Homer City Generation*, Order on Petition Nos. III-2012-06, III-2012-07, and III-2013-023, at 30-31 (July 30, 2014) (finding that SO_2 limits in preconstruction authorization that would become applicable after completion of construction projects could not be omitted from Title V permit on ground that construction project was ongoing at the time of issuance).

The Executive Director's claim that all applicable PBR emission limits are cited in the Proposed Permit is incorrect. While the Proposed Permit does identify various rules that establish generic limits for PBR projects, it does not cite, incorporate, or identify Kinder Morgan's certified PBR registrations that establish source-specific emission limits that are lower than the emission limits in the incorporated rules.

Next, the Executive Director takes aim at Petitioners' demonstration that the Proposed Permit fails to assure compliance with major NSR requirements:

> In regards to the Commenter's assertion "Matters are even more complicated than this, because Texas's rules allow Kinder Morgan to certify and register PBR emissions at levels that are lower than the limits specified by the applicable rules to avoid triggering NNSR and/or PSD netting requirements" is without merit since 30 TAC § 106.4 requires the Applicant to certify that: 1) the permitted facility qualifies for the use of the PBR, and 2) compliance with 30 TAC §§ 106.4(a)(2) and (3) prevents the use of PBRs if the project triggers federal (PSD or NA) review. Specifically, Applicant must "ensure that any applicable netting requirements have been satisfied" and must keep records according to 30 TAC § 106.8 to be able to demonstrate compliance with the PBR requirements. Additionally, the Applicant certifies in a registered and/or certified PBR that the application will not in any way

> violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. Furthermore, Applicant must file annual emissions inventory (EI) report for the site that is publicly accessible. The EI report may be used by the public to determine if there are any significant emission changes at the site that may potentially trigger NA and/or PSD netting requirements.

Response to Comments at 19.

The Executive Director's reliance on Kinder Morgan's representation that certified PBR projects at the Galena Park Terminal will not violate any TCEQ requirement incorrectly presumes that the representation is practicably enforceable, even if the certified PBR registrations including that statement are not incorporated by the Proposed Permit. Petitioners respond that the Proposed Permit's failure to identify Kinder Morgan's certified PBR registrations as applicable requirements undermines the enforceability of Kinder Morgan's representation, just as it undermines the enforceability of emission limits and representations made as part of the certified PBR registration process. Kinder Morgan's certified PBR registrations establish limits necessary to avoid triggering NNSR netting requirements. These limits are applicable requirements that must be included in the Proposed Permit. 42 U.S.C. § 7661c(a) and (c); 40 C.F.R. § 70.6(a) and (c). Kinder Morgan's promise that it will not break any laws or rules does not relieve the Executive Director of his duty to include all applicable requirements in the Proposed Permit.

While the Executive Director's claim that members of the public may use EI data to determine whether Kinder Morgan has violated NNSR requirements has no bearing on the question of whether the Proposed Permit must include Kinder Morgan's certified PBR registrations, it is worth noting that the Executive Director has taken the position that EI data may *not* be used to demonstrate that projects at a major source have violated NNSR requirements. *See*, *An Order*

Concerning the Application of ExxonMobil for Issuance of Air Quality Permit No. 102982, TCEQ Docket No. 2013-0657-AIR, Findings of Fact 88-92.[7]

Specifically, when parties opposing issuance of ExxonMobil's NSR permit argued that EI data demonstrated that ExxonMobil had already exceeded the major modification applicability threshold for PM established by its PAL permit, the Executive Director and the TCEQ Commissioners took the position that EI data was irrelevant to the question of whether major NSR requirements had been triggered. *Id*.

Next, the Executive Director provides a lengthy explanation of how the TCEQ's PBR program works, including an explanation of the Proposed Permit's PBR incorporation by reference and recordkeeping special conditions, and an acknowledgement that operators may certify PBR emission limits. Response to Comments at 20-21. Proposed Permit, Special Condition No. 14—which incorporates PBRs listed in the Proposed Permit's New Source Review Authorization References attachment, however, does not actually incorporate any of Kinder Morgan's certified PBR registrations, *because the certified registrations are not listed in the Proposed Permit's New Source Review Authorization References attachment*. *See*, Proposed Permit at 72. The same problem applies to the Executive Director's reliance on the Proposed Permit's PBR recordkeeping requirement, Special Condition No. 16, because that requirement only applies to PBRs "listed in the New Source Review Authorizations attachment."

After this scattered discussion of various elements of the TCEQ's PBR permitting program that does not actually address Petitioners' demonstration, the Executive Director concludes:

> Therefore, the Proposed Permit assures that the Applicant must comply with any applicable emission limitation or standard for facilities that are permitted by PBRs

[7] Available electronically at: http://www14.tceq.texas.gov/epic/eCID/index.cfm?fuseaction=main.download&doc_id=220514422014050&doc_name=OrderPermit%202013%2D0657%2DAIR%2Epdf&requesttimeout=5000

> and SEs. These requirements assure compliance and enforceability of PBRs and SEs. In addition, the Applicant must periodically submit permit compliance certification (PCC) and deviation reports to assure compliance with the requirements of the Proposed Permit, including Permit No. 101199/N158 and all PBRs and SEs listed on the Proposed Permit at page 68. The annual PCCs are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request. Therefore, compliance and enforceability of the Proposed Permit requirements, including PBRs is assured.

The Executive Director's conclusion does not follow because requirements in Kinder Morgan's certified PBR registrations are not actually incorporated into the Proposed Permit. While Kinder Morgan is required to certify compliance "with the requirements of the Proposed Permit, including Permit No. 101199/N158 and all the PBRs and SEs listed on Proposed Permit at page 68," Kinder Morgan's certified PBR registrations are not listed on page 68 or anywhere else in the Proposed Permit. The Proposed Permit is deficient because it fails to incorporate Kinder Morgan's certified PBR registrations and because the Executive Director has not explained how the Proposed Permit assures compliance with the omitted certified PBR requirements. Accordingly, the Administrator must object to the Proposed Permit.

V. CONCLUSION

For the foregoing reasons, and as explained in Commenters' timely-filed public comments, the Proposed Permit is deficient. The Executive Director's Response to Comments also failed to address Commenters' significant comments. Accordingly, the Clean Air Act requires the Administrator to object to the Proposed Permit.

Sincerely,

/s/_Gabriel Clark-Leach_

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EXHIBIT A

Draft Permit No. O3764

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Kinder Morgan Crude & Condensate LLC

AUTHORIZING THE OPERATION OF
Galena Park Terminal
Crude Condensate Splitter
Special Warehousing and Storage

LOCATED AT
Harris County, Texas
Latitude 29° 43' 58" Longitude 95° 13' 13"
Regulated Entity Number: RN100237452

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O3764 Issuance Date: _____

_____
For the Commission

Table of Contents

Section **Page**

General Terms and Conditions 1

Special Terms and Conditions 1

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting 1

Additional Monitoring Requirements 9

New Source Review Authorization Requirements 9

Compliance Requirements 10

Risk Management Plan 12

Permit Location 12

Permit Shield (30 TAC § 122.148) 12

Attachments 13

Applicable Requirements Summary 14

Additional Monitoring Requirements 59

Permit Shield 61

New Source Review Authorization References 67

Appendix A 71

Acronym List 72

Appendix B 73

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart CC, EEEE, ZZZZ and DDDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §§ 113.340, 113.880, 113.1090 and 113.1130, which incorporates the 40 CFR Part 63 Subpart by reference.

F. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:

(i) Title 30 TAC § 101.352 (relating to General Provisions)

(ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)

(iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)

(iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)

(v) Title 30 TAC § 101.358 (relating to Emission Monitoring and Compliance Demonstration)

(vi) Title 30 TAC § 101.359 (relating to Reporting)

(vii) Title 30 TAC § 101.360 (relating to Level of Activity Certification)

(viii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as

plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

C. Permit holders for sites that have materials handling, construction, roads, streets, alleys, and parking lots shall comply with the following requirements:

(i) Title 30 TAC § 111.143 (relating to Materials Handling)

(ii) Title 30 TAC § 111.145 (relating to Construction and Demolition)

(iii) Title 30 TAC § 111.147 (relating to Roads, Streets, and Alleys)

(iv) Title 30 TAC § 111.149 (relating to Parking Lots)

D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: Storage of Volatile Organic Compounds, the permit holder shall comply with the requirements of 30 TAC § 115.112(e)(1).

5. For industrial wastewater specified in 30 TAC Chapter 115, Subchapter B, the permit holder shall comply with the following requirements:

A. Title 30 TAC § 115.145 (relating to Approved Test Methods)

B. Title 30 TAC § 115.146 (relating to Recordkeeping Requirements)

C. Title 30 TAC § 115.147(1) (relating to Exemptions)

D. Title 30 TAC § 115.148 (relating to Determination of Wastewater Characteristics)

E. Title 30 TAC § 115.147(7), (7)(A) and (B) (relating to Exemptions)

6. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter D requirements:

A. Title 30 TAC § 115.312(a)(1) (relating to Control Requirements), for emissions during Process Unit Shutdown or Turnaround

B. Title 30 TAC § 115.316(a)(2) (relating to Recordkeeping Requirements), for Process Unit Shutdown or Turnaround

7. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

8. For petroleum refinery facilities subject to 40 CFR Part 60, Subpart QQQ, the permit holder shall comply with the following requirements:

A. Title 40 CFR § 60.692-1(a) - (c) (relating to Standards: General)

B. Title 40 CFR § 60.692-2(a) - (c), (e) (relating to Standards: Individual Drain Systems)

C. Title 40 CFR § 60.692-6(a) - (b) (relating to Standards: Delay of Repair)

D. Title 40 CFR § 60.692-7(a) - (b) (relating to Standards: Delay of Compliance)

E. Title 40 CFR § 60.693-1(a) - (d), (e)(1) - (3) (relating to Alternative Standards for Individual Drain Systems)

F. Title 40 CFR § 60.697(a), (b)(1) - (3) (relating to Recordkeeping Requirements), as applicable to Individual Drain Systems

G. Title 40 CFR § 60.697(f)(1) - (2), (g) (relating to Recordkeeping Requirements), as applicable to Individual Drain Systems

H. Title 40 CFR § 60.697(h) (relating to Recordkeeping Requirements), as applicable to excluded Stormwater Sewer Systems

I. Title 40 CFR § 60.698(a), and (b)(1) (relating to Reporting Requirements), as applicable to Individual Drain Systems

J. Title 40 CFR § 60.698(c) (relating to Reporting Requirements), for water seal breaches in Drain Systems

K. Title 40 CFR § 60.698(e) (relating to Reporting Requirements), as applicable to Individual Drain Systems

9. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:

   A. Title 40 CFR § 61.05 (relating to Prohibited Activities)

   B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)

   C. Title 40 CFR § 61.09 (relating to Notification of Start-up)

   D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)

   E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)

   F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)

   G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)

   H. Title 40 CFR § 61.15 (relating to Modification)

   I. Title 40 CFR § 61.19 (relating to Circumvention)

10. For facilities where total annual benzene quantity from waste is less than 1 megagram per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:

   A. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures

   B. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

   C. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)

   D. Title 40 CFR § 61.357(a), and (b) (relating to Reporting Requirements)

11. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

12. For sources subject to emission standards in 40 CFR Part 63, Subpart CC, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.340 incorporated by reference):

A. Title 40 CFR § 63.640(l)(3) - (4) (relating to Applicability and Designation of Affected Source), for units and equipment added to an existing source

B. Title 40 CFR § 63.640(m)(1) - (2) (relating to Applicability and Designation of Affected Source), for units and emission points changing from Group 2 to Group 1 status

C. Title 40 CFR § 63.642(c) (relating to General Standards), for applicability of the General Provisions of Subpart A

D. Title 40 CFR § 63.642(e) (relating to General Standards), for recordkeeping

E. Title 40 CFR § 63.642(f) (relating to General Standards), for reporting

Additional Monitoring Requirements

13. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

14. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

A. Are incorporated by reference into this permit as applicable requirements

B. Shall be located with this operating permit

C. Are not eligible for a permit shield

15. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

16. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

17. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

18. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:

    A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:

        (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:

            (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)

    B. The permit holder shall comply with the Initial Control Plan unit listing requirement in 30 TAC § 117.350(c) and (c)(1).

    C. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.

19. Use of Emission Credits to comply with applicable requirements:

A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) Offsets for Title 30 TAC Chapter 116

B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)

(ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1

(iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

20. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

21. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Permit Location

22. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

23. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 15

Applicable Requirements Summary 22

Note: A "none" entry may be noted for some emission sources in this permit's "Applicable Requirements Summary" under the heading of "Monitoring and Testing Requirements" and/or "Recordkeeping Requirements" and/or "Reporting Requirements." Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
100-11	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-11	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-12	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-12	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-13	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	True Vapor Pressure = True vapor pressure is less than 1.0 psia
100-13	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia
100-13	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641), Existing Source = The storage vessel is at a new source., True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa), Emission Control Type = Fixed roof and an internal floating roof, Seal Type = Two seals mounted one above the other so that each forms a

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
100-13	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	Group 1 Storage Vessel = The storage vessel is a Group 2 vessel., Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-14	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-14	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
100-15	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-15	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
100-20	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-20	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-21	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
100-21	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-22	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-22	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-23	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-23	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-24	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-24	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
120-25	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-25	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
150-10	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
150-10	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
200-1	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
200-1	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
200-2	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
200-2	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
200-3	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
200-3	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	60Kb-01	40 CFR Part 60, Subpart Kb	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
DEGREASER	SOLVENT DEGREASING MACHINES	N/A	R5412-01	30 TAC Chapter 115, Degreasing Processes	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	R7303-01	30 TAC Chapter 117, Subchapter B	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	60JJJJ-01	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
F-101	PROCESS HEATERS/FURNACES	N/A	R7310-01	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = No second fuel
F-101	PROCESS HEATERS/FURNACES	N/A	R7310-02	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases
F-101	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-01	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas D-Series Fuel Type #2 = No second fuel
F-101	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-02	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural Gas D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.
F-101	FCCU CAT REGEN/FUEL GAS COMBUSTION/CLAUS SRU	N/A	60Ja-01	40 CFR Part 60, Subpart Ja	No changing attributes.
F-101	PROCESS HEATERS/FURNACES	N/A	63DDDDD-01	40 CFR Part 63, Subpart DDDDD	No changing attributes.
F-201	PROCESS HEATERS/FURNACES	N/A	R7310-01	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = No second fuel
F-201	PROCESS	N/A	R7310-02	30 TAC Chapter 117,	Fuel Type #1 = Natural gas

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	HEATERS/FURNACES			Subchapter B	Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases
F-201	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-01	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas D-Series Fuel Type #2 = No second fuel
F-201	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-02	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural Gas D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.
F-201	FCCU CAT REGEN/FUEL GAS COMBUSTION/CLAUS SRU	N/A	60Ja-01	40 CFR Part 60, Subpart Ja	No changing attributes.
F-201	PROCESS HEATERS/FURNACES	N/A	63DDDDD-01	40 CFR Part 63, Subpart DDDDD	No changing attributes.
FL-101	FLARES	N/A	R1111-01	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FL-101	FLARES	N/A	60A-01	40 CFR Part 60, Subpart A	No changing attributes.
FL-101	FCCU CAT REGEN/FUEL GAS	N/A	60Ja-02	40 CFR Part 60, Subpart Ja	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	COMBUSTION/CLAUS SRU				
FUG	FUGITIVE EMISSION UNITS	N/A	R5352-01	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	No changing attributes.
FUG	FUGITIVE EMISSION UNITS	N/A	60GGGa	40 CFR Part 60, Subpart GGGa	No changing attributes.
FUG	FUGITIVE EMISSION UNITS	N/A	63EEEE	40 CFR Part 63, Subpart EEEE	No changing attributes.
MISC-ADH	SURFACE COATING OPERATIONS	N/A	R5471-01	30 TAC Chapter 115, Subchapter E, Division 7	No changing attributes.
TK-101	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
100-11	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-11	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-12	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-12	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-13	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						division.			
100-13	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-13	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
100-13	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						process units meeting the criteria in paragraph (a) of this section are part of the affected source.		§ 63.655(i)(5)	§ 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-14	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-14	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
100-15	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-15	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
100-20	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the requirements of this division.			
100-20	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-21	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-21	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-22	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
120-22	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						process units meeting the criteria in paragraph (a) of this section are part of the affected source.		§ 63.655(i)(5)	§ 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-23	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
120-23	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-24	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						and condensate.			
120-24	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
120-25	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
120-25	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1)	Each owner or operator of a Group 1 storage vessel subject to this	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.646(b)(1)	§ 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
150-10	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
150-10	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
200-1	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
200-1	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
200-2	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						subsection (a)(1) of this paragraph for crude oil and condensate.			
200-2	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
200-3	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
200-3	EU	63CC-01	112(B)	40 CFR Part 63,	§ 63.646(a)	Each owner or operator	§ 63.120(a)(3)(i)	§ 63.120(a)(4)	§ 63.120(a)(5)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
			HAPS	Subpart CC	§ 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
5-0	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
5-0	EU	60Kb-01	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(B) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the	§ 60.113b(a)(1) [G]§ 60.113b(a)(3) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(4)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.116b(c) § 60.116b(e) § 60.116b(e)(1) § 60.116b(e)(2)(i)		
5-0	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
DEGREASER	EU	R5412-01	VOC	30 TAC Chapter 115, Degreasing Processes	§ 115.412(1) [G]§ 115.412(1)(A) § 115.412(1)(C) [G]§ 115.412(1)(F) § 115.417(1)	Cold solvent cleaning. No person shall own or operate a system utilizing a VOC for the cold solvent cleaning of objects without the controls listed in §115.412(1)(A)-(F).	[G]§ 115.415(1) § 115.415(3) ** See Periodic Monitoring Summary	None	None
EGEN-1	EU	R7303-01	EXEMPT	30 TAC Chapter 117, Subchapter B	§ 117.303(a)(6)(D)	Units exempted from the provisions of this division, except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1), and 117.354(a)(5), include stationary gas turbines and stationary internal combustion engines that are used exclusively in emergency situations, except that operation for testing or maintenance purposes is allowed for up to 52 hours per year, based on	None	§ 117.340(j) [G]§ 117.345(f)(6)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						a rolling 12-month average.			
EGEN-1	EU	60JJJJ-01	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 4.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(e)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4) § 60.4245(b)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)
EGEN-1	EU	60JJJJ-01	NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a NOx emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(d)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4) § 60.4245(b)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)
EGEN-1	EU	60JJJJ-01	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a VOC emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(f) § 60.4244(g)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4) § 60.4245(b)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)
EGEN-1	EU	63ZZZZ-	EXEMPT	40 CFR Part 63,	§ 63.6590(b)(1)	An affected source which	None	None	§ 63.6645(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
		01		Subpart ZZZZ	§ 63.6595(c) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).			§ 63.6645(f)
F-101	EU	R7310-01	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
F-101	EU	R7310-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-101	EU	R7310-01	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)		[G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-101	EU	R7310-02	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
F-101	EU	R7310-02	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-101	EU	R7310-02	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)		[G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-101	EU	60Db-01	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-01	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			
F-101	EU	60Db-01	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-01	NO_X	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-02	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.			§ 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-02	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-02	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-02	NO_X	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)		§ 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-101	EU	60Ja-01	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
F-101	EU	63DDDDD-01	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
F-201	EU	R7310-01	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101,	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(p)(1) § 117.340(p)(3)	Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-201	EU	R7310-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		[G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-201	EU	R7310-01	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-201	EU	R7310-02	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101,	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(p)(1) § 117.340(p)(3)	Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-201	EU	R7310-02	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		[G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-201	EU	R7310-02	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-201	EU	60Db-01	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.			§ 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-201	EU	60Db-01	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-01	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-01	NO_X	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)		§ 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-201	EU	60Db-02	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-201	EU	60Db-02	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						MMBtu/hr).			
F-201	EU	60Db-02	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-02	NO_X	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-201	EU	60Ja-01	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
F-201	EU	63DDDDD-01	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with	The permit holder shall comply with the applicable requirements	The permit holder shall comply with the applicable monitoring	The permit holder shall comply with the applicable	The permit holder shall comply with the applicable reporting

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	of 40 CFR Part 63, Subpart DDDDD	and testing requirements of 40 CFR Part 63, Subpart DDDDD	recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	requirements of 40 CFR Part 63, Subpart DDDDD
FL-101	EU	R1111-01	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FL-101	CD	60A-01	OPACITY	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(5) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(6)	None	None
FL-101	EU	60Ja-02	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(10)	Instrumentation systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet 40	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						CFR §63.169 (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(11)	Sampling connection systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet the requirements of 40 CFR §63.166(a) and (b) (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(2) § 115.352(9)	Each pressure relief valve equipped with a rupture disk must comply with §115.352(9) and §115.356(3)(C).	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(7) § 115.357(1)	No process drains shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter	§ 115.352(1)(A)	No process drains shall	§ 115.354(1)	§ 115.352(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				115, Pet. Refinery & Petrochemicals	§ 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(7)	be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(10) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) § 115.356(5)	
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(9) § 115.357(1) § 115.357(8) § 115.357(9)	No pressure relief valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(2) § 115.354(4) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(9) § 115.357(12) § 115.357(8)	No pressure relief valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(4) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.357(9)	based on sight, smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(1) § 115.357(8) § 115.357(9)	No open-ended valves or lines shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(12) § 115.357(8) § 115.357(9)	No open-ended valves or lines shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3)	No valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(1) § 115.357(8) § 115.357(9)	per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.357(1)		
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(12) § 115.357(8) § 115.357(9)	No valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(1) § 115.357(12) § 115.357(8)	No flanges or other connectors shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery	§ 115.352(1)(A) § 115.352(1)	No flanges or other connectors shall be	§ 115.354(1) § 115.354(10)	§ 115.352(7) § 115.354(10)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				& Petrochemicals	§ 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(12) § 115.357(8)	allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(4) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	[G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.357(1) § 115.357(8)	based on sight, smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(4) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	[G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(1) § 115.357(8)	parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	60GGGa-01	VOC	40 CFR Part 60, Subpart GGGa	[G]§ 60.590a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart GGGa	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart GGGa	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart GGGa	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart GGGa	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart GGGa
FUG	EU	63EEEE-01	112(B) HAPS	40 CFR Part 63, Subpart EEEE	§ 63.2338(b) The permit holder shall comply with the applicable limitation, standard and/or equipment	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart EEEE

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					specification requirements of 40 CFR Part 63, Subpart EEEE		EEEE		
MISC-ADH	PRO	R5471-01	VOC	30 TAC Chapter 115, Subchapter E, Division 7	§ 115.471(a) [G]§ 115.473(d)	The owner or operator of application processes located on a property with actual combined emissions of volatile organic compounds (VOC) < 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, is exempt from the requirements of this division, except as specified in §115.478(b)(2). When calculating the VOC emissions, adhesives and adhesive primers that are exempt under subsections (b) and (c) are excluded.	None	§ 115.478(b)(2) § 115.478(b)(4)	None
TK-101	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)

Additional Monitoring Requirements

Periodic Monitoring Summary.....60

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: DEGREASER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412-01
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Monthly	
Averaging Period: n/a	
Deviation Limit: Monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of 30 TAC 115.412(1)(A)-(F) shall be considered and reported as a deviation.	
Periodic Monitoring Text: Inspect equipment and record data monthly to ensure compliance with any applicable requirements in § 115.412(1)(A)-(F). Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of § 115.412(1)(A)-(F) shall be considered and reported as a deviation.	

Permit Shield

Permit Shield 62

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/ Inclusive Units		
100-11	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-11	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-12	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-12	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-13	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
100-13	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-14	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
100-14	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-15	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/ Inclusive Units		
100-15	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-20	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-20	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-21	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-21	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-22	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
120-22	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-23	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
120-23	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-24	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/ Inclusive Units		
			part 63, subpart CC.
120-24	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-25	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
120-25	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
150-10	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
150-10	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-1	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
200-1	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-2	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/ Inclusive Units		
200-2	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-3	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
200-3	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
5-0	N/A	40 CFR Part 60, Subpart QQQ	Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the standards in §60.112b and associated requirements are not subject to the requirements of §60.692-3.
CHILLER	N/A	40 CFR Part 63, Subpart CC	The unit does not meet the definition of a heat exchange system because it does not use water to cool down the process stream.
FUG	N/A	40 CFR Part 63, Subpart CC	Equipment leaks that are also subject to the provisions of 40 CFR part 60, subpart GGGa, are required to comply only with the provisions specified in 40 CFR part 60, subpart GGGa.
TK-101	N/A	30 TAC Chapter 115, Storage of VOCs	Process tanks/vessels are not included in the definition of a storage tank.
TK-101	N/A	40 CFR Part 60, Subpart Kb	Process tanks/vessels are not included in the definition of a storage vessel.
TK-102	N/A	30 TAC Chapter 115, Storage of VOCs	Process tanks/vessels are not included in the definition of a storage tank.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/ Inclusive Units		
TK-102	N/A	40 CFR Part 60, Subpart Kb	Process tanks/vessels are not included in the definition of a storage vessel.
TK-102	N/A	40 CFR Part 60, Subpart QQQ	The tank is part of a stormwater sewer system and is not subject to the requirements of 40 CFR part 60, subpart QQQ.
TK-102	N/A	40 CFR Part 63, Subpart CC	Emission point is associated with stormwater from segregated stormwater sewers.

New Source Review Authorization References

New Source Review Authorization References 68

New Source Review Authorization References by Emission Unit..... 69

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Nonattainment (NA) Permits	
NA Permit No.: N158	Issuance Date: 10/08/2014
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 101199	Issuance Date: 10/08/2014
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
100-11	TANK NO. 100-11	101199, N158
100-12	TANK NO. 100-12	101199, N158
100-13	TANK NO. 100-13	101199, N158
100-14	TANK NO. 100-14	101199, N158
100-15	TANK NO. 100-15	101199, N158
100-20	TANK NO. 100-20	101199, N158
100-21	TANK NO. 100-21	101199, N158
120-22	TANK NO. 120-22	101199, N158
120-23	TANK NO. 120-23	101199, N158
120-24	TANK NO. 120-24	101199, N158
120-25	TANK NO. 120-25	101199, N158
150-10	TANK NO. 150-10	101199, N158
200-1	TANK NO. 200-1	101199, N158
200-2	TANK NO. 200-2	101199, N158
200-3	TANK NO. 200-3	101199, N158
5-0	TANK NO. 5-0	101199, N158
CHILLER	CHILLER	106.261/11/01/2003
DEGREASER	DEGREASER	106.454/11/01/2001

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
EGEN-1	EMERGENCY GENERATOR	101199, N158
F-101	NAPHTHA SPLITTER REBOILER TRAIN I	101199, N158
F-201	NAPHTHA SPLITTER REBOILER TRAIN II	101199, N158
FL-101	FLARE NO. 101	101199, N158
FUG	FUGITIVES	101199, N158
MISC-ADH	MISCELLANEOUS ADHESIVES	106.263/11/01/2001
TK-101	TANK NO. 101	106.472/09/04/2000
TK-102	TANK NO. 102	106.472/09/04/2000

Appendix A

Acronym List 72

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
COMS ..... continuous opacity monitoring system
CVS ..... closed-vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
DR ..... Designated Representative
ElP ..... El Paso (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
GF ..... grandfathered
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MMBtu/hr ..... Million British thermal units per hour
MRRT ..... monitoring, recordkeeping, reporting, and testing
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PM ..... particulate matter
ppmv ..... parts per million by volume
PSD ..... prevention of significant deterioration
RO ..... Responsible Official
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table..... 74

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number[1] (EPN)	**Source Name[2]**	**Air Contaminant Name[3]**	**Emission Rates ***		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**(TPY)[4]**	**Spec. Cond.**	**Spec. Cond.**	**Spec. Cond.**
F-101	Naphtha Splitter Reboiler Train I	CO CO[6] NO_x NO_x[6] VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	9.13 14.78 2.47 5.00 1.33 1.48 1.11 1.11 1.11 1.83	— — — — — — — — — —	3, 4, 9, 10, 11, 31	3, 4, 10, 11, 31	3, 4, 10, 30, 31
F-201	Naphtha Splitter Reboiler Train II	CO CO[6] NO_x NO_x[6] VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	9.13 14.78 2.47 5.00 1.33 1.48 1.11 1.11 1.11 1.83	— — — — — — — — — —	3, 4, 9, 10, 11, 31	3, 4, 10, 11, 31	3, 4, 10, 30, 31
F-101 F-201	Heater Annual Emission Cap	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	— — — — — — — —	72.84 11.83 10.63 11.83 8.87 8.87 8.87 14.57			
FL-101	Flare No. 101	CO NO_x VOC SO_2	0.63 0.16 0.03 0.00	2.75 0.69 0.12 0.00	3, 4, 12	3, 4, 12	4
200-1	Tank No. 200-1	VOC	2.27	4.59	17	17, 18, 20	
200-2	Tank No. 200-2	VOC	2.27	4.59	17	17, 18, 20	
200-3	Tank No. 200-3	VOC	2.27	4.59	17	17, 18, 20	
100-20	Tank No. 100-20	VOC	0.80	0.20	17	17, 18, 20	
150-10	Tank No. 150-10	VOC	0.78	0.68	17	17, 18, 20	

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number[1] (EPN)	**Source Name[2]**	**Air Contaminant Name[3]**	**Emission Rates ***		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**(TPY)[4]**	**Spec. Cond.**	**Spec. Cond.**	**Spec. Cond.**
120-24	Tank No. 120-24	VOC	1.24	2.67	17	17, 18, 20	
100-21	Tank No. 100-21	VOC	0.88	0.20	17	17, 18, 20	
100-11	Tank No. 100-11	VOC	0.88	0.20	17	17, 18, 20	
100-14	Tank No. 100-14	VOC	1.22	1.79	17	17, 18, 20	
5-0	Tank No. 5-0	VOC	1.30	0.90	4, 17	4, 17, 18, 20	4
120-22	Tank No. 120-22	VOC	0.91	0.59	17	17, 18, 20	
100-12	Tank No. 100-12	VOC	0.88	0.20	17	17, 18, 20	
120-25	Tank No. 120-25	VOC	1.24	2.67	17	17, 18, 20	
100-13	Tank No. 100-13	VOC	1.22	0.32	17	17, 18, 20	
120-23	Tank No. 120-23	VOC	0.91	0.59	17	17, 18, 20	
100-15	Tank No. 100-15	VOC	1.22	1.79	17	17, 18, 20	
FUG	Process Fugitive Components[5]	VOC	1.74	7.60	4, 13, 14, 15	4, 13, 15	4, 13
MAR-LOADFUG	Marine Loading Fugitives Emissions Cap	VOC	141.96	6.70	6, 22, 23, 25, 26	6, 22, 23, 25, 26, 28	6, 25
MAR-VCU	Marine Loading VCU Emission Caps	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$	6.91 5.18 8.59 0.05 0.64 0.64 0.64	3.40 2.55 3.39 0.03 0.32 0.32 0.32	3, 26, 27, 31	3, 27, 28, 31	26, 30, 31
EGEN-1	Emergency Generator	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$	12.90 6.23 2.02 5.79 0.37 0.37 0.37	3.22 1.56 0.50 1.45 0.09 0.09 0.09	4, 6	4, 6	4, 6

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number(1) (EPN)	**Source Name(2)**	**Air Contaminant Name(3)**	**Emission Rates ***		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**(TPY)(4)**	**Spec. Cond.**	**Spec. Cond.**	**Spec. Cond.**
MSS	MSS Activities	VOC NO_x CO SO_2 PM PM_{10} $PM_{2.5}$	382.50 37.20 131.39 2.42 2.23 2.23 2.23	3.25 0.46 1.35 0.01 0.08 0.08 0.08	35, 36, 37, 40, 43	34, 35, 36, 37, 40, 41, 43	
All	All authorized by permit	Benzene	—	0.30			

Footnotes:

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NOx - total oxides of nitrogen

SO2 - sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented

PM10- total particulate matter, suspended in the atmosphere, equal to or less than 10 microns in diameter, including PM2.5, as represented

PM2.5- particulate matter equal to or less than 2.5 microns in diameter

CO - carbon monoxide

(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

(5) Process component fugitive emissions and marine loading fugitive emissions from leak checked vessels are estimates and are enforceable through compliance with the applicable special condition(s) and permit application representations.

(6) Rates apply to planned startup periods as specified in Special Condition 34.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

A Permit Is Hereby Issued To
Kinder Morgan Crude & Condensate LLC
Authorizing the Construction and Operation of
Galena Park Terminal Condensate Splitter
Located at **Galena Park, Harris County, Texas**
Latitude 29° 43′ 30″ Longitude −95° 14′ 45″

Permits: 101199 and N158

Amendment Date : October 8, 2014

Renewal Date: June 12, 2023

For the Commission

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 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)(iii)]
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 30 TAC 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 not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **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)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. 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.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

Special Conditions

Permit Numbers 101199 and N158

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources — Maximum Allowable Emission Rates" (MAERT) and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) or ammonia at a concentration of greater than 1 percent are not authorized by this permit. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC or ammonia at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions with the exception of those on floating or fixed roof storage tanks.

3. The following requirements apply to capture systems for the heater selective catalytic reduction (SCR) systems, flare, and marine loading vapor combustion unit.

   A. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

   B. If there is a bypass for the control device, comply with either of the following requirements :

      (1) 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

      (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out of the bypass.

      A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

   C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

Federal Applicability

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(10/14)**

   A. Subpart A, General Provisions.

B. Subpart Ja, Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007.

C. Subpart Kb, Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

D. Subpart QQQ, VOC Emissions from Petroleum Refinery Wastewater Systems.

E. Subpart GGGa, Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after November 7, 2006.

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61: **(10/14)**

A. Subpart A, General Provisions.

B. Subpart FF, Benzene Waste Operations.

6. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63: **(10/14)**

A. Subpart A, General Provisions.

B. Subpart R, Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations).

C. Subpart Y, Marine Tank Vessel Loading Operations.

D. Subpart CC, Petroleum Refineries.

E. Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters.

7. If any condition of this permit is more stringent than the applicable regulations in Special Condition Nos. 4, 5, and 6, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

Heaters and Flare

8. Nitrogen oxides (NO_x), carbon monoxide (CO), and ammonia emissions from each heater (Emission Point Numbers [EPNs] F-101 and F-201) shall not exceed the following rates/concentrations (ppmv is corrected to 3 percent oxygen).

Pollutant	Hourly Average	Rolling 12 Month Average
NO_x	0.01 lb/MMBtu	0.006 lb/MMBtu
CO	50 ppmv	n/a
Ammonia	10 ppmv	n/a

9. Combustion units shall be fired with fuel gas containing no more than 2.2 grains of total sulfur per 100 dry standard cubic feet (dscf). Fuel gas shall consist of natural gas and uncondensed off-gas not to exceed 1% of total fuel gas usage. The natural gas shall be sampled every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement. **(10/14)**

10. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO, NO_x, and oxygen from the heaters (EPNs F-101 and F-201).

    A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

    B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

        (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

        (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

    Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

    All CGA exceedances of ±15 percent accuracy indicate that the CEMS is out of control.

C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The permit holder shall install and operate a fuel flow meter to measure the gas fuel usage for each heater. The monitored data shall be reduced to an hourly average flow rate at least once every day, using a minimum of four equally-spaced data points from each one-hour period. Each fuel flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent. In lieu of monitoring fuel flow, the permit holder may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

The individual average concentrations shall be reduced to units of pounds per hour and pounds per million BTU at least once every week as follows:

The measured hourly average concentration from the CEMS shall be multiplied by the exhaust flow rate as measured directly, or determined by monitoring fuel flow, stack oxygen concentration, and the natural gas heating value, to determine the hourly emission rate. The emission rate and fuel gas flow and heating value shall be used to determine the lb NO_x/MMBtu heat input.

D. All monitoring data and quality-assurance data shall be maintained by the permit holder. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the heater is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the heater operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

11. The permit holder shall continuously monitor ammonia emissions from the heater SCR systems (EPNs F-101 and F-201) using one of the following methods:

A. Install and operate two NO_x CEMS, one located upstream of the SCR system and the other located downstream of the SCR system, which are used in association with ammonia injection rate and the following calculation procedure to estimate ammonia slip.

Ammonia slip, ppmvd = ((a – (b x c / 1,000,000)) x 1,000,000 / b) x d

where:

a = ammonia injection rate (lb/hr)/17 (lb/lb-mole);

b = dry exhaust gas flow rate (lb/hr)/29 (lb/lb-mole);

c = change in measured NO_x concentration, ppmvd, across catalyst; and

d = correction factor.

The correction factor shall be derived during compliance testing by comparing the measured and calculated ammonia slip. The ammonia injection rate and exhaust gas flow rate shall be recorded at least every 15 minutes and be recorded as hourly averages. Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

B. Install and operate a dual stream system of NO_x CEMS at the exit of the SCR system. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

C. Install an ammonia CEMS approved by TCEQ.

All CEMS specified in this condition must meet the requirements of Special Condition No. 10. Quality-assured (or valid) data must be generated when gas is directed to the SCR system. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time that gas is directed to the SCR system over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

12. Flares shall be designed and operated in accordance with the following requirements:

A. The flare system 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 air assist to the flare

Leak Detection and Repair

13. Piping, Valves, Pumps, Agitators, and Compressors - Intensive Directed Maintenance — 28LAER

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (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 or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

(1) piping and instrumentation diagram (PID);

(2) a written or electronic database or electronic file;

(3) color coding;

(4) a form of weatherproof identification; or

(5) designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service

or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be 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. In addition, all connectors shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program in accordance with items F thru J of this special condition.

In lieu of the monitoring frequency specified above, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of connectors 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.

The percent of connectors leaking shall be determined using the following formula:

$$(Cl + Cs) \times 100/Ct = Cp$$

Where:

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

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe to monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the 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;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the

open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

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. Non accessible valves shall be monitored by leak-checking for fugitive emissions at least annually 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. A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, than the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

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.

G. All new and replacement pumps, compressors, and agitators 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, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, 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. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times , test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

J. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), and does not constitute approval of alternative standards for these regulations.

K. 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.

L. The percent of valves leaking used in paragraph K shall be determined using the following formula:

$$(Vl + Vs) \times 100 / Vt = Vp$$

Where:

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

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

Vt = 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.

Vp = the percentage of leaking valves for the monitoring period.

M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 500 ppmv of VOC. If the component is found to be leaking in excess of 500 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.

14. All components in heavy liquid service shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through in the same manner as required for connectors in Special Condition 13.E.

15. Piping, valves, pumps, and compressors in greater than one weight percent ammonia service are subject to the following requirements.

A. Audio, olfactory, and visual checks for ammonia leaks within the operating area shall be made every shift.

B. Immediately, but no later than twelve hours 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.

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.

Tanks

16. Tanks are authorized to store the liquids identified below with the maximum tank fill/drain rates. **(10/14)**

Tank ID	Tank Type	Service	Maximum fill/drain rate (bbl/hr)
200-1 200-2 200-3	Internal floating roof	Condensate	15,000
150-10 100-11 100-12 100-20 100-21 120-22 120-23	Internal floating roof	Distillates	10,000
100-13	Internal floating roof	Condensate and Distillates	10,000
100-14	Internal floating roof	Condensate and Light Naphtha	10,000
100-15 100-24 100-25	Internal floating roof	Light Naphtha and Heavy Naphtha	10,000
PV-410 PV-411	Pressurized	Y-grade product	n/a
5-0	Internal floating roof	Wastewater	5,000

"Distillates" may include Atmospheric Residuum ("Resid"), Kerosene, Diesel fuel and other heavy fuel oils.

17. Atmospheric storage tanks are subject to the following requirements:

    A. Uninsulated tank exterior surfaces exposed to the sun shall be white. Storage tanks must be equipped with permanent submerged fill pipes.

    B. Each tank shall be designed to completely drain its entire contents to a sump in a manner that leaves no more than 9 gallons of free-standing liquid in the tank sump.

    C. Tanks storing liquids with VOC vapor pressures greater than 0.10 psia shall meet the following requirements.

        (1) An internal floating deck or "roof" or equivalent control shall be installed in all tanks. The floating roof shall be equipped with two continuous seals mounted one above the other between the wall of the storage vessel and the edge of the internal floating roof:

(2) The permit holder shall perform the visual inspections and any seal gap measurements as specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates the inspection was performed, any measurements made (including raw data), results of the inspections, and actions taken to correct any deficiencies noted.

(3) The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998 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. The floating roof shall be welded (not bolted).

(4) The concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 30 percent of its lower explosive limit (LEL). The permit holder shall visually inspect the rim seal system and roof openings and use an explosimeter to measure the LEL on a semiannual basis. Records shall be maintained of the dates the inspections and measurements were made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.

(5) Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof (roof not floating on liquid) to a control device.

D. For tanks storing liquids with VOC vapor pressures greater than 0.50 psia, an internal floating deck of welded design shall be installed. **(10/14)**

E. The following requirements apply to storage tanks receiving or storing materials at above ambient temperature: **(10/14)**

(1) The permit holder shall reduce the temperature and/or vapor pressure of the stored material as needed to maintain a vapor pressure of less than 11.0 psia at actual storage conditions in each storage tank.

(2) For products stored in bolted deck storage tanks (EPNs 150-10, 100-11, 100-12, 100-21, 120-22 and 120-23), the permit holder shall reduce the temperature and/or vapor pressure of the stored material as needed to maintain a vapor pressure of less than 0.50 psia at actual storage conditions.

(3) For all tanks storing compounds requiring temperature and/or vapor pressure monitoring per items (1)–(2) of this special condition, the following sampling, monitoring and recordkeeping requirements apply:

(a) The liquid surface temperature shall be measured and recorded on a daily basis. The temperature measurement device shall be calibrated on an annual basis.

(b) No later than 90 days following the start of operation, the permit holder shall undertake sampling to determine the vapor pressure-temperature

relationship for each product subject to temperature and/or vapor pressure monitoring per items (1)–(2) of this special condition.

Vapor pressure-temperature relationship shall be determined by ASTM D2879 (1997 or later revision). An alternate ASTM standard may be used if the permit holder determines the alternate standard to be more appropriate. Additional sampling methods can be approved by the TCEQ Regional Director.

Records of vapor pressure-temperature relationship sampling shall include an indication of the method employed for analysis, and the correlation equation developed.

(c) The permit holder shall repeat the sampling procedure required in (b) on a quarterly basis.

(d) Compliance with items (1)–(2) of this special condition shall be determined from temperature monitoring data using the most recent vapor pressure-temperature relationship, with the following exceptions:

i. Prior to 90 days following the start of operations, vapor pressure may be estimated from process knowledge.

ii. If changes in product specifications affecting the vapor pressure properties of the liquid have occurred since the most recent sampling event, a suitable vapor pressure-temperature relationship having been determined within the past two years can be used.

(4) If measured temperature and/or vapor pressure indicate an excursion above the maximum vapor requirements of items (1)–(2) of this special condition, the permit holder may take up to 72 hours to lower the product temperature such that the liquid vapor pressure is below the permissible level. The method used to lower the product temperature shall be documented.

18. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. EPA Tanks 4.09 average monthly temperatures may be used for determining the monthly emissions from unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of this permit at the terminal.

19. Construction of additional volatile organic liquid storage tanks can be authorized only through the mechanisms detailed in this special condition. **(10/14)**

    A. Construction permit or permit amendment.

    B. Permit by Rule (PBR), provided that:

        (1) New storage tanks comply with the design and operational requirements of Special Condition 17; and

        (2) New floating roof storage tanks are designed to be drain dry, and designed with connections to control vapors under a landed roof.

20. Emissions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site in service prior to the start of operation of the last tank authorized by this permit (all storage tanks authorized by NSR Permit 2193 on September 1, 2012; subsequently referred to as existing tanks) is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period. These emissions shall be determined as follows:

    A. If liquid is transferred from a tank authorized by this permit to an existing tank, the emissions due to filling (i.e., working losses) the existing tank shall be quantified. If the liquid transferred to the existing tank is subsequently loaded, those emissions must also be quantified.

    B. For transfer of liquid from an existing tank to a tank authorized by this permit, the emissions associated with refilling (i.e., working losses) the existing tank shall be quantified. If the roof of the existing tank is landed, also add the emissions from the existing tank from the time the transfer to the new tank was completed until the existing tank roof is floated again.

    Tank emissions shall be determined and documented in accordance with Special Conditions 18 and 37, as applicable. Loading emissions shall be determined and documented in accordance with Special Condition 28. The permit holder shall maintain an emissions record which includes calculated emissions of VOC identified in paragraphs A and B during the previous calendar month and the past consecutive 12 month period.

Marine Loading and Vapor Combustors

21. Marine loading of product from these facilities shall not exceed the following rates: **(10/14)**

Type of Vessel Loaded	Product loaded	Loading Rate (bbl/hr)
Ship	Naphthas, Kerosene/Distillate, Resid	10,000
Barge	Kerosene/Distillate, Resid	10,000
Barge	Naphthas	7,500

22. Notwithstanding any contrary requirement of Special Condition 21, the permit holder shall comply with one of the following restrictions for the barge loading of Resid **(10/14):**

    A. Loading shall not occur at more than one barge during any sixty minute period.

    B. The combined fill rate for barge loading shall not exceed 5,000 Bbl/hr over any sixty minute period.

    C. The vapor pressure of the material to be loaded shall be determined following the procedure in Special Condition 17.E(3)(b), and that vapor pressure shall be no greater than 0.10 psia at actual loading conditions.

    D. The permit holder shall submit a permit amendment application which includes sitewide modeling results for residual fuel emissions. Sitewide modeling results shall be subject to approval by the TCEQ Toxicology Division.

23. All loading lines (hoses) and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections. Flanged connections shall be used for all loading operations. The following actions shall be taken prior to removing loading lines/hoses from marine vessels and shore facilities.

    A. After the transfer is complete, the loading line/hose shall be isolated at the connection to the shore piping. The loading line/hose shall be vented at the shore piping and shall be gravity drained into the marine vessel per the site operating procedure.

    B. The loading line/hose may be disconnected from the shore and/or marine vessel piping after the liquid has been removed to the extent possible by gravity draining to the vessel being loaded. If it is necessary to further empty the line/hose, any residual liquid in the line/hose shall be immediately drained directly into a covered sump. If the line/hose is not emptied, the open end(s) of the line/hose shall be immediately capped, plugged, or blinded to prevent leakage.

    C. After the loading line/hose has been removed from the vessel, the vapor return line shall be immediately isolated.

    The actions shall be documented as part of the loading procedure.

24. All ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F, or has a vapor pressure greater than 0.50 psia at actual loading conditions. Marine vessels shall not be loaded with liquid unless the vapor collection system is properly connected and the entire collection and destruction system is working as designed. **(10/14)**

25. If the liquid to be loaded has a VOC vapor pressure is greater than 0.10 psia at 95°F, or has a vapor pressure greater than 0.50 psia at actual loading conditions, the following requirements apply. The requirements of paragraphs C–H apply to all controlled ship

loading activities at the Galena Park Terminal (Regulated Entity Number [RN] 100237452). **(10/14)**

A. Unless the vessel must be inerted during loading due to safety requirements, the marine loading vapor collection system shall be operated such that the vacuum maintained in the collection system during loading is no less than one inch of water and that the vessel being loaded is also under a vacuum. The collection system vacuum shall be continuously monitored and recorded at least once every 15 minutes. The vacuum monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±5 percent of the vacuum being measured or ±0.15 inches of water.

B. If the vessel must remain inerted during loading (it is not possible to draw a vacuum on the marine vessel) due to safety concerns, the marine vessel must have passed an annual vapor tightness test as specified in 40 CFR § 63.565(c) (September 19, 1995) or 40 CFR § 61.304(f) (October 17, 2000). The permit holder shall record the leak test documentation for all ships loaded.

C. Uncaptured emissions (i.e., loading fugitives) from any ship shall not exceed 0.14 lb VOC per 1000 Bbl liquid loaded.

D. For the purposes of demonstrating compliance with the emission standard of paragraph C, VOC collection tests of ships received at the Galena Park Terminal shall be conducted as follows:

(1) Testing shall be conducted in accordance with the Testing Protocol in Attachment A of this permit.

(2) Compliance with the emission standard in paragraph C shall be demonstrated individually for each ship tested.

(3) The initial testing period begins after the first full calendar month from the date the permit is issued.

(4) Testing shall be completed at least 6 times per rolling 12-months period, and at least once per rolling 3-months period.

(5) Upon completion of regular testing as specified by this condition over a 60-month period, the permit holder may request approval to discontinue testing from the TCEQ, Air Permits Division.

(6) The same ship shall not be tested consecutively.

(7) Revisions to the test protocol in Attachment A of this permit shall not be made without the approval of the TCEQ, Air Permits Division.

(8) The Regional Office shall be notified at least 48 hours prior to each testing required by this condition.

E. The permit holder shall maintain the following records for each ship tested for a period of 5 years from the date of testing:

(1) The most recent vapor tightness certificate.

(2) A recent, completed form Q88.

F. Records of each testing conducted in accordance with paragraph D shall be maintained on site for a period of 5 years from the date of testing.

G. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all marine ship loading during the previous calendar month and the past consecutive 12 month period (i.e. 12-month rolling basis). The record shall include ship name and the total barrels loaded. Emissions from marine loading shall be calculated using the methods that were used to determine the MAERT limits in the permit application.

H. Records relating to ship testing shall be submitted to the TCEQ, Air Permits Division, as follows:

(1) During the first 12 months for which testing is required by this condition, test results shall be submitted for each testing event, no later than 60 days following the testing event.

(2) Following the initial period referred to in paragraph (1), the permit holder may submit either:

(a) Individual test results within 60 days of each testing event; or

(b) A summary of all testing results during the preceding 12-months, for each 12 month period following the initial period referred to in paragraph (1).

(3) Notwithstanding the requirements of paragraph (2), if testing is not conducted in accordance with the requirements of paragraph D of this condition, then the initial period referred to in paragraph (1) shall be extended so that it only covers months during which the permit holder was in compliance with the requirements of paragraph D.

I. Records shall be made available upon request by authorized representatives of the TCEQ, Air Permits Division or the TCEQ Office of Compliance and Enforcement.

26. The vapor combustors (EPNs: VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) used to control emissions shall achieve 99.8 percent control of the carbon compounds directed to it or reduce the VOC concentration in the exhaust to no greater than 10 ppmv corrected to 3 percent oxygen. This shall be ensured by maintaining the temperature in the combustion chamber above 1400°F prior to the initial stack test performed in accordance with Special Condition 26. Following the completion of that stack test, the six minute average temperature shall be maintained above the minimum one hour average temperature maintained during the last satisfactory stack test.

The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±2 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

Quality assured (or valid) data must be generated when the VCU is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the VCU operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

27. Each vapor combustor shall be operated with no visible emissions and have a constant pilot flame during all times waste gas could be directed to it. 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.

28. The permit holder shall maintain and update monthly an emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12 month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids that are at or below ambient temperatures. Loading emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of the permit at the terminal.

29. Additional loading facilities, and throughput increases at existing facilities, shall not be authorized except in accordance with the requirements of this condition.

    A. Additional barge loading facilities, or increased throughput in barge loading, can be authorized by:

        (1) Permit amendment; or

        (2) Permit by Rule, provided that the control, monitoring and recordkeeping procedures are consistent with applicable requirements of Special Conditions 22–28.

    B. Additional ship loading facilities can be authorized by permit amendment. No additional ship loading facilities shall be constructed under Permit by Rule (PBR) without written approval of the TCEQ Executive Director.

    C. Increased throughput in ship loading can be authorized by:

        (1) Permit amendment; or

        (2) Permit by Rule, provided that the control, monitoring and recordkeeping procedures are consistent with applicable requirements of Special Conditions 22–28.

Stack Sampling

30. Sampling ports and platform(s) shall be incorporated into the design of the heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

31. The permit holder 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 heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) to demonstrate compliance with the MAERT, and Special Conditions 8 and 26. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods.

    Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

    A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

        (1) Proposed 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.

        (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

        (7) Procedure/parameters to be used to determine worst case emissions during the sampling period.

        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 the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

    B. Air contaminants emitted from the heaters to be tested for include (but are not limited to) CO, NO_x, $PM_{2.5}$ (condensable and filterable), and ammonia. Air

contaminants emitted from the vapor combustors to be tested for include (but are not limited to) VOC, CO, and NO_x. **(10/14)**

C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

Sampling associated with VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU and authorized by the nonattainment permit N158 shall occur within 60 days after achieving the maximum operating rate authorized by nonattainment permit N158, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office. Existing stack test records may be used to demonstrate compliance in lieu of conducting a new stack test on a VCU.

D. The heater being sampled shall operate at the maximum firing rate during stack emission testing. The VCU shall be operated with maximum waste gas flow (loading rate) and VOC concentration (loading light naphtha or equivalent gasoline blend) to demonstrate compliance with the maximum allowable emission rate limits. The VCU shall be operated with maximum waste gas flow when determining the minimum operating temperature and demonstrating compliance with the minimum destruction efficiency requirement. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the waste gas flow rate to the vapor combustor is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

Offsets

32. The following requirements apply to offsets: **(10/14)**

A. This Nonattainment New Source Review (NNSR) permit is issued based on the use of 82.9 tons per year (tpy) VOC emission reduction credits (ERCs) from TCEQ Emission Reduction Credit Certificate (ERCC) No. 2778. This ERCC provides offsets at the ratio of 1.3 to 1 for 63.76 tpy of VOC emissions authorized from the following facilities under this permit:

(1) Naphtha Splitter Reboiler Train I (EPN: F-101) — 6.9 tpy

(2) Naphtha Splitter Reboiler Train II (EPN: F-102) — 6.9 tpy

(3) Flare No. 101 (EPN: FL-101) — 0.2 tpy

(4) Tank No. 200-1 (EPN: 200-1) — 6.0 tpy

(5) Tank No. 200-2 (EPN: 200-2) — 6.0 tpy

(6) Tank No. 200-3 (EPN: 200-3) — 6.0 tpy

(7) Tank No. 100-20 (EPN: 100-20) — 0.3 tpy

(8) Tank No. 150-10 (EPN: 150-10) — 0.9 tpy

(9) Tank No. 120-24 (EPN: 120-24) — 3.5 tpy

(10) Tank No. 100-21 (EPN: 100-21) — 0.3 tpy

(11) Tank No. 100-11 (EPN: 100-11) — 0.3 tpy

(12) Tank No. 100-14 (EPN: 100-14) — 2.3 tpy

(13) Tank No. 5-0 (EPN: 5-0) — 1.2 tpy

(14) Tank No. 120-22 (EPN: 120-22) — 0.8 tpy

(15) Tank No. 100-12 (EPN: 100-12) — 0.3 tpy

(16) Tank No. 120-25 (EPN: 120-25) — 3.5 tpy

(17) Tank No. 100-13 (EPN: 100-13) — 0.4 tpy

(18) Tank No. 120-23 (EPN: 120-23) — 0.8 tpy

(19) Tank No. 100-15 (EPN: 100-15) — 2.3 tpy

(20) Process Fugitive Components (EPN: FUG) — 9.9 tpy

(21) Marine Loading Fugitives (EPN: MAR-LOADFUG) — 8.7 tpy

(22) Marine Loading VCU (EPN: MAR-VCU) — 4.4 tpy

(23) Emergency Generator (EPN: EGEN-1) — 0.7 tpy

(24) MSS Activities (EPN: MSS) — 4.2 tpy

(25) Transfers between tanks authorized under Special Condition 20 — 6.1 tpy

The offset requirement associated with item (25) is adjusted to ensure that the total offset requirement equals 82.9 tpy VOC.

B. This NNSR permit is issued on the condition that the permit holder obtain and provide 22.2 tpy of NOx ERCs to offset the 17.09 tpy NOx project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1, through participation in the TCEQ Emission Banking and Trading (EBT) Program.

The permit holder shall use 0.9 tpy NOx ERCs from TCEQ ERCC No. 2771 in order to provide offsets at the ratio of 1.3 to 1 for 0.69 tpy of NO_x emissions authorized from Flare No. 101 (EPN FL 101).

The permit holder shall, prior to the commencement of operation, obtain approval from the TCEQ EBT Program for the ERCs being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ ERCC number.

C. In addition to using ERCs for NO_x, or in place of using ERCs for NO_x, the permit holder may utilize Mass Emission Cap and Trade (MECT) Program allowances to satisfy all, or a portion (with the balance of the offset requirement being obtained through the use of Emission Reduction Credit Certificates) of the NO_x offset requirement for facilities required to participate in the MECT Program. The permit holder shall, prior to the commencement of operation, obtain approval from the TCEQ Emission Banking and Trading Program for the use of MECT allowances. If this offset option is chosen, the permit holder shall comply with the following:

(1) To satisfy the 1:1 portion of the 1.3:1 offset requirement for the project's increase of NOx emissions from facilities subject to the MECT Program, the permit holder shall permanently set aside 16.2 tons per year (tpy) of MECT allowances prior to the start of operation of the following facilities. At the end of each control period, the full amount of allowances set aside to satisfy any part of the 1:1 portion will be deducted, regardless of whether the actual NOx emissions from the following facilities are less than this amount.

(a) Naphtha Splitter Reboiler Train I (EPN: F-101) – 5.9 tpy

(b) Naphtha Splitter Reboiler Train II (EPN: F-201) – 5.9 tpy

(c) Marine Loading VCU Emissions Cap (EPN: MAR-VCU) – 2.6 tpy

(d) Emergency Generator (EPN: EGEN-1) – 1.6 tpy

(e) MSS Emissions from sources subject to MECT (EPN: MSS) – 0.2 tpy

(2) To satisfy the 0.3 portion of the 1.3:1 offset requirement for the project's increase of NOx emissions from facilities subject to the MECT program, the permit holder shall permanently transfer to the TCEQ 4.8 tpy of MECT allowances prior to the start of operation of the following facilities.

(a) Naphtha Splitter Reboiler Train I (EPN: F-101) – 1.8 tpy

(b) Naphtha Splitter Reboiler Train II (EPN: F-201) – 1.8 tpy

(c) Marine Loading VCU Emissions Cap (EPN: MAR-VCU) – 0.8 tpy

(d) Emergency Generator (EPN: EGEN-1) – 0.3 tpy

(e) MSS Emissions from sources subject to MECT (EPN: MSS) – 0.1 tpy

The offset requirement associated with item (d) is adjusted to ensure that the total offset requirement in paragraph (2) equals 4.8 tpy NO_x.

(3) If MECT allowances set aside to satisfy the 1:1 portion of the 1.3:1 offset requirement devalue due to future regulatory changes, the permit holder shall acquire additional MECT allowances equivalent to the allowance devaluation to make up for the devaluation change. Allowances used to satisfy the 0.3:1 portion of the offset requirement will not devalue due to future regulatory changes. The TCEQ EBT Program shall verify the use of these allowances.

(4) The permit holder may use MECT allowances to satisfy the 1.3:1 offset requirement for MSS Emissions from sources not subject to MECT (EPN: MSS). The permit holder shall permanently transfer to the TCEQ 0.3 tpy of MECT allowances to satisfy the offset requirement for the 0.24 tpy NO_x project emission increases for MSS emissions from sources not subject to MECT.

Maintenance, Startup, and Shutdown

33. This permit authorizes emissions from the following temporary facilities used to support the planned MSS activities identified in Special Condition 34 at permanent site facilities: frac tanks, vacuum trucks, portable control devices identified in Special Condition 43, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities authorized by this permit, and (c) does not operate as a replacement for an existing authorized facility.

34. This permit authorizes the emissions from the facilities authorized by this permit for the planned maintenance, startup, and shutdown (MSS) activities summarized in the table below.

Facility	Activity	EPN
Process Line	Shutdown, depressurize, and degas to flare. Vent to atmosphere.	MSS
Heater	Heater startup.	F-101, F-201
Storage Tanks	Drain, degas, and open tank.	MSS
Storage Tanks	Refill empty tank with landed roof.	MSS
Vessels and Piping	Empty and degas to control.	MSS
Piping	Degas to atmosphere.	MSS
Piping	Drain liquid.	MSS
Air movers and vacuum trucks	Remove liquid from storage tanks, piping, and other facilities for planned maintenance.	MSS

Facility	Activity	EPN
Frac tanks	Store liquid from tanks, piping, and other facilities undergoing planned MSS.	MSS
Minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet	Isolate, drain, degas to atmosphere, and refill to support planned maintenance.	MSS

Maintenance activities associated with minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet in the table above may be tracked through work orders or equivalent. Emissions from these activities identified shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of and emissions associated with each planned MSS activity performed on the facilities identified as storage tanks, air movers, vacuum trucks, and frac tanks shall be documented in accordance with the applicable Special Condition(s).

The performance of each planned MSS activity associated with pressurized tanks and the facility identified as vessels and piping in the table above and the emissions associated with it shall be recorded and include at least the following information:

A. the process equipment at which emissions from the MSS activity occurred, including the emission point number and common name of the process equipment;

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.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

35. Permanent facilities, with the exception of atmospheric storage tanks, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.

A. 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 psi at the normal process temperature and 95°F may be opened to atmosphere and

drained in accordance with paragraph C of this special condition. 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 psi 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 equipment is no longer vented to atmosphere.

C. All liquids from process equipment must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be transferred into a storage tank authorized by this permit or a vessel meeting the requirements of Special Condition 41 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 psi 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. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

(1) For MSS activities that may be tracked through work orders, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 5 percent of the lower explosive limit (LEL) per documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures).

(2) The locations and/or identifiers where the purge gas or steam enters the process equipment and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior

to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 36. The sampling point shall be upstream of the inlet to the control device or controlled recovery system to determine whether VOC concentrations are acceptable for uncontrolled venting. 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. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL, with the exception of the pressurized storage tanks which must be degassed to control until the VOC concentration is 2,000 ppmv or 2 percent of the LEL. Documented site procedures used to de-inventory 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.

36. 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:

        (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded.

        (2) 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, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

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

        (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

5,000*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 (5000 ppmv standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 5 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard at 10 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 10 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the LEL response is within 95 percent of that for the appropriate gas.

(4) Definitions

(a) An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

(b) The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be 10 percent of the LEL for that gas.

D. Lower explosive limit measured with a lower explosive limit detector (2 percent LEL standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 1 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard with a concentration between 2 and 3 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90% of the calibration gas certified value in ppmv. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 2 to 3 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the concentration response is within 95 percent of that for the appropriate gas.

(4) Definitions

(a) An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

(b) The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be the same concentration (between 2 and 3 percent of the LEL for that gas).

37. This permit authorizes MSS emissions (EPN MSS) from internal floating roof storage tanks during planned floating roof landings. Tank roof landings include all operations when the tank floating roof is on its supporting legs. The following requirements apply to tank roof landings.

A. If the tank is to be completely drained, the tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank and tank sump have been drained to the maximum extent practicable without the use of a sump stripping pump or entering the tank. The sump shall be emptied within 4 hours unless the vapor space is routed to control.

B. If the VOC vapor pressure of the liquid being drained from the tank is greater than 0.50 psia, a vapor recovery system shall be connected to the vapor space under the landed tank roof and the vapor space vented to a control device meeting the requirements of Special Condition 43. 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. The vapor space shall be vented to the control device during the period from the floating roof is landed until the tank has been degassed per part D of this condition or the tank has been filled so that the landed roof is floating on liquid. The vapor recovery system collection rate shall always be greater than 100 cubic feet per minute when the tank is idle and two times the fill rate when the tank is being refilled. There shall be no other gas/vapor flow out of the vapor space under the floating roof when the vapor space is directed to the control device. This shall be demonstrated as follows:

(1) The concentration of organic vapor in the vapor space above the internal floating roof shall be sampled and verified not to exceed 30 percent of its LEL.

(2) This sampling shall be performed annually on a tank being filled and on an idle tank, or as requested by the TCEQ Regional Office. The sampling shall be

performed in the morning if the tank is idle or being filled, as applicable, during that period.

(3) The vapor collection recovery system shall be maintained at the minimum vapor collection system pressure set point required prior to and during sampling.

(4) The tank sampled, sampling results, flow rates, date and time shall be recorded. Sampling may be waived if a tank roof is not landed in a calendar year.

C. Tank roofs shall not be landed for more than 72 hours unless the tank has been completely drained and degassing commenced per part D of this condition.

D. If necessary, tanks shall be degassed as follows:

(1) If the tank had not been emptied, degassed, and entered within the last 24 months, the permit holder shall open at least one entry into the tank to perform a visual inspection of the tank floor and sump to confirm that there is no standing liquid present and the drain dry tank is operating as designed. This inspection shall be performed during controlled degassing, if applicable. If any standing liquid is noted, it must be removed prior to uncontrolled tank degassing.

(2) If the VOC vapor pressure of the liquid stored in the tank is greater than 0.10 psia, the gas or vapor removed from the vapor space under the floating roof must be routed to a control device through a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL as measured per Special Condition 36. Degassing shall continue until the VOC concentration is less than 2,000 ppmv or 2 percent of the LEL if the tank will be opened or ventilated without control as allowed by part E of this condition. 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.

(3) 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.

(4) The vent stream before the control device shall be sampled to determine whether VOC concentrations are acceptable for uncontrolled venting. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 36.

(5) 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.

E. The tank may be opened without restriction and ventilated without control after all standing liquid has been removed from the tank and the vapor space VOC concentration is less than 2000 ppmv or 2 percent of the LEL or the liquid previously stored in the tank had a VOC vapor pressure less than or equal to 0.10 psia. A tank shall not be ventilated without control more than once in any rolling 12 month period and only one tank shall be ventilated without control at any time.

F. The following requirements apply to filling tanks with landed roofs until the roof is off its legs (floating on the liquid).

(1) The vapor space under the landed floating roof shall be vented to control per part B of this condition prior to commencing the filling of an empty tank unless the tank is being filled with liquid with a VOC vapor pressure less than 0.50 psia and the tank has verified dry by visual inspection of the tank floor and sump.

(2) Tanks shall be refilled as rapidly as practicable.

G. 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:

(1) Identification of the tank and emission point number, liquid stored, and any control devices or recovery systems used to reduce emissions;

(2) reason for the tank roof landing;

(3) date, time, and the other information specified below for each of the following events:

(a) the roof was initially landed,

(b) volume in the tank when liquid withdrawal stopped or when the tank and sump were fully drained,

(c) vapor space volume under the floating roof vented to control device and ventilation flow rate to the control device,

(d) start and completion of controlled degassing, total volumetric flow, results of any tank inspection of the tank for liquid and any corrective actions taken, VOC concentration sampling results;

(e) all standing liquid was removed from the tank,

(f) tank refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

(g) tank roof off supporting legs and floating on liquid;

(4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted while the roof was landed 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 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.

38. Reserved.

39. All permanent facilities must comply with all operating requirements, limits, and representations this permit during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for NO_x and CO emissions from the heaters during planned startup and shutdown are 0.025 lb/MMBtu and 100 ppmv corrected to 3 percent oxygen, respectively, if the startup period does not exceed 8 hours in duration and the time it takes to complete the shutdown does not exceed 4 hours.

40. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:

    A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.

    B. The vacuum/blower exhaust shall be routed to a control device and the fill line intake equipped with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

    C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.

        (1) 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.

        (2) 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 at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 36.A or B.

    D. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.

    E. 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.

41. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

    A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.

    B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom. The tank vapor space shall be vented to a control device meeting the requirements of Special Condition 43.

    C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.

    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. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. 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."

42. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity. Total VOC planned MSS emissions associated with the facilities authorized by this permit shall not exceed the quantity shown in the MAERT for EPN MSS.

43. Control devices required by this permit for emissions from planned 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. Storage tank emissions shall be controlled by a VCU or thermal oxidizer meeting the requirements of part B of this condition.

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

    A. Carbon Adsorption System (CAS).

        (1) The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.

(2) The CAS shall be sampled downstream of the first canister 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) It may be extended to up to 30 percent of the minimum potential saturation time for a new canister of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.

(b) 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 the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.

(3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 36.A or B.

(4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. 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 four hours. 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.

(5) Records of CAS monitoring shall include the following:

(a) Sample time and date.

(b) Monitoring results (ppmv).

(c) Canister replacement log.

(6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent 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.

B. Thermal Oxidizer/Vapor Combustor.

(1) If controlling storage tank emissions, the thermal oxidizer/vapor combustion unit shall provide no less than 99.8 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This shall be demonstrated per by

having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor..

(2) If controlling MSS emissions from facilities other than atmospheric storage tanks, the thermal oxidizer/vapor combustion unit shall provide no less than 99.5 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This may be demonstrated by:

(a) maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than 1400°F with 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/combustor; or

(b) having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor.

The thermal oxidizer/vapor combustor exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer/combustor. 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 ±0.75 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

C. Internal Combustion Engine.

(1) The internal combustion engine shall have a VOC destruction efficiency of at least 99.5 percent.

(2) The engine must have been stack tested with butane or propane to confirm the required destruction efficiency within the period specified in item (3) below. 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 following each occurrence of engine maintenance that may

reasonably be expected to increase emissions including oxygen sensor replacement and catalyst cleaning or replacement. 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 36.A are also acceptable for this documentation.

(3) The engine shall be operated and monitored as specified below.

(a) If the engine is 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. The engine must have been stack tested within the past 12 months in accordance with item (2) of this condition.

The test period may be extended to 24 months if the engine exhaust is sampled once an hour when waste gas is directed to the engine using a detector meeting the requirements of Special Condition 36.A. 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 engine. The concentrations shall be recorded and the MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background.

(b) If an oxygen sensor-based AFR controller is not used, the engine exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the engine. 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 engine. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 36.A. 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 if the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded. The engine must have been stack tested within the past 24 months in accordance with part (2) of this condition.

D. The flare (EPN FL-101) shall be used to control the emissions from process train shutdowns. After the process train has been depressurized to the flare, the permit holder shall install and operate continuous flow monitors that provide a record of the exhaust vent stream and natural gas flows to the flare. The flow monitor sensor and

analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. The monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be ±5.0%, temperature monitor shall be ±2.0% at absolute temperature, and pressure monitor shall be ±5.0 mm Hg. The exhaust vent gas from the process shall be assumed to have no net heating value so that the natural gas flow shall provide for sufficient heating value at the flare tip.

Date: October 8, 2014

Emission Sources - Maximum Allowable Emission Rates

Permit Number 101199 and N158

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

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
F-101	Naphtha Splitter Reboiler Train I	CO	9.13	—
		CO (6)	14.78	—
		NO_x	2.47	—
		NO_x (6)	5.00	—
		VOC	1.33	—
		SO_2	1.48	—
		PM	1.11	—
		PM_{10}	1.11	—
		$PM_{2.5}$	1.11	—
		Ammonia	1.83	—
F-201	Naphtha Splitter Reboiler Train II	CO	9.13	—
		CO (6)	14.78	—
		NO_x	2.47	—
		NO_x (6)	5.00	—
		VOC	1.33	—
		SO_2	1.48	—
		PM	1.11	—
		PM_{10}	1.11	—
		$PM_{2.5}$	1.11	—
		Ammonia	1.83	—

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
F-101 F-201	Heater Annual Emission Cap	CO	—	72.84
		NO_x	—	11.83
		VOC	—	10.63
		SO_2	—	11.83
		PM	—	8.87
		PM_{10}	—	8.87
		$PM_{2.5}$	—	8.87
		Ammonia	—	14.57
FL-101	Flare No. 101	CO	0.63	2.75
		NO_x	0.16	0.69
		VOC	0.03	0.12
		SO_2	0.00	0.00
200-1	Tank No. 200-1	VOC	2.27	4.59
200-2	Tank No. 200-2	VOC	2.27	4.59
200-3	Tank No. 200-3	VOC	2.27	4.59
100-20	Tank No. 100-20	VOC	0.80	0.20
150-10	Tank No. 150-10	VOC	0.78	0.68
120-24	Tank No. 120-24	VOC	1.24	2.67
100-21	Tank No. 100-21	VOC	0.88	0.20
100-11	Tank No. 100-11	VOC	0.88	0.20
100-14	Tank No. 100-14	VOC	1.22	1.79
5-0	Tank No. 5-0	VOC	1.30	0.90
120-22	Tank No. 120-22	VOC	0.91	0.59
100-12	Tank No. 100-12	VOC	0.88	0.20

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
120-25	Tank No. 120-25	VOC	1.24	2.67
100-13	Tank No. 100-13	VOC	1.22	0.32
120-23	Tank No. 120-23	VOC	0.91	0.59
100-15	Tank No. 100-15	VOC	1.22	1.79
FUG	Process Fugitive Components (5)	VOC	1.74	7.60
MAR-LOADFUG	Marine Loading Fugitives Emissions Cap	VOC	141.96	6.70
MAR-VCU	Marine Loading VCU Emission Caps	CO	6.91	3.40
		NO_x	5.18	2.55
		VOC	8.59	3.39
		SO_2	0.05	0.03
		PM	0.64	0.32
		PM_{10}	0.64	0.32
		$PM_{2.5}$	0.64	0.32
EGEN-1	Emergency Generator	CO	12.90	3.22
		NO_x	6.23	1.56
		VOC	2.02	0.50
		SO_2	5.79	1.45
		PM	0.37	0.09
		PM_{10}	0.37	0.09
		$PM_{2.5}$	0.37	0.09

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS	MSS Activities	VOC	382.50	3.25
		NO_x	37.20	0.46
		CO	131.39	1.35
		SO_2	2.42	0.01
		PM	2.23	0.08
		PM_{10}	2.23	0.08
		$PM_{2.5}$	2.23	0.08
All	All authorized by permit	Benzene	—	0.30

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Process component fugitive emissions and marine loading fugitive emissions from leak checked vessels are estimates and are enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Rates apply to planned startup periods as specified in Special Condition 34.

Date: October 8, 2014

EXHIBIT B

Public Comments on Draft Permit No. O3764

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November 30, 2015

Ms. Bridget C. Bohac
Chief Clerk, MC-105
Texas Commission on Environmental Quality
P.O. Box 13087
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Via Electronic Filing

Re: Public Comments Regarding Draft Title V Permit No. O3764 Authorizing Operation of Kinder Morgan Crude & Condensate LLC's Galena Park Terminal.

The Executive Director proposes to issue Title V Permit No. O3764 ("Draft Permit") authorizing operation of Kinder Morgan Crude & Condensate LLC's ("Kinder Morgan") Galena Park Terminal, Crude Condensate Splitter, and Special Warehousing and Storage complex ("Galena Park Terminal") located in Harris County, Texas. Kinder Morgan filed its Title V permit application on November 12, 2014. Kinder Morgan published notice of the Executive Director's preliminary decision to approve the application and draft permit on October 29, 2015. Bilingual notice was published on November 1, 2015.

I. INTRODUCTION

Environmental Integrity Project, Air Alliance Houston, Sierra Club, Texas Environmental Justice Advocacy Services, and Environment Texas ("Commenters") appreciate this opportunity to comment on Kinder Morgan's Draft Permit. Each Title V permit issued by the Texas Commission on Environmental Quality ("TCEQ") must include "enforceable emission limitations and standards . . . and such other conditions as are necessary to assure compliance with applicable requirements . . . including the requirements of the applicable implementation plan." 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); *see also Virginia v. Browner*, 80F.3d 869,873 (4th Cir. 1996).

The Draft Permit is deficient for the following reasons:

- It fails to include monitoring, recordkeeping, and reporting requirements that assure compliance with applicable federal requirements, New Source Review ("NSR") permit limits, conditions, and enforceable application representations;

- It fails to provide sufficient information about how Permits by Rule ("PBRs") apply to facilities at the Terminal to assure compliance with applicable requirements;

- It fails to identify and incorporate applicable PBR registration requirements;

- It improperly incorporates the State's disapproved affirmative defense for excess emissions during planned maintenance, startup, and shutdown activities ("MSS") as a federally-enforceable requirement; and

- It limits the ability of the public and regulators to rely on any credible evidence to demonstrate non-compliance with applicable requirements.

II. ISSUES

A. Monitoring

Title V permits must include monitoring requirements that assure compliance with the permit terms and conditions. To comply with this mandate, permitting authorities must take four steps:

(1) Permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the Title V permit;

(2) If the applicable requirements contain no periodic monitoring, permitting authorities must add periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit;

(3) If there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with the permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance; and

(4) Permitting agencies must clearly document the rationale for the monitoring requirements they select in the permit record.

42 U.S.C. §§ 7661c(a) and (c); 40 C.F.R. §§ 70.6(a)(3)(i)(A)-(B), (c)(1); 70.7(a)(5); *In the Matter of United States Steel Corp.—Granite City Works*, Order on Petition No. V-2009-03 (January 31, 2011) ("Granite City I Order") at 7-8; *In the Matter of Shell Chemical LP and Shell Oil Co.,* Order on Petition Nos. VI-2014-04 and VI-2014-05 (September, 24, 2015) ("Deer Park Order") at 18.

The Draft Permit is deficient, as explained below, because it does not properly incorporate applicable monitoring requirements, it fails to establish periodic monitoring requirements for applicable requirements that do not include monitoring, it fails to supplement insufficient monitoring requirements in applicable requirements, and the permit record fails to provide a clear rationale for the monitoring requirements selected.

1. The Draft Permit Fails to Properly Incorporate Applicable Monitoring Requirements in Permit No. 101199/N158

a. Marine Loading--The Draft Permit Fails to Include Applicable Requirements

The Draft Permit incorporates by reference requirements established by NSR Permit No. 101199/N158. Draft Permit, Special Condition 14 and New Source Review Authorization References Table. Permit No. 101199/N158, Special Condition 25(C) provides that "[u]ncaptured emissions (i.e., loading fugitives) from any ship shall not exceed 0.14 lb VOC per 1000 Bbl liquid loaded." To demonstrate compliance with this limit, Special Condition 25(D) requires that "[t]esting shall be conducted in accordance with the Testing Protocol in Attachment A of this permit." The emission limit in Special Condition 25(C) and the testing protocol referenced by 25(D) and contained in Attachment A to Permit No. 101199/N158 were established through a no-notice permit amendment that revised the permit's initial LAER determination and resulted in a reduction in the amount of emission offsets Kinder Morgan was required to obtain before commencing construction of facilities authorized by the permit:

> Revisions have been made to the estimated emission rates of VOC due to the loading of inerted tanker ships with high vapor pressure volatile organic liquids. Representatives of KM Liquids Terminals conducted negotiations with TCEQ Management between 2013 and early 2014 to develop a protocol for quantifying uncollected VOC vapors emitted from inerted, vapor-tight tank ships undergoing controlled loading. Based on test results, and an enforceable agreement by KMLT to conduct follow-up verification and compliance testing as specified by permit special condition 25, a site-specific emission factor for loading fugitives has been approved which is significantly lower than the standard assumption of 5% loss.
>
> And
>
> The amount of offsets required under permit N158 has been reduced due to additional emission reductions . . . due to revised estimates of VOC losses from loading activities. Attachment 1.

Though Attachment A to Permit No. 101199/N158, referenced in Special Condition 25(D), includes a testing protocol that constitutes an applicable requirement, was used to revise

the TCEQ's LAER determination and offset requirements (which are applicable requirements), and is necessary to assure compliance with the Special Condition 25(C) emission limit, it was not included in the Draft Permit. The Draft Permit is therefore incomplete. While EPA has allowed Texas to incorporate applicable requirements in minor NSR permits into Title V permits by reference, EPA has objected to Texas's use of incorporation by reference ("IBR") to include applicable requirements in major NSR permits in Title V permits. *Objection to Federal Operating Permit No. O1626, Sweeny Refinery* (January 8, 2010) at ¶ 1. Accordingly, the Executive Director must include Attachment A as part of the Draft Permit. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); *In the Matter of WE—Oak Creek Power Plant*, Order on Petition to Object to Permit No 241007690-P10 (June 12, 2009) ("Oak Creek Order") at 25-26.

Additionally, because the Draft Permit and Permit No. 101199/N158 require compliance with the Attachment A testing protocol and because the TCEQ relied upon this testing protocol to revise the Galena Park Terminal's potential to emit, to revise its previous LAER determination, and to reduce the amount of offsets Kinder Morgan was required to obtain before constructing new facilities at its terminal, the content of the attachment is information necessary to impose applicable requirements and must be in the Title V permit application, 40 C.F.R. § 70.5(c), and available for review during the public comment period. 40 C.F.R. § 70.7(h)(2). Oak Creek Order at 25-26. Commenters have reviewed Kinder Morgan's Title V application file and Attachment A is not included in it.[1] Because Kinder Morgan's Title V application is incomplete and because the public did not have an opportunity to review Attachment A during the comment period, the Executive Director may not issue the Draft Permit. The Executive Director must require Kinder Morgan to submit a complete application and provide the public an opportunity to comment on it before he issues Kinder Morgan's Title V permit.

b. Marine Loading—The Executive Director Failed to Support his Determination that Testing Described in Attachment Assures Compliance with Applicable Requirements

Based on our review of *draft* versions of Attachment A contained in the permitting file for Permit No. 101199/N158, Commenters are concerned that the testing conducted to establish the Special Condition 25(C) emission limit and the follow-up testing protocol will fail to assure compliance with this limit, even if Attachment A is included in the Draft Permit, because (1) the testing used to establish the limit was only conducted on three relatively new and well-maintained ships and should not be presumed to represent actual emissions across all actual loading activities at the terminal; (2) only one of the three tests actually measured emissions for a

[1] Commenters did search for Attachment A on the TCEQ's remote document server and were unable to find a final version of the document. The version available was a draft that contained redlined edits. Commenters also reviewed the application file for Permit No. 101199/N158 and it did not contain a final version of the attachment. The, the various draft versions of the Attachment in the application file varied substantially from the draft attachment available on the TCEQ's document server.

full loading run; and (3) follow up testing under the Attachment A protocol will use a different emission calculation methodology than was used in the initial test; (4) it is unclear that Kinder Morgan has the authority to require ships using the Galena Park terminal to conduct testing; and (5) the draft follow-up test protocol does not preclude Kinder Morgan from declining to test ships that will not be able to comply with the emission limit.[2]

The emission limit in Permit No. 101199/N158, Special Condition 25(C) is based on testing conducted on three relatively new tankers, constructed between 2005 and 2009. According to one version of Draft Attachment A found in Kinder Morgan's permit file:

> The above referenced tankers were required to perform annual leak vapor-tightness tests. In addition, the tank crews also conducted regular maintenance checks, adhered to standard operating procedures, routed loading loss emissions to pollution control devices, and maintained cargo tank pressures near atmospheric pressure throughout the loading process. As such, the potential for uncollected loading losses to occur during routine loading operations on these vessels was expected to be relatively low. As summarized below in Table 1-1, the results of these measurement studies confirmed this expectation. Attachment 2.

As this passage suggests, the three ships tested are not representative of all ships that utilize the Galena Park Terminal. Unless all ships that use the terminal are in similar condition and maintained with the same diligence as the tested ships, it is unreasonable to presume that the emission limit based on this testing, which is much lower than Texas's standard emission factor for loading losses, will be achieved in practice unless additional conditions on the kind and condition of ships using the terminal are added to the Draft Permit.

- Commenters request that the Executive Director identify information in the permitting record assuring that:

    - All ships using the Galena Park Terminal will be as new and as well-maintained as the tankers Kinder Morgan tested; and

    - All ships using the Galena Park Terminal will be of the same kind as the tankers Kinder Morgan tested.

According to Table 1-1 of Draft Attachment A, testing for two of the three ships used to establish the permit emission limit, "took place near the end of the load and results were conservatively extrapolated over the entire duration of the load." Commenters are concerned that these results may not be representative of actual emissions from the tested ships. While Kinder Morgan attempted to justify limited testing as consistent with MACT Y Method 21 and

[2] Commenters did not have an opportunity to comment on the testing protocol in Attachment A when it was added to Permit No. 101199/N158, because it was established through a no-notice permit amendment. Attachment 1.

explained that the Attachment A testing protocol states that subsequent tests will be limited to the last 20 percent of the loading process, the proper citation relevant to vapor-tightness testing using Method 21 is 40 C.F.R. § 63.565(c)(2), which requires testing to be performed "…during the final 20 percent of loading of *each product tank* [rather than overall load]." (emphasis added). Accordingly, there is no way of knowing whether Kinder Morgan's partial load testing, which did not measure emissions during the final 20 percent loading *of each product tank*, reflects actual emissions throughout the loading process.

While Attachment A does require follow-up testing, the emissions calculation methodology for the follow up testing does not match the method used in the initial tests. *See*, Attachment 2, Table 1-1, note c ("The results in this table match the results provided in the three reports generated for these three studies. The process for calculating uncollected emissions has changed since the issuance of these three reports.") Because the testing process is suspect and follow-up testing emissions will be calculated using a different method than used in the initial tests, Commenters are concerned that the testing protocol contained in Attachment A to Permit No. 101199/N158 fails to assure compliance with applicable requirements.

Finally, unless Kinder Morgan has the authority to require ships using the Galena Park Terminal to conduct the testing described in Attachment A, follow-up testing cannot assure compliance with the applicable emission limit. It is unlikely that poorly maintained ships will submit to testing or that Kinder Morgan will opt to conduct testing on ships the Company believes cannot demonstrate compliance with the limit. Because Permit No. 101199/N158 and the draft Attachment A documents do not establish procedures for ensuring that ships must submit to the testing and that the ships Kinder Morgan selects for testing are representative of the full range of ships that use the Galena Park Terminal, Commenters are concerned that the test protocol is unenforceable and unreliable. Commenters ask that the Executive Director identify information in the permit record demonstrating that:

- Kinder Morgan has the authority to require ships using the Galena Park Terminal to consent to the testing protocol contained in Attachment A; and

- Kinder Morgan is required to select ships for follow up testing that are representative of the full range of ships that use the Galena Park Terminal.

Requested Revision to the Title V Permit:

The Executive Director must revise the Draft Permit to include Permit No. 101199/N158, Attachment A. The Executive Director must also revise the Statement of Basis to explain how the Attachment A testing protocol assures compliance with applicable requirements. If the Executive Director determines that additional monitoring requirements must be established to assure compliance with the uncontrolled loading emission limit in Permit No. 101199/N158, he must revise the Draft Permit to include such requirements. After these revisions have been

made, the Executive Director must require Kinder Morgan to re-notice the Draft Permit to allow the public an opportunity to comment on the complete Title V permit and application

2. The Draft Permit Fails to Establish Periodic Monitoring to Assure Compliance with Applicable Requirements in Permit No. 101199/N158

a. Heater Emission Caps and Site-Wide Benzene Limit

According to the Draft Permit's Major NSR Summary Table, Permit No. 101199/N158 does not contain any monitoring, testing, recordkeeping, or reporting requirements that assure compliance with annual emission caps for Kinder Morgan's two heaters and the permit's site-wide annual benzene limit. Draft Permit at 74 and 76. Because the Draft Permit indicates that there are no requirements to assure compliance with these limits, it fails to assure compliance with them.

Requested Revision to the Title V Permit:

The Executive Director must revise the Draft Permit to identify monitoring, recordkeeping, and reporting requirements that assure compliance with Permit No. 101199/N158 heater emission caps and site-wide benzene limit. If Permit No. 101199/N158 does not establish such conditions, the Executive Director must add requirements to the Draft Permit that assure compliance with the limits. The Executive Director must also revise the Statement of Basis to explain how the monitoring, recordkeeping, and reporting requirements listed in the revised Draft Permit assure compliance with applicable requirements.

b. Tank Drain and Fill Rates

Permit No. 101199/N158, Special Condition 16 establishes bbl/hr fill and drain rate limits for Kinder Morgan's tanks. These limits are applicable requirements of the Draft Permit. The Draft Permit is deficient because it does not include a method for determining compliance with these requirements.

Requested Revision to the Title V Permit:

The Executive Director must revise the Draft Permit to establish monitoring, recordkeeping, and reporting requirements that assure compliance with Permit No. 101199/N158 tank fill and drain rates. The Executive Director must also revise the Statement of Basis to explain how the monitoring, recordkeeping, and reporting requirements added to the Draft Permit assure compliance with applicable requirements.

3. Monitoring Requirements Incorporated into the Draft Permit Fail to Assure Compliance with Applicable Requirements in Kinder Morgan's NSR Permits

a. PBR Monitoring

Title V permits must specify monitoring methods that assure compliance with each applicable requirement. . 42 U.S.C. § 7661c(c); *In the Matter of Wheelabrator Baltimore, L.P.*, Permit No. 24-510-01886 (April 14, 2010) at 10. Emission limits, terms, and conditions of claimed PBRs are applicable requirements. 30 Tex. Admin. Code § 122.10(2)(H). The Draft Permit is deficient because it fails to specify monitoring methods that assure compliance with applicable PBR requirements.

The Draft Permit incorporates by reference the following PBRs as applicable requirements: 106.261 (11/01/2003), 106.262 (11/01/2003), 106.263 (09/04/2000), 106.263 (11/01/2001), 106.454 (11/01/2001), 106.472 (09/04/2000), and 106.511 (09/04/2000). Draft Permit at 68.

Facilities authorized by these PBRs must comply with general PBR requirements listed at 30 Tex. Admin. Code § 106.4 as well as any requirements listed in the specific claimed PBRs. Draft Permit, Special Conditions 14 and 15. Requirements listed at § 106.4 include emission limits for facilities authorized by PBR, *id.* at § 106.4(a)(1), as well as a prohibition on the use of PBRs to authorize construction of a new major source or a major modification of an existing source. *Id.* at §§ 106.4(a)(2) and (3). Because the NO_x and VOC emissions limits established by 30 Tex. Admin. Code § 106.4(a)(1) exceed the netting trigger to determine major NSR applicability for sources in the HGB non-attainment area, § 106.4(a)(2) provides that persons claiming a PBR for a non-attainment source must comply with applicable netting requirements listed at 30 Tex. Admin. Code § 116.150. *Id*. at 106.4(a)(2). Additionally, because the CO, H_2SO_4, H_2S, and TRS emissions limits established by 30 Tex. Admin. Code § 106.4(a)(1) exceed the netting trigger to determine major NSR applicability for modifications in areas listed as attainment or unclassified for those pollutants, and because PBRs can be used to authorize increases of other pollutants—including PM, PM_{10}, and $PM_{2.5}$—at multiple facilities at levels that exceed applicable netting thresholds, projects authorized by PBR may trigger PSD netting requirements listed at 30 Tex. Admin. Code § 116.160(b).[3]

The emission limits established by 30 Tex. Admin. Code § 106(a)(1), the prohibition on emissions increases that trigger PSD and NNSR requirements at § 106(a)(2) and (3), and the requirement to conduct netting to determine major NSR applicability for PBR increases that exceed applicable netting thresholds (though remaining below the limits at § 106.4(a)(1)) are all

[3] While 30 Tex. Admin. Code § 106.4(a)(1) does not establish specific limits for H_2SO_4, H_2S, and TRS, it contains a 25 tons per year limit for unlisted contaminants. *Id*. at § 106.4(a)(1)(E).

applicable requirements and the Draft Permit must contain monitoring methods that assure compliance with them.

In addition to these general PBR requirements, the following emission limits and standards contained in the specific PBRs claimed by Kinder Morgan are also applicable requirements of the Draft Permit:

PBRs 106.261 and 106.262 claimed by Kinder Morgan establish hourly and annual emission limits for various contaminants, *Id.* at §§ 106.261(a)(2) and (3); 106.262(a)(2) and prohibit visible emissions exceeding five percent. *Id.* at §§ 106.261(a)(5); 106.262(a)(5). Additionally, 106.262(a)(4) limits the amount of certain chemicals that may be stored on property.

PBR 106.263 (11/01/2001), which applies to routine maintenance, start-up, and shutdown of facilities and temporary facilities establishes daily emission limits, *Id.* at § 106.263(d)(1), requires a case-by-case permit for activities that exceed these limits, *Id*. at § 106.263(d)(2), incorporates by reference emission limits and conditions established by various other PBRs for specific source categories, *Id*. at § 106.263(e)(1)-(5), requires a case-by-case permit for activities that exceed these limits, *Id*. at § 106.263(e)(6), and incorporates emission limits listed in 106.4(a)(1)-(3) in any rolling 12-month period. *Id*. at § 106.263(f).

PBR 106.511, which applies to portable and emergency engines and turbines, limits the maximum operation of such units authorized by PBR to ten percent of the normal annual operating schedule of the primary equipment.

Though the Draft Permit and Texas's Chapter 106 rules require Kinder Morgan to maintain records demonstrating compliance with applicable PBR requirements, *Id.* at §§ 106.8(c) and 106.263(g); Draft Permit, Special Condition 16, the Draft Permit is deficient because it does not specify the monitoring methods Kinder Morgan must use to determine compliance with each applicable PBR requirement. Instead, the Draft Permit outsources the TCEQ's obligation to specify the monitoring method(s) that will assure compliance with each applicable requirement to Kinder Morgan. Draft Permit, Special Condition 16 (establishing non-exhaustive list of data Kinder Morgan may consider, at its discretion, to determine compliance with PBR requirements). This outsourcing renders the Draft Permit deficient for three reasons: First, the Draft Permit is deficient because it fails to specify monitoring requirements for each applicable requirement. Second, the Draft Permit is deficient, because the permitting record does not explain how the Draft Permit assures compliance with PBR requirements. Finally, the Draft Permit is deficient, because the Executive Director's failure to specify monitoring methods for applicable PBR requirements or to identify the monitoring methods Kinder Morgan has selected prevented the public from evaluating whether Title V monitoring requirements have been met. *See In the Matter of United States Steel—Granite City* Works, Order on Petition No. V-2011-2 (December 3, 2012) ("Granite City II Order) at 9-12 (granting petition for objection, because the

"permit fails to specify the monitoring methodology and also fails to provide a mechanism for review of the methodology by IEPA, the public, and EPA after the permit is issued. It is impossible to know whether the periodic monitoring chosen by the source assures compliance with the permit terms and conditions as required by 40 C.F.R. §§ 70.1(b) and 70.6(c)(1) because that monitoring has not been determined yet."). For example, Commenters would likely review and/or challenge PBR monitoring relying upon undefined "engineering calculations" to determine compliance without more information about how those calculations were to be made and evidence that operational conditions presumed by the calculations are consistent with actual conditions at the Galena Park Terminal.

The Draft Permit's Special Condition 16 recordkeeping requirement is deficient for an additional reason: It fails to require permit records demonstrating compliance to be made available to the public as required by Texas's Title V program. Deer Park Order at 15 ("[T]he permit records for demonstrating compliance with PBRs must be available to the public as required under the approved Texas title V program").

Requested Revision to the Title V Permit

To assure compliance with incorporated PBR requirements, the Executive Director should revise the Draft Permit to specify the monitoring method(s) that assure compliance with each applicable PBR requirement, and provide a reasoned basis for his determination that such methods assure compliance. The Executive Director must also revise the Draft Permit to require any records used to demonstrate compliance with PBR requirements be made available to the public on request. After these revisions are made, the Executive Director must re-notice the Draft Permit and allow the public an opportunity to comment on the monitoring methods for PBR requirements.

b. Permit No. 101199/N158 Monitoring

Tank Emissions: Permit No. 101199/N158, Special Condition 18 provides that "[e]missions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit." This Special Condition does not assure compliance with hourly and annual VOC limits in the MAERT, because it does not identify the methods Kinder Morgan used to calculate tank emissions in its application(s), does not identify the application(s) that contains the relevant information, does not describe how this information should be applied to determine actual emissions from the tanks, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) assure compliance with the applicable limits. Granite City I Order at 43.

Loading Emissions: Permit No. 101199/N158, Special Conditions 25(G) and 28 require Kinder Morgan to maintain and records calculating emissions and tracking various operational

parameters related to loading activities at the Galena Park Terminal. These conditions do not, however, explain how Kinder Morgan is to calculate loading emissions or how the parametric information should be used to determine compliance with applicable requirements, including hourly and annual emission limits, in the permit. Instead, these conditions provide that "emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit."

These special conditions do not assure compliance with the permit's emission limits and conditions for loading operations, because they do not identify the methods Kinder Morgan used to calculate loading emissions in its application(s), do not identify the application(s) that contains the relevant information, do not describe how this information should be applied to determine actual emissions from loading operations, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirement assures compliance with the applicable conditions and limits. Granite City I Order at 43.

Tank Landing Emissions: Permit No. 101199/N158, Special Condition 37(G) requires Kinder Morgan to maintain records regarding tank landings at the Galena Park Terminal and to estimate emissions resulting from these activities. According to the permit, "[t]he emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Storage of Organic Liquids" dated November 2006 and the permit application." Emissions from tank landings must be calculated to determine compliance with limits in the MAERT as well as the 5 TPY limit on tank transfer emissions established by Special Condition 20.

Special Condition 37 does not assure compliance with the permit's emission limits and conditions, because it does not identify the methods Kinder Morgan used to calculate tank landing emissions in its application(s), does not identify the application(s) that contains the relevant information, does not describe how this information should be applied to determine actual emissions from loading operations, does not describe how application information should be used with the identified AP-42 method, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirement in Special Condition 37 assures compliance with the applicable conditions and limits. Granite City I Order at 43.

Tank Transfer Emissions: Permit No. 101199/N158, Special Condition 20 provides that "[e]missions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site . . . is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period. To demonstrate compliance with this limit, Permit No. 101199/N158 requires Kinder Morgan to quantify emissions associated with working losses from filling, refilling, and loading. According to the permit, "[t]ank emissions shall be determined and documented in accordance with Special Conditions 18 and 37, as

applicable. Loading emissions shall be determined and documented in accordance with Special Condition 28." These provisions fail to assure compliance with this limit, because, as explained above, the Draft Permit does not identify the required calculation methods required by Special Conditions 18, 28, and 37, and because the permit record does not demonstrate that these methods reliably indicate actual emissions from the Galena Park Terminal over the applicable compliance periods.

MSS Emissions: Permit No. 101199/N158, Special Conditions 34-40 authorize and establish various requirements related to emissions during planned MSS activities at the Galena Park Terminal. These special conditions require Kinder Morgan to calculate actual emissions from these activities to demonstrate compliance with applicable requirements. The permit, however, does not explain how Kinder Morgan must calculate these emissions, and refers instead to methods and information contained in Kinder Morgan's application for Permit No. 101199/N158.

These special conditions do not assure compliance with the permit's emission limits and conditions for Planned MSS activities, because they do not identify the methods and information Kinder Morgan used in its application(s), do not identify the application(s) that contains the relevant information, do not describe how this information should be applied to determine actual emissions from planned MSS activities, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirements in the Draft Permit assure compliance with the applicable conditions and limits. Granite City I Order at 43.

Requested Revision to the Title V Permit:

The Executive Director should revise the Draft Permit to expressly identify the calculation methods Kinder Morgan must use to determine compliance with applicable tank, loading, tank landing, tank transfer, and MSS emission limits. The Executive Director must also revise the Statement of Basis to explain how these calculation methods assure compliance with applicable requirements.

To the extent that the applicable methods rely on AP-42 emission factors or other non-source-specific emission factors, Commenters request that the Executive Director demonstrate that the emission factors accurately predict actual emissions from units at the Galena Park Terminal and identify requirements in the Draft Permit that assure Kinder Morgan will operate affected facilities consistent with conditions presumed by the emission factors.

B. The Draft Permit Omits or Fails to Assure Compliance with Applicable Requirements

1. The Draft Permit's Method of Incorporating Permit by Rule Requirements by Reference Fails to Assure Compliance

The Draft Permit incorporates by reference many PBR limits and requirements. *See* Draft Permit at 68-70 (listing PBRs incorporated by reference into the Draft Permit). To assure compliance with applicable requirements, the Executive Director must "ensure that Title V permits are clear and unambiguous as to how emission limits [established by PBRs] apply to particular emissions units." *In the Matter of Premcor Refining Group,* Order on Petition No. VI-2007-02 (May 28, 2009) at 6, n3. Though IBR of PBRs may be proper in some cases, Title V permits that incorporate PBRs by reference must provide enough information about facilities authorized by PBRs to allow readers to answer the following basic questions about how incorporated PBRs apply to Title V sources: (1) how much pollution may each facility emit under claimed PBRs, (2) which pollutants may each facility emit under claimed PBRs, and (3) which PBRs apply to each facility. The Draft Permit is deficient—not because it fails to directly include the text of the incorporated PBRs—but because it does not include information a reader needs to understand how PBRs apply to facilities at the Galena Park Terminal. *See, White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program* ("White Paper 2") (March 5, 1996) at 37 ("Citations, cross references, and incorporations by reference must be detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation").

a. How Much Pollution May Kinder Morgan Emit Under Claimed PBRs?

Before any actual work is begun on a new or modified facility, an operator must obtain a permit or permit amendment authorizing the project. 30 Tex. Admin. Code § 116.110(a). To authorize construction of new or modified facilities, an operator may apply for a new or amended case-by-case permit. *Id*. at §§ 116.110 and 116.111. In lieu of applying for a new or amended case-by-case permit under § 116.111, an operator may instead claim a PBR (or PBRs) to authorize construction or modification of a facility, so long as the proposed construction project complies with PBR requirements. *See, e.g., id.* at §§ 106.4(a) (listing general requirements that must be met to qualify for a PBR); 116.110(a)(4) (stating that construction may be authorized by PBR); and 116.116(d) (stating that a PBR may be used in lieu of a permit amendment to authorize construction). While each case-by-case permit is assigned a unique permit number[4]

[4] The TCEQ's numbering conventions are actually a bit more complicated than this. A case-by-case permit may have up to three different unique numbers. Each PSD or NNSR permit will have two numbers: a state permit tracking number and a federal permit tracking number. So, for example, Permit No. 101199 and N158 listed in the Draft Permit refer to the same permit. Additionally, if an NNSR or PSD permit contains PAL provisions (see 30 Tex. Admin. Code 116, Subchapter C), the permit will also have a PAL permit number.

and includes source-specific emission limits and special conditions based on the Executive Director's review of the operator's application, PBRs establish generic emission limits and operating requirements that apply to all new and modified facilities authorized by PBR (unless the operator registers PBR emissions at lower rates—*see,* 30 Tex. Admin. Code § 106.6). These generic requirements are found in Texas's PBR rules. When construction of new or modified facilities is authorized by PBR, the PBR(s) claimed by the operator—*i.e., the rule itself*—is the permit authorizing the project. *See, e.g.*, 30 Tex. Admin. Code § 106.454 ("Any degreasing unit that satisfies the following conditions of this section is permitted by rule").

Thus, while the Draft Permit identifies the case-by-case permit it incorporates by reference by its unique permit numbers (101199 and N158) and date of issuance (October 8, 2014), it identifies the PBRs Kinder Morgan has claimed by rule number and the date that each rule was promulgated (not the date(s) it was claimed by Kinder Morgan). Draft Permit at 68. This way of listing applicable requirements is misleading, because it suggests that each claimed PBR, like the case-by-case permit identified in the Draft Permit, is a single permit. This suggestion is misleading because Kinder Morgan has claimed the same PBR to separately authorize construction of or modifications to different facilities, various modifications to a single facility, or various modifications that affect several different facilities at the Galena Park Terminal. *See, e.g.*, Attachment 3.

According to the TCEQ's Permit by Rule Applicability Checklist, PBRs may only be used to authorize construction or modification of facilities if (1) emissions from **each** facility are below the 106.4(a)(1) thresholds; and (2) emissions from **all** facilities covered by the PBR submittal are below the 106.4(a)(1) thresholds. PBR Checklist, Section 1.[5] Because PBR limits may apply to a single facility or establish caps that cover multiple facilities depending how many facilities are included in each PBR submission and how many submissions Kinder Morgan has made, one cannot tell from the Draft Permit and information in the incorporated PBR rules how much each facility at the Galena Park Terminal is authorized to emit under the various PBRs listed in the Draft Permit. For example, the Draft Permit's New Source Review Authorization References by Emission Unit chart indicates that Kinder Morgan has used the PBR at 106.472 to authorize emissions from two of its tanks, TK-101 and TK-102. Draft Permit at 70. This PBR does not include any emission limits, so the emission limits at 30 Tex. Admin. Code § 106.4(a)(1) apply. However, one cannot tell, based on information contained in the Draft Permit and the incorporated PBR, whether TK-101 and TK-102 were authorized as part of the same submission or as different projects. This matters, because if construction of each tank was separately authorized—*i.e.*, meaning the PBR has been claimed twice—each tank may emit up to the 30 Tex. Admin. Code §106.4(a)(1) emission limits, while the tanks' combined emissions must remain below those limits if they were authorized as part of the same construction project

[5] Available electronically at https://www.tceq.texas.gov/assets/public/permitting/air/Forms/PermitsByRule/Checklists/10149.pdf

(and the PBR was only claimed once). Matters are even more complicated than this, because Texas's rules allow Kinder Morgan to certify and register PBR emissions at levels that are lower than the limits specified by the applicable rules to avoid triggering NNSR and/or PSD netting requirements. 30 Tex. Admin. Code § 106.6; *Approval and Promulgation of Implementation Plan; Texas; Revisions to Regulations for Permits by Rule*, 68 Fed. Reg. 64,543, 64,547 (November 14, 2003).("The [PBR] regulations allow a source to limits PTE of a pollutant below the level of a major source defined in the Act. This includes regulations which Texas revised to allow an owner or operator of a source to register and certify restrictions and limitations that the owner or operator will meet to maintain its PTE below the major source threshold"). Kinder Morgan has registered PBR emissions for various facilities at the Galena Park Terminal at levels well below the § 106.4(a)(1) limits. Attachment 3.

The Draft Permit is incomplete and fails to assure compliance with PBR requirements, because readers cannot determine, based on the text of the incorporated PBR rules and other information in the Draft Permit, how much pollution Kinder Morgan is authorized to emit from each facility under any of the claimed PBRs.

b. Which Pollutants May Kinder Morgan Emit Under Claimed PBRs?

Texas's General PBR requirements indicate that PBRs may be used to authorize emissions of *any* contaminant other than water, nitrogen, ethane, hydrogen, oxygen, and greenhouse gasses. 30 Tex. Admin. Code § 106.4(a)(1)(E).[6] However, claiming a PBR for a project does not authorize emissions of <u>*all*</u> pollutants up to the limits identified in 106.4 and the specific claimed PBR (*i.e.*, 250 tpy NO_x and CO+25 TPY of VOC, SO_2, and PM+15 TPY PM_{10}+10 TPY $PM_{2.5}$+25 TPY Lead+25 TPY H_2S+25 TPY H_2SO_4 etc). That would run afoul of the TCEQ's reading of 30 Tex. Admin. Code § 106.4 as precluding PBR submissions to authorize emissions increases exceeding the applicable major source threshold. PBR Checklist, Section 3. Instead, only emissions related to the particular construction project for which the PBR is claimed are authorized. *See, e.g.*, 30 Tex. Admin. Code § 106.4(a) (stating that emissions from a facility authorized by PBR must remain below that 106.4(a)(1) emission limits, "*as applicable*") (emphasis added). The Draft Permit does not contain any information about the projects or emissions authorized by PBR for any facility at the Galena Park Terminal. Thus, one cannot determine—based solely on the text of Texas's PBR rules incorporated by reference into the Draft Permit—which pollutants Kinder Morgan is authorized to emit from any PBR facility. Because the Draft Permit fails to provide sufficient information to allow a reader to determine which pollutants each PBR facility is authorized to emit, it is incomplete and fails to assure compliance with applicable PBR requirements. Because incorporated PBR emission limits and requirements are not enforceable, the Draft Permit is deficient.

[6] The term "contaminant," as defined by the Texas Clean Air Act encompasses all federally regulated NSR pollutants. *See,* Tex. Health & Safety Code § 382.003(2).

c. Which Facilities are Subject to PBR Limits and Requirements?

While the Draft Permit incorporates the following PBRs, it does not identify any facility or group of facilities authorized by these permits: 106.262, 106.263 (09/04/2000), and 106.511. Because the Draft Permit does not even identify the facility or facilities authorized by and subject to the requirements of these PBRs, it fails to unambiguously describe how these permits apply to individual facilities at the Galena Park Terminal. Without this information, members of the public and federal regulators will not be able to determine which facilities must comply with these permits**.** *Objection to Title V Permit No. O2164, Chevron Phillips Chemical Company, Philtex Plant* (August 6, 2010) at ¶ 7 (draft permit fails to meet 40 C.F.R. § 70.6(a)(1), because it does not list any emission units authorized under specified PBRs). Moreover, even if an interested party is able to determine which facilities should be subject to one of these PBRs, a court is unlikely to enforce these requirements, because the Draft Permit fails to identify them as applicable for any specific facility or facilities at the Galena Park Terminal. *See United States v. EME Homer City Generation*, 727 F.3d 274, 300 (3rd Cir. 2013) (explaining that the Court lacks jurisdiction to enforce a requirement omitted from a Title V permit). Because this is so, the Draft Permit fails to identify and assure compliance with all applicable requirements.

- If the Executive Director contends that the Draft Permit's method of incorporating PBR requirements assures compliance, Commenters respectfully request that the Executive Director identify the information in the Draft Permit, the Statement of Basis, and the text of the incorporated PBRs that indicates which facilities are covered by each of the following PBRs: 106.262, 106.263 (09/04/2000), and 106.511.

Requested Revision to the Title V Permit

The Executive Director must revise the Draft Permit to identify which pollutants and how much of each pollutant facilities at the Galena Park Terminal are authorized to emit under claimed PBRs.

- 30 Tex. Admin. Code § 106.4(a)(1) states that "[t]otal actual emissions authorized under permit by rule from the facility shall not exceed the following limits[.]" Commenters read this language to mean that total emissions from each facility authorized by PBR may not exceed the limits listed at 106.4(a)(1), regardless of how many PBRs are claimed or how many PBR submittals are made for that facility (*i.e.*, regardless of how many PBRs are claimed and how many PBR submittals are made to authorize changes to a particular tank, that tank may not emit more than 25 TPY of VOC without a case-by-case permit). Commenters ask that the Executive Director indicate whether this reading of the rule is correct;

- If the Executive Director contends that Commenters' reading of 106.4(a)(1) is incorrect, Commenters ask that he clarify the proper reading of the rule and identify applicable guidance documents supporting that reading.

2. The Draft Permit Omits Applicable PBR Requirements

a. The Draft Permit Fails to Identify and Incorporate PBR Registrations as Applicable Requirements

Texas Title V permits must include and assure compliance with all applicable requirements, including "[a]ll requirements under Chapter 106, Subchapter A . . . (relating to Permits by Rule)." 30 Tex. Admin. Code § 122.10(2)(H) (defining "applicable requirements" to include PBR requirements); 42 U.S.C. § 7661c(a).

Texas's Chapter 106, Subchapter A rules state that "[a]n owner or operator may certify and register the maximum emission rates from facilities permitted by rule under this chapter in order to establish federally-enforceable allowable emission rates which are below the emission limitations in § 106.4[.]" 30 Tex. Admin. Code § 106.6(a). Various PBRs also require operators to register emissions. *See, e.g., id.* at § 106.454(1)(A)(i). In cases where an operator registers emission rates, "[a]ll representations with regard to construction plans, operating procedures, and maximum emission rates in any certified registration become conditions upon which the facility permitted by rule shall be constructed and operated." *Id*. at § 106.6(b). These source-specific PBR emission limits and conditions are applicable requirements that must be included in Title V permits and Title V permits must include conditions necessary to assure compliance with them.

Kinder Morgan has certified and registered PBR emissions for various facilities at the Galena Park Terminal at levels substantially lower than the general PBR emission limits found at 30 Tex. Admin. Code § 106.4(a)(1) and the specific claimed PBRs. Attachment 3. The Draft Permit, however, does not identify Kinder Morgan's registrations as applicable requirements. Draft Permit at 68-70. Indeed, the Draft Permit fails to indicate that these registrations even exist. This omission suggests that all facilities authorized via PBR may emit up to the limits specified in § 106.4(a)(1). The Draft Permit's failure to identify and include source-specific § 106.6 registration requirements is contrary to 42 U.S.C. § 7661c(a) and renders them unenforceable under the prevailing doctrine of collateral attack. *See United States v. EME Homer City Generation*, 727 F.3d 274, 300 (3rd Cir. 2013) (explaining that the Court lacks jurisdiction to enforce a requirement omitted from a Title V permit).

Additionally, because Kinder Morgan's PBR registrations contain information necessary to impose applicable PBR requirements, these registrations must be included in Kinder Morgan's Title V permit application, 40 C.F.R. § 70.5(c), and available for review during the public comment period. *Id.* at § 70.7(h)(2). *In the Matter of WE—Oak Creek Power Plant*, Order on

Petition to Object to Permit No 241007690-P10 (June 12, 2009) at 25-26. Commenters have reviewed Kinder Morgan's application file and it does not contain information about requirements in Kinder Morgan's registered PBRs. Because the application is incomplete and because the public did not have an opportunity to review the PBR registration requirements in the application during the comment period, the Executive Director may not issue the Draft Permit. The Executive Director must require Kinder Morgan to submit a complete application and provide the public an opportunity to comment on it before he issues Kinder Morgan's Title V permit.

b. The Draft Permit's Failure to Incorporate PBR Registration Requirements Fails to Assure Compliance with Major NSR Requirements

The Galena Park Terminal is located in the HGB sever ozone nonattainment area. Accordingly, Kinder Morgan is required to conduct netting to determine major NSR applicability for any construction or modification that has the potential to increase NO_x or VOC emissions more than 5 tons per year. 30 Tex. Admin. Code § 116.150(c).[7] Texas's general PBR requirements provide that facilities authorized by PBR may emit up to 250 tpy of NO_x and 25 tpy of VOC, which exceeds the applicable netting threshold. *Id.* at §§ 106.4(a)(1); 116.150(c). To avoid netting requirements that would otherwise be triggered by potential VOC and NO_x increases for PBR projects subject to § 106.4(a)(1) limits, Kinder Morgan has registered PBR emission rates at levels lower than the general limits. Attachment 3.

To be effective, Kinder Morgan's PBR registrations must be federally and practicably enforceable. *Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits*, Katie A. Stein, Director, EPA Air Enforcement Division ("Enforceability Guidance") (January 25, 1995).[8] EPA's guidance contains the following statement addressing rules like 30 Tex. Admin. Code § 106.6, which allow operators claiming a general permit to accept limits lower than provided by the general permit:

> A rule that allows sources to submit the specific parameters and associated limits to be monitored may not be enforceable because the rule itself does not set specific technical limits. The submission of these voluntarily accepted limits on parameters or monitoring requirements would need to be federally enforceable. Absent a source-specific permit and appropriate review and public participation of the limits, such a rule is not consistent with EPA's enforceability principles.

Enforceability Guidance at 8.

[7] If and when Harris County is designated as attainment for the revoked 1-hour ozone standard, the netting trigger will increase to 40 tpy of NO_x or VOC, because the County is also designated as a marginal nonattainment area for the 2008 eight-hour ozone standard. *Id.* at § 116.150(c)(2).

[8] Available electronically at http://www2.epa.gov/sites/production/files/2015-07/documents/potoem.pdf

Thus, to ensure that registered PBRs limiting the PTE of facilities at the Galena Park Terminal are enforceable requirements of the Draft Permit, the Executive Director must incorporate the registered limits and operating parameters as source-specific NSR permit requirements. Otherwise, the only enforceable limits for PBR facilities at the Galena Park Terminal will be those established in 30 Tex. Admin. Code §106.4(a)(1) and the claimed PBRs, which are not low enough to ensure that PBR facilities do not trigger major NSR netting and preconstruction permitting requirements. By failing to specifically identify and incorporate PBR registrations, the Draft Permit fails to assure compliance with major NSR requirements and subjects Kinder Morgan to possible liability for failing to comply with netting requirements triggered by authorizations subject to § 106.4(a)(1) limits, because Kinder Morgan's PBR registrations are not enforceable and do not effectively limit the PTE of covered facilities. Enforceability Guidance at 11 ("[W]here a source is required to use another mechanism to limit potential to emit, i.e., a construction permit, the general permit may not be relied upon by the source or the State, to limit the potential to emit").

Requested Revision to the Title V Permit:

To ensure that Kinder Morgan's PBR registrations are federally enforceable and effectively limit the PTE of facilities at the Galena Park Terminal and to prevent circumvention of major NSR netting and preconstruction permitting requirements, the Executive Director should revise the Draft Permit to (1) identify and include registered PBR limits, conditions, and representations and (2) specify monitoring methods sufficient to assure compliance with them. The Executive Director should also revise the Statement of Basis to explain how these registered PBRs assure compliance with major NSR requirements and how the identified monitoring methods assure compliance with PBR registration requirements.

3. The Draft Permit Incorporates Texas's Disapproved Affirmative Defense for Planned Maintenance, Startup, and Shutdown as a Federally Enforceable Requirement

Title V permits must assure compliance with all applicable federal requirements, including emission limits established by the Texas SIP and New Source Review permits. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.2 (defining "applicable requirement" to include SIP limits and terms and conditions of NSR permits). To ensure that state-only requirements listed in a Title V permit may not be read to displace more stringent federal requirements, Title V permits must identify state-only provisions and explain that they are not federally-enforceable. 40 C.F.R. § 70.6(b)(2).

While the Draft Permit incorporates by reference many SIP limits and NSR permit requirements, it also incorporates by reference 30 Tex. Admin. Code §§ 101.222(h)-(j), which purport to establish an affirmative defense to penalties for unauthorized emissions during

planned maintenance, startup, and shutdown activities. Draft Permit, Special Condition 2(I). This affirmative defense, which EPA disapproved,[9] interferes with federal enforcement of SIP limits and NSR permit requirements by limiting the means that EPA and the public may use to compel compliance with applicable requirements. Because EPA disapproved the affirmative defense, it is not a SIP requirement and the Draft Permit must state that it is not federally-enforceable.

Though EPA disapproved Texas's affirmative defense for planned MSS events, at least one federal court has held that unqualified incorporation of the disapproved defense into a Title V permit makes the defense federally enforceable. *Sierra Club v. Energy Future Holdings Corp.*, 2014 WL 2153913 at *11 (W.D. Texas March 28, 2014) (holding that Plaintiff's argument that the disapproved affirmative defense incorporated by reference into a Texas Title V permit was not federally enforceable amounted to a non-justiciable collateral attack on the Title V permit). In light of this decision and EPA's disapproval of the Commission's affirmative defense for excess emissions during planned MSS events, the Executive Director must revise the Draft Permit to state that the affirmative defense rules at 30 Tex. Admin. Code §§ 101.222(h)-(j) are not federally enforceable and that the Commission's affirmative defense for planned maintenance, startup, and shutdown events is not available in federal enforcement actions brought by EPA or citizen suits brought under 42 U.S.C. § 7604. 40 C.F.R. § 70.6(b)(2). Unless the Executive Director makes this revision, the Draft Permit may be read to improperly limit the ability of EPA and citizens to enforce and compel compliance with applicable requirements.

Requested Revision to the Title V Permit

The Executive Director should revise the Draft Permit to indicate that the State's disapproved affirmative defense for planned MSS excess emissions is not federally-enforceable.

- If the Executive Director contends that the affirmative defense for excess emissions during planned MSS activities is federally enforceable, Commenters ask that he provide the basis for that determination;

- If the Executive Director contends that the affirmative defense for excess emissions during planned MSS activities is not federally enforceable and that the Draft Permit does not make it so, we ask that he state that for the record.

[9] 75 Fed.Reg. 68,989, 68,992. EPA's disapproval was upheld by the Fifth Circuit Court of Appeals. *Luminant Generation Co. v. EPA*, 714 F.3d 841 (5th Cir. 2013).

4. Texas's Title V Permits Have Been Interpreted to Preclude Use of Any Credible Evidence to Demonstrate Non-Compliance in Citizen Suits

a. Texas's Title V Permits Have Been Interpreted to Preclude Use of Credible Evidence to Demonstrate Non-Compliance in Citizen Suits

To assure compliance with applicable requirements, Title V permits must allow EPA, permitting agencies, and citizens to use any credible evidence to assess a source's compliance status and respond to noncompliance with Clean Air Act requirements. Deer Park Order at 38; 62 Fed. Reg. 8,314, 8,315, 8,318 (February 24, 1997). A Title V permit may not preclude any entity, including the EPA, citizens or the state, from using any credible evidence to enforce any provision of a Title V permit. 62 Fed. Reg. 54,900, 54,907-08 (October 22, 1997).

The Draft Permit includes Special Condition 17, which states:

> The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and *any other credible evidence or information.*

(emphasis added) .

This special condition is the only statement regarding credible evidence contained in the Draft Permit. Commenters read this condition to allow members of the public to rely on any credible evidence to demonstrate non-compliance with applicable requirements, because Kinder Morgan is required to consider all such evidence before certifying compliance. This reading of the Draft Permit was, however, not adopted by the United States District Court for the Western District of Texas when it considered a different Texas Title V permit with an identical compliance certification special condition. *See*, Order Granting Motion for Partial Summary Judgment, *Sierra Club v. Energy Future Holdings Corp.*, No. W-12-CV-108 (W.D. Tex. February 10, 2014) at 15-16. Despite permit language requiring the operator to consider all credible evidence to determine compliance, the Court held that "a concerned citizen is limited to the compliance requirements, as defined in the Title V permit, when pursuing a civil lawsuit for CAA violations." *Id*. According to the Court, Title V permits must be read to limit applicable compliance demonstration methods to those specifically identified in a permit, because a different reading would undermine the "permit's objective as the source-specific bible for Clean Air Act compliance." *Id.* at 16.

- In light of this decision, we ask the Executive Director to state whether the Draft Permit, as written, limits the ability of EPA, the State, or citizens to rely on any credible evidence

to demonstrate non-compliance with applicable requirements in a federal enforcement proceeding.

b. The TCEQ Has Taken the Position That Credible Evidence May Not be Used to Determine Compliance with Applicable Requirements

In a contested case hearing concerning ExxonMobil Chemical Company's application for Permit No. 102982, authorizing construction of a new ethylene production unit at the Baytown Olefins Plant in Harris County, Protestants introduced evidence—ExxonMobil's own Emissions Inventory Reports—to demonstrate that ExxonMobil had emitted more particulate matter than its existing permit allowed, and that exceedances of this limit triggered major NSR preconstruction permitting requirements for the proposed project. Protestants' Exhibit No. 100, Expert Testimony of William Powers, P.E., TCEQ Docket No. 2013-0657-AIR at 35-40. In a deposition conducted prior to the contested case hearing, the TCEQ's permit engineer testified that, "based on the best information . . . available" it was his opinion that ExxonMobil had exceeded its limit. Protestants' Exhibit No. 106, Deposition Testimony of Kyle Virr, TCEQ Docket No. 2013-0657-AIR at 35-36.

Nonetheless, in post-hearing briefing, the Executive Director took the position that ExxonMobil's self-reported Emissions Inventory information could not be used to demonstrate non-compliance with the applicable limit, because ExxonMobil's Title V permit established a different and authoritative method for demonstrating compliance with applicable requirements. *Executive Director's Reply to Closing Argument*, TCEQ Docket No. 2013-0657-AIR at 3 ("The Protestants contend, and the Executive Director does not dispute, that EI data shows that ExxonMobil reported PM emissions greater than the PM PAL cap of 365.62 tons for several years. However, TCEQ rules clearly provide that compliance with PAL limits is evidenced through annual compliance certifications under the Title V program and semi-annual reports"). In its order approving ExxonMobil's permit application, the TCEQ adopted this position:

> 91. The Semi-Annual Report (SAR) is used to determine compliance with PAL6.
>
> 93. PAL6 specifies the methods that must be used by Applicant to demonstrate compliance with the PALs. All SARs prepared by Applicant have demonstrated compliance with the PALs contained in PAL6.

Order, TCEQ Docket No. 2013-0657-AIR (February 18, 2014).

The position taken by the Executive Director in his briefing and endorsed by the Commission in its order granting ExxonMobil's permit application appears to conflict with EPA's position that the State, citizens, and EPA must be allowed to rely on any credible evidence to demonstrate non-compliance with applicable requirements. In light of this conflict,

Commenters request that the Executive Director (1) state whether the Draft Permit, as written, limits the ability of citizens, the State, or EPA to rely on any credible evidence to demonstrate non-compliance with applicable requirements; and (2) revise the Draft Permit to expressly state that Texas, citizens, and EPA may rely on any credible evidence to demonstrate non-compliance with applicable requirements.

Requested Revision to the Title V Permit

To ensure that the Draft Permit is read to allow citizens, the State, and EPA to use any credible evidence to demonstrate non-compliance with applicable requirements, Commenters request that the Executive Director revise the Draft Permit to include the following Special Condition: "Nothing in this permit shall be interpreted to preclude the use of any credible evidence to demonstrate non-compliance with any term of this permit."

c. Permit No. 101199/N158 Improperly Limits Use of CEMS to Demonstrate Non-Compliance with Applicable Requirements

Permit No. 101199/N158 establishes the following limits for CO and NO_x emissions from Kinder Morgan's heaters (EPNs F-101 and F-201):

Special Condition 8

Pollutant	**Hourly Average**	**Rolling 12 Month Average**
NO_x	0.01 lb/MMBtu	0.006 lb/MMBtu
CO	50 ppmv	n/a

Special Condition 39 (Alternate Conditions for NO_x and CO emissions from the heaters during planned startup and shutdown)

Pollutant	**Emission Rate Limit**
NO_x	0.025 lb/MMBtu
CO	100 ppmv

Maximum Allowable Emission Rates Table

Unit	**Pollutant**	**Emission Limit (lbs/hr)**
F-101	NO_x (routine operation)	2.47
	NO_x (planned MSS)	5.00
	CO (routine operation)	9.13
	CO (planned MSS)	14.78

Unit	Pollutant	Emission Limit (lbs/hr)
F-201	NO_x (routine operation)	2.47
	NO_x (planned MSS)	5.00
	CO (routine operation)	9.13
	CO (planned MSS)	14.78

Unit	Pollutant	Emission Limit (TPY)
F-101 and F-201	NO_x	11.83
Emission Caps	CO	72.84

Each of these emissions limits is an applicable requirement incorporated by reference into the Draft Permit.

Permit No. 101199/N158, Special Condition 10 requires Kinder Morgan to install CEMS to measure and record the in-stack concentration of CO, NO_x, and oxygen from its heaters and establishes various conditions to ensure that information generated by the CEMS accurately reflects actual emissions from the heaters. Special Condition 10(C) requires CEMS data to be reduced to units of pounds per hour and pounds per million BTU once every week. Thus, the CEMS provide credible and relevant data indicative of Kinder Morgan's compliance or non-compliance with the above-listed NO_x and CO limits. Nonetheless, Special Condition 10(D) provides that "[t]he data from the CEMS may, *at the discretion of the TCEQ*, be used to determine compliance with the conditions of this permit" (emphasis added).

This special condition, which is incorporated by reference into the Draft Permit, is contrary to EPA's longstanding position on credible evidence and undermines the enforceability of applicable requirements, because it presumptively precludes EPA and citizens from using credible evidence generated by Kinder Morgan's CEMS to enforce requirements in the Draft Permit, unless the TCEQ exercises its discretion to require Kinder Morgan to consider the data. Draft Permit, Special Condition 10(D) also improperly relieves Kinder Morgan of its obligation to consider credible evidence to determine compliance with applicable requirements, as required by Draft Permit, Special Condition 17.

***Requested Revision to the Title V Permit*:**

The Executive Director should revise the Draft Permit to indicate that Kinder Morgan's CEMS provide credible evidence concerning its heaters' CO and NO_x emissions that must be considered to determine compliance with applicable requirements in Permit No. 101199/N158.

5. Request for Clarification Regarding Permit No. 101199/N15 Loading Losses Control Requirement

When Permit No. 101199/N158 was initially issued, it established a LAER-based requirement that "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F." Attachment 4,[10] Permit No. 101199/N158 (June 12, 2013), Special Condition 20. This vapor threshold cutoff was established to ensure compliance with an emission limitation of 2 lb/Mbbl liquid loaded, found in SCAQMD Rule 1142, which was determined to represent LAER for the project. Attachment 5. This Special Condition was amended on October 8, 2014 without any public notice, and now reads "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F, *or has a vapor pressure greater than 0.50 psia at actual loading conditions*." Draft Permit at Appendix B (Permit No. 101199/N158) (emphasis added). While the amended condition appears to require Kinder Morgan to direct loading emissions from loaded liquids with a vapor pressure greater than 0.10 psia at 95°F to its VCU, regardless of vapor pressure at actual loading conditions, Commenters are concerned that the condition is intended to provide an alternative, less stringent vapor pressure cutoff than the original permit required. Commenters are concerned, because the new language was added to the permit to address Kinder Morgan's request to "update the vapor control threshold from 0.1 psia to 0.5 psia." Attachment 5.

- Commenters ask the Executive Director to confirm that Permit No. 101199/N158 requires Kinder Morgan to direct all barge loading emissions to its VCU if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F.

III. CONCLUSION

For the foregoing reasons, the Draft Permit and the permit record fail to assure compliance with the federal Clean Air Act and its implementing regulations. The Executive Director must correct these deficiencies before he may issue the final Title V permit.

Thank you for your attention to this matter. Please call me at (512) 637-9478 should you have any questions.

[10] Attachment 4 is labeled as a "draft." It is the only version of the permit conditions that Commenters could locate on the TCEQ's remote document server searching by project number 174745, which was assigned to the initial issuance of Permit No. 101199/N158.

Sincerely,

Gabriel Clark-Leach
ENVIRONMENTAL INTEGRITY PROJECT
707 Rio Grande Suite 200
Austin, Texas 78701

ATTACHMENT 1

Technical Review Document for Amendment to Permit No. 101199/N158

Permit Amendment
Source Analysis & Technical Review

Company	**Kinder Morgan Crude & Condensate LLC**	Permit Number	**101199 and N158**
City	**Galena Park**	Project Number	**197190**
County	**Harris**	Account Number	**HG-0262-H**
Project Type	**Amend**	Regulated Entity Number	**RN100237452**
Project Reviewer	**Mr. Jesse Lovegren**	Customer Reference Number	**CN603935248**
Site Name	**Condensate Splitter**		

Project Overview

Kinder Morgan Crude and Condensate, LLC (KMCC) has applied for a permit amendment to reflect changes in the design of permitted equipment for its Galena Park Terminal Condensate Splitter. The permit authorized construction of fifteen product storage tanks. Construction on the individual tanks commenced between Oct. 2013 – Jun. 2014, and is expected to be completed in Oct. 2014. Six of the storage tanks were originally permitted as fixed roof tanks, but are being built with an internal floating roof in order to permit storage of products at elevated temperatures. Estimated marine loading fugitive emissions have been revised, and a protocol for enhanced monitoring of ship loading activities is attached to the permit. Since the original construction project was authorized under Nonattainment New Source Review (NNSR), KMCC completed a revised (LAER) demonstration for the sources whose construction plans have changed. The construction project was previously planned in phases, contingent on the availability of VOC Emission Reduction Credits. KMCC no longer proposes to construct the plant in phases, as it has secured offsets for the total project. The site is in an Air Pollutant Watch List (APWL) area for benzene. Benzene emissions for both routine and planned maintenance, startup & shutdown (MSS) undergo net decreases on a short-term and on an annual basis.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)	Project Changes at Major Sources (tpy)*
PM	9.15	9.36	+0.21	9.36
PM_{10}	9.15	9.36	+0.21	9.36
$PM_{2.5}$	9.15	9.36	+0.21	9.36
VOC	105.23†	63.76†	–41.47	63.76†
NO_X	18.10	17.09	–1.01	17.09
CO	79.01	83.56	+4.55	83.56
SO_2	12.55	13.32	+0.77	13.32
Ammonia	14.57	14.57	0.00	N/A
Benzene	0.48	0.30	–0.18	N/A

*Initial project was subject to nonattainment review for VOC and NO_x (as O_3 precursors). Changes to allowable rates do not affect NNSR or PSD applicability for any regulated NSR pollutant.

†Includes 5 tpy of VOC emissions associated with the transfer between storage tanks authorized in this permit and other storage tanks at the site.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on: **Compliance history not applicable (30 TAC §60.1(a)(4)(H))**

Public Notice Information - 30 TAC Chapter 39 Rules

Rule Citation	Requirement	
39.403	Is Public Notice Required?	**No**
	If no, give reason:	**Change in emission rates below public notice *de minimis* levels (30 TAC §39.402(a)(3))**

Construction Permit & Amendment Requirements - 30 TAC Chapter 116 Rules

Rule Citation	Requirement	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	**Yes**
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?	**Yes**

Rule Citation	Requirement		
116.111(a)(2)(B)	Emissions will be measured using the following method:		**Calculations, parametric monitoring**
	Comments on emission verification:		
116.111(a)(2)(D)	Subject to NSPS?		**Yes**
	Subparts **A, Kb, Ja, Kb, QQQ, & GGGa**		
116.111(a)(2)(E)	Subject to NESHAP?		**Yes**
	Subparts **A & FF**		
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories?		**Yes**
	Subparts **A, R, Y, CC & DDDDD**		
116.111(a)(2)(H)	**Nonattainment Applicability:** Initial project was subject to nonattainment review for VOC and NO_x (as O_3 precursors). Nonattainment offset and LAER requirements have been updated to reflect revised construction plans.		
116.111(a)(2)(I)	**PSD Applicability:** Previously issued permit allowables were below significance levels for all PSD pollutants (CO, SO_2, PM_{10}, $PM_{2.5}$, NO_2). This action includes no changes to allowable rates that would affect the previous applicability determination.		
116.111(a)(2)(L)	Is Mass Emissions Cap and Trade applicable to the new or modified facilities?		**Yes**
	If yes, did the proposed facility, group of facilities, or account obtain allowances to operate:		**Yes**
116.140 - 141	Permit Fee: $ **900.00**	Fee certification:	**Ref. No. 186424**

Title V Applicability - 30 TAC Chapter 122 Rules

Rule Citation	Requirement
122.10(13)	**Title V applicability:** Federal Operating Permit (FOP) application to be submitted, either for new operating area including condensate splitter, or as revision to FOP O988.
122.602	**Periodic Monitoring (PM) applicability:** The site is a major source subject to the requirements of 30 TAC Chap. 122 (SOP No. TBD). Periodic monitoring for facilities affected by this action is conducted in the form of temperature and/or vapor pressure monitoring and recordkeeping for elevated temperature stocks (SC 17),ongoing sampling and reporting requirements for ship loading activities (SC 25), and recordkeeping and parametric monitoring for tank floating roof landing events (SC 37).
122.604	**Compliance Assurance Monitoring (CAM) applicability:** The site is a major source subject to the requirements of 30 TAC Chap. 122 (SOP Permit No. TBD). The marine VCU and process heater selective catalytic reduction system (SCR) are control devices used to comply with applicable permit limits, and they control emissions from facilities with pre-control emission rates in excess of the amount required for a site to be classified as a major source under 30 TAC Chap. 122. Neither device is affected by this permitting action, and associated CAM requirements (SC's 9–10, 26–27) are unchanged.

Request for Comments

Received From	Program/Area Name	Reviewed By	Comments
Region:	**12**	**LeAnn Kincaid**	**Request clarification on storage tank names and service authorizations**
City:	**Galena Park**		**No comments received**
County:	**Harris**		**No comments received**
Toxicology:			
Emissions Banking & Trading:		**Lindley Anderson, Melissa Ruano**	**Rewrite offset conditions, clarify ESAD monitoring and offset requirements for sources subject to MECT.**
Legal:		**Booker Harrison**	**Public notice per SC 27.B(1) of previously issued permit not required due to changes in construction schedule/phasing.**

Received From	Program/Area Name	Reviewed By	Comments
Comment resolution and/or unresolved issues:			**SC 16 contains updated tank identifiers and authorized products. SC 32 completely rewritten and reorganized to reflect current EB&T guidance, and to remove requirement for public notice. KMCC understands and acknowledges responsibilities under 30 TAC Chap. 117 for sources subject to MECT.**

Process/Project Description

This process consists of a 2 train topping refinery (or "condensate splitter") with a total processing capacity of 100 MBpd. Condensate is received from a pipeline and separated into light naphtha, heavy naphtha, kerosene/distillate, residual, and Y-grade products which are stored in tanks and loaded into marine vessels at the existing Galena Park Terminal docks. There may be some product that is transferred to existing tankage as well. Associated emissions, as well as any subsequent loading emissions, are limited to 5 tpy and are required to be tracked per SC 20.

A total of fifteen atmospheric product storage tanks and two pressure tanks are authorized by this permit. Six tanks intended to store kerosene and distillate were originally permitted as fixed roof tanks. KMCC has revised construction plans such that all storage tanks will have an internal floating roof, regardless of service. Additionally, three tanks are to be constructed with greater storage capacities than originally represented (150 or 120 MBbl instead of 100 MBbl). Six of the tanks have bolted decks, and are restricted by permit LAER requirements to store only products with true vapor pressures in the range of 0.10 psia < VP < 0.50 psia. The other nine product tanks have welded tanks and may store products with VP > 0.50 psia.

Revisions were made to MSS calculations to reflect emissions from floating roof landings for the six tanks previously represented as fixed roof tanks. Revisions were made to represented product properties, such that some products may now be stored at elevated temperatures. High RVP stocks stored at elevated temperatures are subject to a maximum vapor pressure of 11 psia for storage in atmospheric tanks. Changes have also been made to the emergency generator (EPN EGEN-1), which was originally represented as diesel-fueled and which is now fired with natural gas.

Revisions have been made to the estimated emission rates of VOC due to the loading of inerted tanker ships with high vapor pressure volatile organic liquids. Representatives of KM Liquids Terminals (KMLT) conducted negotiations with TCEQ Management between 2013 and early 2014 to develop a protocol for quantifying uncollected VOC vapors emitted from inerted, vapor-tight tanker ships undergoing controlled loading. Based on test results, and an enforceable agreement by KMLT to conduct follow-up verification and compliance testing as specified by permit special condition 25, a site-specific emission factor for loading fugitives has been approved which is significantly lower than the standard assumption of 5% loss. The emission factor and associated monitoring, sampling, and reporting requirements cannot be used at any other site (i.e., no site other than the Kinder Morgan Galena Park Terminal). Extension of a similar program to other sources requires case-by-case review and approval from Air Permits Division.

The project site is located in a severe ozone nonattainment area, and the project involves variance from previously authorized representations. A retrospective nonattainment review was performed to determine whether the additional federal permitting requirements would have been triggered if the operations, as modified, had been authorized *de novo*. When permit 101199 was issued, nonattainment review requirements were triggered, with associated nonattainment permit N158 being issued. For sources affected by this action, current LAER has been applied, and an updated RBLC entry has been submitted. The amount of offsets required under permit N158 has been reduced due to additional emission reductions on tanks previously permitted as fixed roof tanks, and due to revised estimates of VOC losses from loading activities. Special Condition 32, specifying offset requirements, has been updated. No other NNSR or PSD permitting requirements apply.

Changes to permit special conditions are as follows:

New SC No.	Old SC No.	Action
4–6	4–5	Incorporate additional applicable NSPS and NESHAPS requirements.
7	—	Language concerning permit stringency.

New SC No.	Old SC No.	Action
9	7	Update fuel sulfur requirements to allow firing of fuel gas recovered from atmospheric tower overhead.
16	14	Update ID, roof type, and service for storage tanks consistent with revised construction plans.
17	15	Update storage tank LAER requirements for tanks with bolted decks, tanks storing products at elevated temperatures.
19	—	Guidelines on the usage of Permits by Rule (PBR) for construction of new storage tanks.
21	18	Remove site-wide restrictions on short-term loading rate of naphthas based on revised health effects review.
22	—	Temporary restrictions on loading of fuel oils until performance of next sitewide modeling, based on revised effects review.
24	21	Clarify LAER requirements for loading of products at non-ambient conditions.
25	—	Monitoring and reporting requirements pertaining to revised estimation of VOC emissions due to controlled loading of inerted tanker ships.
32	27	Offset condition completely rewritten with coordination of TCEQ Emissions Banking and Trading (EB&T) team.
38	33	MSS Condition pertaining only to fixed roof tanks reserved. No fixed roof tanks currently authorized under pemit.

Changes to the permit MAERT are as follows:

EPN	Change	Comment
All tanks	Name change	KMCC's mnemonic for assigning EPNs to facilities involves designating the storage capacity of the tank with the first three digits of the EPN. Three tanks originally permitted as having storage capacities of 100 Mbbl (old EPNs 101-202, 100-209, 100-207, respectively) are now represented with capacities of 150 Mbbl and 120 Mbbl (new EPNs 150-10, 120-22, 120-23). Due to changes in name, size and service of tanks, it is not possible to make a one-to-one comparison between old and new EPNs.
Six of the tanks	Reduce allowables	No fixed roof tanks are authorized by the permit.
MAR-VCU	Increase annual allowables	Increased marine loading throughput proposed concurrent with revision to MAR-LOADFUG emission rates.
MAR-LOADFUG	Decrease annual allowables	Estimate of uncaptured fugitive VOC emissions revised downward per SC 25. Short-term rate refers to emissions from uncontrolled loading of low volatility products.
EGEN-1	Changes to allowables	Engine design changed from diesel to gas-fired, with changes to all emission factors.
MSS	Reduce VOC allowables, increase NO_x, CO and $PM/PM_{10}/PM_{2.5}$ allowables.	Emissions from degassing events for fixed roof tanks are replaced by controlled emissions from tank roof landing events.

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

Storage tanks and MSS tank floating roof landings were subject to a LAER demonstration for VOC. Other emission sources and emission-generating activities remain substantially unchanged from original representations.

Tanks - Nine IFR tanks with welded decks, mechanical shoe primary, and rim mounted secondary seals store liquids with VOC vapor pressures > 0.10 psi. Visual inspection of the rim seal system, roof openings, and a LEL check is required every 6 months. 6 IFR tanks with bolted decks store resid or kerosene/distillate. Each tank is designed to completely drain its entire contents to a sump in a manner that leaves no more than 9 gallons of free-standing liquid in the tank sump ("drain dry" construction). LAER for storage tanks requires storage in a floating roof tank (or fixed roof tank vented to control) for organic liquids with vapor pressures > 0.10 psia. This requirement is based on a SCAQMD rule. Welded decks are additionally required for floating roof tanks storing organic liquids with vapor pressures > 0.50 psia, as this is the most stringent method of control achieved in practice. The welded roof requirement does not apply for tanks storing liquids such that 0.10 psia < vp < 0.50 psia.

MSS - Tanks – Control is required if the vapor pressure of the liquid stored is greater than 0.10 psia. This is consistent with a SCAQMD rule requiring control on fixed roof tanks (tanks with landed roofs essentially function as fixed roof tanks). The tank vapor space must be vented to control until the roof is again floating on liquid. If the tank has been entered within the past two years, it is assumed that it will drain dry as designed. If the tank is to be entered and has not been entered in the last 2 years, the operator must visually confirm that there is no standing liquid in the tank before venting without control. Degassing must be directed to control until the VOC concentration is less than 5000 ppmv if the vapor space will not be ventilated without control, 2000 ppmv if ventilated to atmosphere. The tank vapor space must also vent to control when refilling following maintenance if the VOC vapor pressure is >0.10 psia. (SC 37)

The above controls are LAER for VOC. The applicant provided RBLC search results for VOC controls which were enhanced by the permit reviewer. The level of control proposed equals or exceeds that of any item in the RBLC database, and of any permit recently issued in Texas for a similar facility type.

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

Was modeling conducted? **Yes** Type of Modeling:	**SCREEN3 (also previous sitewide modeling results)**
Will GLC of any air contaminant cause violation of NAAQS?	**N/A**
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:	

Summary of Modeling Results

A Modeling and Effects Review Applicability (MERA) analysis was performed to determine whether modeling is required. Y-grade, benzene, and naphtha fell out at MERA step 1. Fuel oils required APD review at step 1C in order to reach a finding of acceptable impacts. The result of APD review was an enforceable restriction on fuel oils loading activities (SC 22) until acceptable impacts for fuel oils are demonstrated through sitewide modeling.

In order to evaluate increased emissions of criteria pollutants due to a change in size and fuel type for the permitted emergency generator (EPN EGEN-1), increased emission were modeled using SCREEN3, and predicted concentrations were added to previous sitewide modeling results for criteria pollutants. Impacts were less than the relevant significant impacts level (SIL) for all criteria pollutants, so the proposed changes are not expected to cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS). NAAQS for SO_2 (1-hr) is more stringent than the state 30-minute SO_2 standard, and no increases in hydrogen sulfide emissions are authorized, so the project is deemed protective of state standards as well.

Pollutant	Averaging period	SIL (µg/m³)	Previous sitewide GLC_{max} (µg/m³)	Increased concentration (µg/m³)	Total GLC_{max} (µg/m³)
SO_2	1-hr	7.8	4.02	1.27	5.30
SO_2	3-hr	25	17.58	6.70	24.28
SO_2	24-hr	5	1.44	0.37	1.81
SO_2	Annual	1	0.32	0.10	0.42
PM_{10}	24-hr	5	1.12	0.02	1.14
$PM_{2.5}$	24-hr	1.2	0.98	0.02	1.01
$PM_{2.5}$	Annual	0.3	0.15	0.006	0.16
NO_2	1-hr	7.5	6.13	1.10	7.22
NO_2	Annual	1	0.57	0.08	0.65
CO	1-hr	2000	31.45	49.76	81.20
CO	8-hr	500	14.44	4.35	18.79

Monitoring data from EPA AIRS Monitor 482011035 (Clinton) was used to determine background concentrations for $PM_{2.5}$ (24-hr) and $PM_{2.5}$ (annual) in order to assess the appropriateness of using SILs of 1.2 µg/m³ and 0.3 µg/m³, respectively. If the background concentration plus the relevant SIL is less than or equal to the relevant standard, then use of the SIL is appropriate. 24-hr and annual concentrations were calculated using the procedures in 40 CFR Pt. 50, Appendix N using monitoring data from the years 2011–2013. Use of the $PM_{2.5}$ SIL is appropriate.

Pollutant and averaging time	Background concentration (µg/m³)	SIL (µg/m³)	Background + SIL (µg/m³)	Standard (µg/m³)
$PM_{2.5}$ (24-hr)	22.7	1.2	23.9	35
$PM_{2.5}$ (annual)	11.6	0.3	11.9	12.0

Permit Concurrence and Related Authorization Actions

Is the applicant in agreement with special conditions?	**Yes**
Company representative(s):	**Cliff McCowan**
Contacted Via:	**Email**
Date of contact:	**September 19, 2014**
Other permit(s) or permits by rule affected by this action:	**None**
List permit and/or PBR number(s) and actions required or taken:	**N/A**

Project Reviewer Date Team Leader/Section Manager/Backup Date

ATTACHMENT 2

Permit No. 101199/N158, Draft Attachment A

Test Plan for the Direct Measurement of Uncollected VOC Loading Losses During Marine Vessel Loading

KM Liquids Terminals, LLC
Galena Park Terminal

June 2014

Table of Contents

Page

1.0 Introduction 1-1

2.0 Loading Process Description 2-1

2.1 Loading Loss Determination 2-3
2.2 VOC Emissions Regulations 2-4
2.2 Potential Uncollected Loading Loss Leak Points 2-4

3.0 Measurements Approach 3-1

3.1 Leak Detection Approach 3-4
3.1.1 EPA Method 21 Screening (primary leak detection method) 3-5
3.1.2 FLIR GF320 Survey 3-8
3.2 Leak Emission Measurement Approach 3-9
3.3 Calculation of VOC Emission Rates and Total Uncollected Emissions 3-10

4.0 Sampling and Measurement Equipment 4-1

4.1 FLIR GF320 4-1
4.2 phx21 Hydrocarbon Analyzer 4-2
4.3 Bacharach Hi Flow Sampler 4-3

5.0 Other Measurement Data 5-1

6.0 Quality Assurance and Quality Control Procedures 6-1

6.1 FLIR GF320 6-1
6.2 phx21 Hydrocarbon Analyzer 6-2
6.3 Bacharach Hi Flow Sampler 6-3

7.0 Data Reduction and Reporting 7-1

8.0 References 8-1

List of Figures

		Page
2-1	Aerial images of Panamax tanker docked at Kinder Morgan Galena Park Terminal Ship Dock #3 and Ship Dock #4	2-2
2-2	Process diagram and study area boundary	2-2
4-1	The FLIR GF320	4-2
4-2	The phx21 Hydrocarbon Analyzer	4-2
4-3	Bacharach Hi Flow Sampler	4-3

List of Tables

		Page
1-1	Ship Loading Uncollected/Fugitive Emissions Testing Summary	1-2
2-1	Potential Leaking Component Types on a Typical Marine Vessel	2-5
3-1	General Responsibilities of Field Personnel during Various Phases of Testing	3-3
3-2	Summary of General Handheld Leak Detection Screening Procedure	3-7
3-3	Screening Concentrations and Corresponding Emission Leak Rate Values	3-11

STATEMENT OF LIMITATIONS

This document was developed for the sole use of KM Liquids Terminals, LLC. The scope of this study may not be appropriate to satisfy the needs of other users. Any use of the information provided in this document by any other user is at the sole risk of said user.

1.0 Introduction

KM Liquids Terminals, LLC (KMLT) currently operates the Galena Park Terminal marine docks as a loading/offloading terminal for ships and barges. KMLT obtained the appropriate New Source Review (NSR) authorization required to load gasoline and gasoline blendstocks onto marine vessels and utilizes marine vapor control equipment that allows for the collection of vapors generated during ship loading operations. Collected vapors are routed to a vapor combustion unit (VCU) with a minimum destruction efficiency of 99.8%.

KMLT submitted a document entitled "Test Plan for the Direct Measurement of Uncollected VOC Loading Losses during Marine Vessel Loading" in May 2013 to the Texas Commission on Environmental Quality (TCEQ) and was granted approval on June 4, 2013 to conduct the proposed ship testing. The test plan was later updated to incorporate lessons learned during initial testing efforts to streamline the testing approach while maintaining high data quality objectives and ensuring testing objectives are achieved. The first field measurement study took place on June 11 – 14, 2013 while a tanker, the Atlantic Pisces, was loaded with 305,000 barrels of gasoline blendstock. The second study took place on September 6, 2013 while the Apollon was loaded with 253,000 barrels of gasoline blendstock. The third study took place on September 19, 2013 while the Norient Star was loaded with 295,400 barrels of gasoline blendstock. Each of these measurement studies was successfully executed and all study objectives were accomplished.

Leaking components on all three ships were identified using a portable flame ionization detector (FID) following ~~the general guidance of~~ EPA Method 21. Remote screening using a specialized infrared gas imaging device (FLIR GF250) was also used where allowed. Leak rates were measured using a Bacharach Hi Flow® Sampler. Potential fugitive leak points on the tankers included tank tops, tank cleaning machines, and pressure/vacuum (P/V) valves and manifold vapor connection spools.

→ insert specific exemption

The above referenced tankers were required to perform annual leak vapor-tightness tests. In addition, the tanker crews also conducted regular maintenance checks, adhered to standard operating procedures, routed loading loss emissions to pollution control devices, and maintained cargo tank pressures near atmospheric pressure throughout the loading process. As such, the potential for uncollected loading losses to occur during routine loading operations on these vessels was expected to be relatively low. As summarized below in Table 1-1, the results of these measurement studies confirmed this expectation.

slow

Table 1-1. Ship Loading Uncollected/Fugitive Emissions Testing Summary

Parameter	Tanker Name		
	Atlantic Pisces	Apollon	Norient Star
Year Ship Built	2009	2005	2008
Loaded Volume (barrels)	305,000	253,000	295,400
Loading Duration (hours)	64	42	79
Testing Duration (hours)	64	12[a]	12[a]
Number of Components Monitored	109	130	108
Number of Components with a Detectable Leak Rate[b]	9	3	10
Total Uncollected/Fugitive Emissions (lbs.) [c]	5.2	34.2	17.3
Uncollected/Fugitive Emissions Factor (lbs./1,000 barrel loaded)	0.017	0.135	0.059

a – Testing took place near the end of the load and results were conservatively extrapolated over the entire duration of the load.
b – Measurement sensitivity was approximately 4 grams/hour.
c – The results in this table match the results provided in the three reports generated for these three studies. The process for calculating uncollected emissions has changed since the issuance of these three reports. The updated process for calculating total uncollected emissions is addressed in Section 3.3 of this document.

Upon completion of the above referenced measurement studies, KMLT submitted the test results to the TCEQ as part of a collaborative effort to evaluate the accuracy of the long standing collection efficiency value of 95% the TCEQ currently assumes for ocean going vessels. Upon review of the test results, the TCEQ drafted New Source Review (NSR) Boilerplate Special Conditions that would apply to companies who proposed ship loading emissions rates based on collection efficiencies which are greater than the long standing TCEQ collection efficiency of 95%. The Boilerplate Special Condition requires companies to commit to a ship testing regiment to be conducted over a period of time that is intended to demonstrate compliance with the specific uncollected/fugitive emission factor that was utilized to establish NSR federally enforceable emission rate limits.

In support of NSR Permit No. 101199, KMLT submitted this test plan to outline the required measurement studies that will be conducted to demonstrate continued compliance with the Permit No. 101199 annual average ship loading uncollected/fugitive emission factor of 0.14 lbs/1,000 bbls loaded.

ATTACHMENT 3

Kinder Morgan Galena Park Permit by Rule Registrations

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 16, 2012

MR EARL CROCHET
GENERAL MANAGER TERMINALS
KM LIQUIDS TERMINALS LLC
405 CLINTON DR
GALENA PARK TX 77547-3468

Permit by Rule Registration Number:	105434
Location/City/County:	906 Clinton Dr, Galena Park, Harris County
Project Description/Unit:	Authority to Store and Load Gasoline Blendstock and Associated Tank MSS Activities
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
New or Existing Site:	Existing
Affected Permit (if applicable):	2193
Renewal Date (if applicable):	None

KM Liquids Terminals LLC has certified the emissions associated with storage and loading of gasoline blendstock at the Galena Park Terminal under Title 30 Texas Administrative Code § 106.261, § 106.263 and § 106.478. For rule information see:

PBR No. 105434 must be incorporated into permit No. 2193 during the next amendment or renewal.

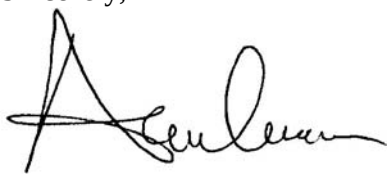
www.tceq.texas.gov/permitting/air/nav/numerical_index.html

KM Liquids Terminals LLC represented that to comply with the emission limits for gasoline blendstock under § 106.261 a maximum of either one barge or two trucks can be loaded at any one time.

Planned MSS emissions for one floating roof tank landing per year and associated degassing for three tanks have been reviewed. These authorized MSS emissions are included on the emissions table. No other planned MSS emissions will be authorized under this registration. The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Mr. Guillermo Reyes, P.E. at (512) 239-5716.

Sincerely,



Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 182118

Emission Sources - Certified Emission Rates

Registration Number 105434

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS															
EPN / Emission Source	Specific VOC or Other Pollutants	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
12-26/Storage Tank		0.63	0.74												
12-27/Storage Tank		0.63	0.74												
12-4/ Storage Tank		0.63	0.74												
TR-10/TT/RC Rack		1.31	0.14												
VCU-1a/VCU1b/ Barge and Truck Loading VCU		4.93	0.53	1.43	0.16	2.85	0.32					<0.01	<0.01		
FUG		0.05	0.24												
TK-ATMDEGAS/Post Control Degassing		0.68	0.01												
Port TO/Portable Thermal Oxidizer		2.73	0.01	0.75	<0.01	1.51	0.01								
TOTAL EMISSIONS (TPY):		11.60	3.16	2.18	0.16	4.35	0.33					<0.01	<0.01		

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8760

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 3, 2014

MR WILLIAM P BROWN
VICE PRESIDENT TERMINALS REGION
KM LIQUIDS TERMINALS LLC
405 CLINTON DR
GALENA PARK TX 77547-3468

Permit by Rule Registration Number: 118052
KM Liquids Terminals LLC
Increase Floating Storage Tank Deck Fittings
Galena Park, Harris County
Regulated Entity Number: RN100237452
Customer Reference Number: CN603254707
Account Number: HG-0262-H
Affected Permit: 2193

This is in response to your certification Form PI-7 CERT regarding the Increase Floating Storage Tank Deck Fittings located at 906 Clinton Dr, Galena Park, Harris County.
KM Liquids Terminals LLC has certified the emissions under Title 30 Texas Administrative Code (TAC) §§ 106.261 and 106.262. For rule information see:
www.tceq.texas.gov/permitting/air/nav/numerical_index.html
As referenced in 30 TAC § 116.116(d)(2), all changes authorized under Chapter 106 to a permitted facility shall be incorporated into the NSR Permit No. 2193 when it is amended or renewed.
The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.
If you need further information or have questions, please contact Mr. Tory Wingate at (512) 239-2944 or write to the Texas Commission on Environmental Quality (TCEQ), Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under the authority delegated by the Executive Director of the TCEQ.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 207276

Emission Sources - Certified Emission Rates

Registration Number 118052

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS														
EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
12-29	0.04	0.027												
25-18	0.068	0.027												
25-4	0.023	0.027												
12-05	0.047	0.044												
25-13	0.031	0.044												
12-12	0.052	0.055												
12-09	0.015	0.001												
80-13	0.039	0.084												
TOTAL EMISSIONS (TPY):	0.32	0.31												

MAXIMUM OPERATING SCHEDULE:	Hours/Day	24	Days/Week	7	Weeks/Year	52	Hours/Year	8,760

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 2, 2014

MR GARY COTIE
ENVIRONMENTAL MANAGER
KM LIQUIDS TERMINALS LLC
906 CLINTON DR
GALENA PARK TX 77547-3461

Permit by Rule Registration Number:	114179
Location/City/County:	906 Clinton Dr, Galena Park, Harris County
Project Description/Unit:	Galena Park Terminal - Harris County
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
New or Existing Site:	New
Affected Permit (if applicable):	None
Renewal Date (if applicable):	None

KM Liquids Terminals LLC has certified the emissions associated with the new rail car product loading and off-loading terminal rack (RR #3) located at the Galena Park Terminal - Harris County under Title 30 Texas Administrative Code §§ 106.261, 106.262 and 106.472. For rule information see:

www.tceq.texas.gov/permitting/air/nav/numerical_index.html

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Ms. Julie Steger at (512) 239-1542.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 199860

Emission Sources - Certified Emission Rates

Registration Number 114179

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS														
EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
RRACK (106.492)	47.68	2.69												
FUG (106.261/262)	0.06	0.27												
TOTAL EMISSIONS (TPY):		**2.96**												

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8,760

NOTE: Other represented emissions include: 0.12 tpy Biodiesel, 2.54 tpy CO-1214 and 0.03 tpy Furfural

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 28, 2015

MR GARY DAVID COTIE
ENVIRONMENTAL MANAGER
KM LIQUIDS TERMINALS
906 CLINTON DR
GALENA PARK TX 77547-3461

Permit by Rule Registration Number:	130986
KM Liquids Terminals LLC	
Galena Park Terminal	
Galena Park, Harris County	
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
Account Number:	HG-0262-H
Affected Permit:	2193

This is in response to your certification Form PI-7 CERT regarding the Galena Park Terminal located at 906 Clinton Dr., Galena Park, Harris County.

KM Liquids Terminals LLC has certified the emissions under Title 30 Texas Administrative Code (TAC) § 106.261. For rule information see:
www.tceq.texas.gov/permitting/air/nav/numerical_index.html

As referenced in 30 TAC § 116.116(d)(2), all changes authorized under Chapter 106 to a permitted facility shall be incorporated into the NSR Permit No. 2193 when it is amended or renewed.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. If you need further information or have questions, please contact Mr. Mark McDonald at (512) 239-1357 or write to the Texas Commission on Environmental Quality (TCEQ), Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under the authority delegated by the Executive Director of the TCEQ.

Sincerely,

Samuel Short, Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 230733

Emission Sources - Certified Emission Rates

Registration Number 130986

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS												
EPN / Emission Source	VOC		NOx		CO		$PM_{10/2.5}$		SO_2		HAPs	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Fugitives / Truck Rack#14	0.074	0.325										
TOTAL EMISSIONS (TPY):	**0.074**	**0.325**										

MAXIMUM OPERATING SCHEDULE:	Hours/Day	24	Days/Week	7	Weeks/Year	52	Hours/Year	8760

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 3, 2007

MR JAMES WILSON
MANAGER EHS
KM LIQUIDS TERMINALS LP
906 CLINTON DR
GALENA PARK TX 77547-3461

Permit by Rule Registration Number:	81751
Location/City/County:	906 Clinton Drive, Galena Park, Harris County
Project Description/Unit:	Galena Park Terminal - Change of Service for Tank 12-24
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN602717092
New or Existing Site:	Existing
Affected Permit (if applicable):	Title V Operating Permit O-988, NSR Permit 2193
Renewal Date (if applicable):	None

KM Liquids Terminals, L.P. has registered the emissions associated with the change of service for Tank 12-24 at the Galena Park Terminal under Title 30 Texas Administrative Code § 106.261.
For rule information see www.tceq.state.tx.us/permitting/air/nav/numerical_index.html.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. This registration is authorized on behalf of the TCEQ Executive Director. If you have questions, please contact Mr. Marc Olivier at (512) 239-5760.

Sincerely,

Represented Emissions:

VOCs	0.07	tpy

Anne M. Inman, P.E., Manager
General/Standard/Rule (GSR) Permit Section
Air Permits Division

cc: Director, Pollution Control Department, Harris County Public Health and Environmental Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 128961

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 11, 2013

MR JEFF HERSPERGER
GENERAL MANAGER
KM LIQUIDS TERMINALS LLC
405 CLINTON DR
GALENA PARK TX 77547-3468

Permit by Rule Registration Number:	112072
Location/City/County:	906 Clinton Drive, Galena Park, Harris County
Project Description/Unit:	Modification to Tank 25-11
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
New or Existing Site:	Existing
Affected Permit (if applicable):	2193
Renewal Date (if applicable):	None

KM Liquids Terminals LLC has certified the emissions associated with the Galena Park Terminal under Title 30 Texas Administrative Code §106.262. Emissions should be incorporated into Permit 2193 at next amendment or renewal. For rule information see: www.tceq.texas.gov/permitting/air/nav/numerical_index.html

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Ms. Nancy Akintan at (713) 767-3773.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 196201

Emission Sources - Certified Emission Rates

Registration Number 112072

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS														
EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Tank 25-11	0.00072	0.001415												
TOTAL EMISSIONS (TPY):		<0.01												

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8760

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 12, 2015

MR KENT MILLER
DIRECTOR OF OPERATIONS
KINDER MORGAN CRUDE & CONDENSATE LLC
1001 LOUISIANA ST STE 1000
HOUSTON TX 77002-5089

Permit by Rule Registration Number:	131940
Kinder Morgan Crude & Condensate LLC	
Galena Park Splitter	
Galena Park, Harris County	
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603935248
Account Number:	HG-0262-H
Affected Permit:	101199

This is in response to your certification Form PI-7 CERT regarding the additional fugitive at the Galena Park Splitter located at 906 Clinton Drive, Galena Park, Harris County.

Kinder Morgan Crude & Condensate LLC has certified the emissions under Title 30 Texas Administrative Code (TAC) § 106.261. For rule information see:
www.tceq.texas.gov/permitting/air/nav/numerical_index.html

As referenced in 30 TAC § 116.116(d)(2), all changes authorized under Chapter 106 to a permitted facility shall be incorporated into the NSR Permit No. 101199 when it is amended or renewed.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

If you need further information or have questions, please contact Ms. Nancy Akintan at (713) 767-3773 or write to the Texas Commission on Environmental Quality (TCEQ), Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under the authority delegated by the Executive Director of the TCEQ.

Sincerely,

Samuel Short, Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 233029

Emission Sources - Certified Emission Rates

Registration Number 131940

This table lists the certified emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

ESTIMATED EMISSIONS														
EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
FUG/Fugitives	0.01	0.06												
TOTAL EMISSIONS (TPY):		0.06												

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8,760

February 2, 2005

Mr. James Wilson
Regional Manager EHS
Km Liquids Terminal, L.P.
405 Clinton Drive
Galena Park, Texas 77547

Re: Permits by Rule Registration Number: 74762
Galena Park Terminal
Galena Park, Harris County
Regulated Entity Number: RN100237452
Customer Reference Number: CN602717092

Dear Mr. Wilson:

This is in response to your Form PI-7, entitled "Registration for Permits by Rule," concerning your request to register the emissions associated with the one-time marine loading of Sodesol B at your plant located at 906 Clinton Drive, Galena Park, Harris County. We understand that the emissions from this project are less than 0.01 ton per year of volatile organic compounds.

After evaluation of the information which you have furnished, we have determined that your modification is authorized under Title 30 Texas Administrative Code § 106.261 (30 TAC § 106.261) if constructed and operated as described in your registration request. This permit by rule was authorized by the Texas Commission on Environmental Quality (TCEQ) pursuant to 30 TAC Chapter 106.

A copy of the permit by rule in effect at the time of this registration is enclosed. You must modify facilities in accordance with the version of the permit by rule in effect when modification actually begins [see 30 TAC § 106.4(a)(5)]. After completion of the modification, the facility shall be operated in compliance with all the applicable conditions of the claimed permit by rule and 30 TAC § 106.4.

You are reminded that regardless of whether a permit is required, these facilities must be in compliance with all rules and regulations of the TCEQ and of the U.S. Environmental Protection Agency at all times.

Please reference the regulated entity number (RN), customer reference number (CN), and permit number noted in this document in all your future correspondence for the referenced facility or site.

The RN replaces the former TCEQ account number for the facility (if portable) or site (if permanent). The CN is a unique number assigned to the company or corporation and applies to all facilities and sites owned or operated by this company or corporation.

Your cooperation in this matter is appreciated. If you have any questions concerning this permit by rule, please contact Mr. Emmanuel Ndame at (713) 767-3553 or write to the Texas Commission on Environmental Quality, Office of Permitting, Remediation, and Registration, Air Permits Division (MC-163), P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Anne M. Inman, Manager
General/Standard/Rule (GSR) Permit Section
Air Permits Division
Texas Commission on Environmental Quality

AMI/ECN/alb

Enclosure

cc: Ms. Christina Harris, Project Manager EHS, KM Liquids Terminals LP, Galena Park
Mr. Rob Barrett, Director, Harris County Public Health and Environmental Services, Pollution Control Department, Pasadena
Air Section Managers, Region 12 - Houston

Project Number: 113191

Air Permits Division MC 163

MR JAMES WILSON
REGIONAL MANAGER EHS
KM LIQUIDS TERMINAL LP
405 CLINTON DR
GALENA PARK TX 77547

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 8, 2012

MR EARL CROCHET
GENERAL MANAGER TERMINALS
KM LIQUIDS TERMINALS LLC
405 CLINTON DR
GALENA PARK TX 77547-3468

Permit by Rule Registration Number:	101674
Location/City/County:	906 Clinton Dr, Galena Park, Harris County
Project Description/Unit:	Tank 25-23/Galena Park Terminal
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
New or Existing Site:	Existing
Affected Permit (if applicable):	2193, O988
Renewal Date (if applicable):	None

KM Liquids Terminals LLC has certified the emissions associated with the roof conversion and reauthorization of Tank 25-23 in acetone service at the Galena Park Terminal under Title 30 Texas Administrative Code §§ 106.261, 106.262, 106.263, and 106.478. This registration should be incorporated into Permit No. 2193 when the permit is next amended or renewed. For rule information see: www.tceq.texas.gov/permitting/air/nav/numerical_index.html

Planned MSS emissions for one floating roof landing per year have been reviewed. These authorized MSS emissions are included on the emissions table. No other planned MSS emissions will be authorized under this registration. The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Mr. Howard Uhal at (512) 239-6115.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

Certified Project Emissions:

VOC	<0.01	tpy
Acetone	0.90	tpy
NO_x	0.05	tpy
CO	0.10	tpy
SO_2	<0.01	tpy

cc: Karen Neumann Jones, P.E., Senior Consultant, RPS JDC Inc, Austin
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 175761

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 19, 2012

MR EARL CROCHET
GENERAL MANAGER TERMINALS
KM LIQUIDS TERMINALS LLC
405 CLINTON DR
GALENA PARK TX 77547-3468

Permit by Rule Registration Number:	103829
Location/City/County:	906 Clinton Dr, Galena Park, Harris County
Project Description/Unit:	Tank 25-2 Change of Service/Galena Park Terminal
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN603254707
New or Existing Site:	Existing
Affected Permit (if applicable):	2193, 103819, O988
Renewal Date (if applicable):	None

KM Liquids Terminals LLC has certified the emissions associated with Tank 25-2 change of service to ethanol at the Galena Park Terminal under Title 30 Texas Administrative Code §§ 106.261, 106.263, and 106.478. In conjunction with this change of service, an internal floating roof will be installed in the tank by PCP Standard Permit No. 103819. This registration should be incorporated into Permit no. 2193 at the next permit action. For rule information see:
www.tceq.texas.gov/permitting/air/nav/numerical_index.html

Planned MSS emissions for one floating roof landing per year have been reviewed. These authorized MSS emissions are included on the emissions table. No other planned MSS emissions will be authorized under this registration. The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. This certification is taken under the authority delegated by the Executive Director of the TCEQ. If you have questions, please contact Mr. Howard Uhal at (512) 239-6115.

Sincerely,

Anne M. Inman, P.E., Manager
Rule Registrations Section
Air Permits Division

Certified Project Emissions:

VOC	0.61	tpy
NO_x	0.31	tpy
CO	0.61	tpy
SO_2	<0.01	tpy

cc: Karen Neumann Jones, P.E., Senior Consultant, RPS JDC Inc, Austin
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 179318

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 26, 2006

MR. JAMES WILSON
REGIONAL MANAGER EHS
KM LIQUIDS TERMINALS LP
405 CLINTON DR
GALENA PARK TX 77547

Permit by Rule Registration Number:	79780
Location/City/County:	906 Clinton Drive, Galena Park, Harris County
Project Description/Unit:	Bulk Liquids Storage Tanks
Regulated Entity Number:	RN100237452
Customer Reference Number:	CN602717092
New or Existing Site:	Existing
Affected Permit (if applicable):	2193
Renewal Date (if applicable):	None

KM Liquids Terminals LP has registered the emissions associated with the construction and operation of six tanks (EPN T50-1, 50-2, 50-3, 10-21, 20-1, 15-2) and their associated fugitive emissions at the Bulk Liquids Storage plant under Title 30 Texas Administrative Codes §§ 106.261, 106.47, and 106.478.
For rule information see www.tceq.state.tx.us/permitting/air/nav/numerical_index.html.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements. This registration is authorized on behalf of the TCEQ Executive Director. If you have questions, please contact Ms. Nancy Akintan at (713) 767-3773.

Represented Emissions:

VOCs	1.59	tpy

Anne M. Inman, P.E., Manager
General/Standard/Rule (GSR) Permit Section
Air Permits Division

cc: Mr. Badruddin (Bud) Karachiwala, Director, Pollution Control Department, Harris County Public Health and Environmental Services, Pasadena
Air Section Manager, Region 12 - Houston

Project Number: 124499

ATTACHMENT 4

Permit No. 101199/N158 Special Conditions (Initial Issuance)

SPECIAL CONDITIONS

Permit Numbers 101199 and N158

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT) and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) or ammonia at a concentration of greater than 1 percent are not authorized by this permit. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC or ammonia at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions with the exception of those on floating or fixed roof storage tanks.

3. The following requirements apply to capture systems for the heater selective catalytic reduction (SCR) systems, flare, and marine loading vapor combustion unit.

   A. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

   B. If there is a bypass for the control device, comply with either of the following requirements :

      (1) 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

      (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out of the bypass.

      A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

   C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

Federal Rules

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A and Kb.

5. These facilities shall comply with all applicable requirements of EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories promulgated for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), Marine Tank Vessel Loading Operations, and Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters in Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), Subparts A, R, Y, and DDDDD.

Heaters and Flare

6. Nitrogen oxides (NOx), carbon monoxide (CO), and ammonia emissions from each heater (Emission Point Numbers [EPNs] F-101 and F-201) shall not exceed the following rates/concentrations (ppmv is corrected to 3 percent oxygen).

Pollutant	Hourly Average	Rolling 12 Month Average
NOx	0.01 lb/MMBtu	0.006 lb/MMBtu
CO	50 ppmv	n/a
Ammonia	10 ppmv	n/a

7. Combustion units shall be fired with natural gas containing no more than 2.2 grains of total sulfur per 100 dry standard cubic feet (dscf). The natural gas shall be sampled every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement.

8. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO, NOx, and oxygen from the heaters (EPNs F-101 and F-201).

   A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR

Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

(1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

(2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ±15 percent accuracy indicate that the CEMS is out of control.

C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The permit holder shall install and operate a fuel flow meter to measure the gas fuel usage for each heater. The monitored data shall be reduced to an hourly average flow rate at least once every day, using a minimum of four equally-spaced data points from each one-hour period. Each fuel flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent. In lieu of monitoring fuel flow, the permit holder may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

The individual average concentrations shall be reduced to units of pounds per hour and pounds per million BTU at least once every week as follows:

The measured hourly average concentration from the CEMS shall be multiplied by the exhaust flow rate as measured directly, or determined by monitoring fuel flow, stack oxygen concentration, and the natural gas heating value, to determine the hourly emission rate. The emission rate and fuel gas flow and heating value shall be used to determine the lb NOx/MMBtu heat input.

D. All monitoring data and quality-assurance data shall be maintained by the permit holder. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the heater is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the heater operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

9. The permit holder shall continuously monitor ammonia emissions from the heater SCR systems (EPNs F-101 and F-201) using one of the following methods:

A. Install and operate two NOx CEMS, one located upstream of the SCR system and the other located downstream of the SCR system, which are used in association with ammonia injection rate and the following calculation procedure to estimate ammonia slip.

Ammonia slip, ppmvd = (a – (b x c / 1,000,000)) x 1,000,000 / b) x d

where:

a = ammonia injection rate (lb/hr)/17 (lb/lb-mole);
b = dry exhaust gas flow rate (lb/hr)/29 (lb/lb-mole);
c = change in measured NOx concentration, ppmvd, across catalyst; and
d = correction factor.

The correction factor shall be derived during compliance testing by comparing the measured and calculated ammonia slip. The ammonia injection rate and exhaust gas flow rate shall be recorded at least every 15 minutes and be recorded as hourly averages. Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

B. Install and operate a dual stream system of NOx CEMS at the exit of the SCR system. One of the exhaust streams would be routed, in an unconverted state, to one NOx CEMS and the other exhaust stream would be routed through a NH3 converter to convert NH3 to NOx and then to a second NOx CEMS. The NH3 slip concentration shall be calculated from the delta between the two NOx CEMS readings (converted and unconverted).

C. Install an ammonia CEMS approved by TCEQ.

All CEMS specified in this condition must meet the requirements of Special Condition No. 9. Quality-assured (or valid) data must be generated when gas is directed to the SCR system. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time that gas is directed to the SCR system over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

10. Flares shall be designed and operated in accordance with the following requirements:

A. The flare system 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 air assist to the flare

Leak Detection and Repair

11. Piping, Valves, Pumps, Agitators, and Compressors - Intensive Directed Maintenance - 28LAER. Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (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 or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

(1) piping and instrumentation diagram (PID);
(2) a written or electronic database or electronic file;
(3) color coding;
(4) a form of weatherproof identification; or
(5) designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe to monitor component is not considered safe to monitor within a

calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be 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. In addition, all connectors shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program in accordance with items F thru J of this special condition.

In lieu of the monitoring frequency specified above, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of connectors 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.

The percent of connectors leaking shall be determined using the following formula:

$$(Cl + Cs) \times 100 / Ct = Cp$$

` Where:

`Cl = the number of connectors found leaking by the end of the monitoring period, either by Method 21 or sight, sound, and smell.

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe to monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the 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 comply with either of the following actions within that time period;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

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. Non accessible valves shall be monitored by leak-checking for fugitive emissions at least annually 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. A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, than the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

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.

G. All new and replacement pumps, compressors, and agitators 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, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, 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. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for

each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times , test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator=s log or equivalent.

J. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), and does not constitute approval of alternative standards for these regulations.

K. 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.

L. The percent of valves leaking used in paragraph K shall be determined using the following formula:

$$(Vl + Vs) \times 100 / Vt = Vp$$

Where:

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

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

Vt = 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.

Vp = the percentage of leaking valves for the monitoring period.

M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 500 ppmv of VOC. If the component is found to be leaking in excess of 500 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.

12. All components in heavy liquid service shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through in the same manner as required for connectors in Special Condition 11.E.

13. Piping, valves, pumps, and compressors in greater than one weight percent ammonia service are subject to the following requirements.

A. Audio, olfactory, and visual checks for ammonia leaks within the operating area shall be made every shift.

B. Immediately, but no later than twelve hours 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.

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.

Tanks

14. Tanks are authorized to store the liquids identified below with the maximum tank fill/drain rates.

Tank ID	Tank Type	Service	Maximum fill/drain rate (bbl/hr)
200-201 200-202 200-203	Internal floating roof	Hydrocarbon condensate feed stock (RVP-13)	15,000
100-201 100-202 100-209	Internal floating roof	Light naphtha (RVP-13)	10,000
100-203 100-204 100-210	Internal floating roof	Heavy Naphtha (RVP-7)	10,000
100-205 100-206 100-2011	Fixed roof	Kerosene/distillate	10,000
100-207 100-208 100-212	Fixed roof	Residual	10,000
20-4 20-5	Pressurized	Y-grade product	n/a
5-201	Internal floating roof	Wastewater	5,000

15. Atmospheric storage tanks are subject to the following requirements:

A. Uninsulated tank exterior surfaces exposed to the sun shall be white. Storage tanks must be equipped with permanent submerged fill pipes.

B. Each tank shall be designed to completely drain its entire contents to a sump in a manner that leaves no more than 9 gallons of free-standing liquid in the tank sump.

C. Tanks storing liquids with VOC vapor pressures greater than 0.10 psia shall meet the following requirements.

(1) An internal floating deck or "roof" or equivalent control shall be installed in all tanks. The floating roof shall be equipped with two continuous seals

mounted one above the other between the wall of the storage vessel and the edge of the internal floating roof:

(2) The permit holder shall perform the visual inspections and any seal gap measurements as specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates the inspection was performed, any measurements made (including raw data), results of the inspections, and actions taken to correct any deficiencies noted.

(3) The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998 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. The floating roof shall be welded (not bolted).

(4) The concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 30 percent of its lower explosive limit (LEL). The permit holder shall visually inspect the rim seal system and roof openings and use an explosimeter to measure the LEL on a semiannual basis. Records shall be maintained of the dates the inspections and measurements were made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.

(5) Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof (roof not floating on liquid) to a control device.

16. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. EPA Tanks 4.09 average monthly temperatures may be used for determining the monthly emissions from unheated tanks which receive liquids that are at or below ambient temperatures.

    Emissions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of this permit at the terminal.

17. Emissions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site in service prior to the start of operation of the last tank authorized by this permit (all storage tanks authorized by NSR Permit 2193 on September 1, 2012; subsequently referred to as existing tanks) is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period. These emissions shall be determined as follows:

    A. If liquid is transferred from a tank authorized by this permit to an existing tank, the emissions due to filling (i.e., working losses) the existing tank shall be quantified. If the liquid transferred to the existing tank is subsequently loaded, those emissions must also be quantified.

    B. For transfer of liquid from an existing tank to a tank authorized by this permit, the emissions associated with refilling (i.e., working losses) the existing tank shall be quantified. If the roof of the existing tank is landed, also add the emissions from the existing tank from the time the transfer to the new tank was completed until the existing tank roof is floated again.

    Tank emissions shall be determined and documented in accordance with Special Conditions 17 and 33, as applicable. Loading emissions shall be determined and documented in accordance with Special Condition 25. The permit holder shall maintain an emissions record which includes calculated emissions of VOC identified in paragraphs A and B during the previous calendar month and the past consecutive 12 month period.

<u>Marine Loading and Vapor Combustors</u>

18. Marine loading of product from these facilities shall not exceed the following rates:

Type of Vessel Loaded	Product loaded	Loading Rate (bbl/hr)
Ship	Naphthas*, Kerosene/Distillate, Residual	10,000
Barge	Kerosene/Distillate, Residual	10,000
Barge	Naphthas	7,500

* - This limit applies to all naphtha loading to ships at the site.

19. All loading lines (hoses) and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections. Flanged connections shall be used for all loading operations. The following actions shall be taken prior to removing loading lines/hoses from marine vessels and shore facilities.

A. After the transfer is complete, the loading line/hose shall be isolated at the connection to the shore piping. The loading line/hose shall be vented at the shore piping and shall be gravity drained into the marine vessel per the site operating procedure.

B. The loading line/hose may be disconnected from the shore and/or marine vessel piping after the liquid has been removed to the extent possible by gravity draining to the vessel being loaded. If it is necessary to further empty the line/hose, any residual liquid in the line/hose shall be immediately drained directly into a covered sump. If the line/hose is not emptied, the open end(s) of the line/hose shall be immediately capped, plugged, or blinded to prevent leakage.

C. After the loading line/hose has been removed from the vessel, the vapor return line shall be immediately isolated.

The actions shall be documented as part of the loading procedure.

20. All ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F. Marine vessels shall not be loaded with liquid unless the vapor collection system is properly connected and the entire collection and destruction system is working as designed.

21. If the liquid to be loaded has a VOC vapor pressure is greater than 0.10 psia at 95°F, the following requirements apply:

A. Unless the vessel must be inerted during loading due to safety requirements, the marine loading vapor collection system shall be operated such that the vacuum maintained in the collection system during loading is no less than one inch of water and that the vessel being loaded is also under a vacuum. The collection system vacuum shall be continuously monitored and recorded at least once every 15 minutes. The vacuum monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±5 percent of the vacuum being measured or ±0.15 inches of water.

B. If the vessel must remain inerted during loading (it is not possible to draw a vacuum on the marine vessel) due to safety concerns, the marine vessel must have passed an annual vapor tightness test as specified in 40 CFR § 63.565(c) (September 19, 1995) or 40 CFR § 61.304(f) (October 17, 2000). The permit holder shall record the leak test documentation for all ships loaded.

22. The vapor combustors (EPNs: VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) used to control emissions shall achieve 99.8 percent control of the carbon compounds directed to it or reduce the VOC concentration in the exhaust to no greater than 10 ppmv corrected to 3 percent oxygen.. This shall be ensured by maintaining the temperature in the combustion chamber above 1400°F prior to the initial stack test performed in accordance with Special Condition 26. Following the completion of that stack test, the six minute average temperature shall be maintained above the minimum one hour average temperature maintained during the last satisfactory stack test.

    The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±2 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

    Quality assured (or valid) data must be generated when the VCU is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the VCU operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

23. Each vapor combustor shall be operated with no visible emissions and have a constant pilot flame during all times waste gas could be directed to it. 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.

24. The permit holder shall maintain and update monthly an emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12 month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids that are at or below ambient temperatures. Loading emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of the permit at the terminal.

Stack Sampling

25. Sampling ports and platform(s) shall be incorporated into the design of the heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

26. The permit holder 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 heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) to demonstrate compliance with the MAERT, and Special Conditions 6 and 22. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods.

    Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

    A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

        (1) Proposed 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.
        (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.
        (7) Procedure/parameters to be used to determine worst case emissions during the sampling period.

        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 the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

B. Air contaminants emitted from the heaters to be tested for include (but are not limited to) CO, NOx, $PM_{2.5}$ (condensable and filterable), and ammonia. Air contaminants emitted from the vapor combustors to be tested for include (but are not limited to) VOC, CO, NOx, and $PM_{2.5}$ (condensable and filterable).

C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

Sampling associated with VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU and authorized by the nonattainment permit N158 shall occur within 60 days after achieving the maximum operating rate authorized by nonattainment permit N158, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office. Existing stack test records may be used to demonstrate compliance in lieu of conducting a new stack test on a VCU..

D. The heater being sampled shall operate at the maximum firing rate during stack emission testing. The VCU shall be operated with maximum waste gas flow (loading rate) and VOC concentration (loading light naphtha or equivalent gasoline blend) to demonstrate compliance with the maximum allowable emission rate limits. The VCU shall be operated with maximum waste gas flow when determining the minimum operating temperature and demonstrating compliance with the minimum destruction efficiency requirement. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the waste gas flow rate to the vapor combustor is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.
One copy to each local air pollution control program.

Offsets

27. The permit holder shall obtain and provide VOC and NOx emission reductions to offset the 105.20 tpy VOC and 18.10 tpy NOx project emission increases for the facilities authorized by this permit at the ratio of 1.3 to 1 through participation in the Emissions Banking and Trading Programs. The permit holder shall specifically identify the source of the emissions reduction the HGB area prior to commencing construction of the facilities authorized by this permit. The proposed reductions and associated new facilities to be offset shall be submitted to the TCEQ for review. The TCEQ must approve the proposed plan prior to the start of construction of the facilities. The emission reductions must be complete and emission reduction verified by the TCEQ prior to the start of operation of the facilities authorized by this permit. The permit holder has identified two phases of construction for the facilities authorized by this permit.

A. Offsets for Phase 1

(1) Offsets for the VOC emission increase associated with Phase 1 of this permit will be obtained from actual emission reductions at KMLT's Pasadena Terminal (Regulated Entity Number: RN100224815). The emission reduction will be obtained by reducing the frequency and duration of the uncontrolled tank roof landing emissions from floating roof tanks authorized by Permit 5171 (EPN: Annual Emissions Cap). The VOC emission reduction shall be at least 82.2 tpy of VOC to offset the Phase 1 VOC emission increase of 63.16 tpy (includes emissions of up to 5.0 tpy from existing affected facilities as specified in Special Condition 18) at a 1.30 to 1 ratio. VOC DERCs owned by the permit holder may also be used to meet the above emission reduction requirements. The DERCs must be used and/or emission reductions at KMLT's Pasadena Terminal must be certified as emission reduction credits and used as offsets for this permit by the TCEQ Emissions Banking and Trading Program prior to the start of operation of any facilities authorized by this permit. If the permit holder chooses to use VOC DERCs, then the permit holder shall submit a completed DEC-2 Form prior to the start of operation and submit at least

one additional year of DERCs for offsets before continuing operation in each subsequent year.

(2) The NOx emission reduction for the flare shall be at least 1.1 tpy to offset the Phase 1 flare NOx emission increase of 0.81 tpy. NOx DERCs owned by the permit holder shall be used to meet the emission reduction requirement. The permit holder shall submit a completed DEC-2 Form prior to the start of operation and submit at least one additional year of DERCs for offsets before continuing operation in each subsequent year;

(3) The NOx emission reduction for facilities subject to the mass emissions cap and trade (MECT) program shall be at least 3.2 tpy of NOx to offset the Phase 1 NOx emission increase of 10.44 tpy at a 0.30 to 1 ratio. The emission reductions shall be obtained from MECT allowances owned by the permit holder and the 3.2 tpy of MECT allowances shall be permanently retired prior to start of operation of Phase 1 facilities**.** The permit holder must satisfy the 1 to 1 portion of the NOx emissions offset for these facilities through participation in the MECT program in the HGB nonattainment area. The permit holder must hold or obtain NOx MECT allowances equal to 10.5 tpy at the beginning of each MECT compliance period and must surrender MECT allowances equal to 10.5 tpy for the MECT facilities authorized in Phase 1 at the end of each MECT compliance period, regardless of whether the actual NOx emissions from these facilities are lower than this amount. The TCEQ Emissions Banking and Trading Program must be notified and verify the use of MECT allowances for the 1 to 1 portion of the NOx emissions offset. If the MECT allowances are devalued due to future regulatory changes, the permit holder must acquire additional allowances to hold during and surrender 10.5 tpy of MECT allowances at the end of each MECT compliance period. 10.5 tpy of MECT allowances shall be permanently retired upon the permanent shutdown of the facilities authorized by this permit.

B. Offsets for the other facilities authorized by this permit may be identified and provided in increments in accordance with the following requirements:

(1) Offsets must be associated with a viable, stand alone portion of the proposed construction. Offsets identified after permit issuance must undergo public notice and be available for public comment. This process and the Executive Director response to any comments received shall be completed in the same manner as for plant-wide applicability limit permits (subject to the notice and comment requirements in 30 TAC Chapter 39 [relating to Public Notice]).

(2). If the offsets associated with portions of the proposed construction have not been identified and approved within 18 months of the issuance of this

permit or within 18 months of the most recent demonstration of lowest achievable emission rate (LAER) for those new facilities associated with the proposed emission reductions, the permit holder shall include an updated demonstration of LAER for those new facilities associated with the proposed emission reductions. This demonstration must be approved by the TCEQ prior to starting construction on those facilities.

Maintenance, Startup, and Shutdown

28. This permit authorizes emissions from the following temporary facilities used to support the planned MSS activities identified in Special Condition 29 at permanent site facilities: frac tanks, vacuum trucks, portable control devices identified in Special Condition 38, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities authorized by this permit, and (c) does not operate as a replacement for an existing authorized facility.

29. This permit authorizes the emissions from the facilities authorized by this permit for the planned maintenance, startup, and shutdown (MSS) activities summarized in the table below.

Facility	**Activity**	**EPN**
Process Line	Shutdown, depressurize, and degas to flare. Vent to atmosphere.	MSS
Heater	Heater startup	F-101, F-201
Storage Tanks	Drain, degas, and open tank	MSS
Storage Tanks	Refill empty tank with landed roof	MSS
Vessels and Piping	Empty and degas to control	MSS
Piping	Degas to atmosphere	MSS
Piping	Drain liquid	MSS
Air movers and vacuum trucks	Remove liquid from storage tanks, piping, and other facilities for planned maintenance	MSS
Frac tanks	Store liquid from tanks, piping, and other facilities undergoing planned MSS	MSS
Minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet	Isolate, drain, degas to atmosphere, and refill to support planned maintenance.	MSS

Maintenance activities associated with minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet in the table above may be tracked through work orders or equivalent. Emissions from these activities identified shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of and emissions associated with each planned MSS activity performed on the facilities identified as storage tanks, air movers, vacuum trucks, and frac tanks shall be documented in accordance with the applicable Special Condition(s).

The performance of each planned MSS activity associated with pressurized tanks and the facility identified as vessels and piping in the table above and the emissions associated with it shall be recorded and include at least the following information:

A. the process equipment at which emissions from the MSS activity occurred, including the emission point number and common name of the process equipment;

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.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

30. Permanent facilities, with the exception of atmospheric storage tanks, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.

A. 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 psi at the normal process temperature and 95°F may be opened to atmosphere and drained in accordance with paragraph C of this special

condition. 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 psi 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 equipment is no longer vented to atmosphere.

C. All liquids from process equipment must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be transferred into a storage tank authorized by this permit or a vessel meeting the requirements of Special Condition 36 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 psi 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. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

(1) For MSS activities that may be tracked through work orders, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 5 percent of the lower explosive limit (LEL) per documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures).

(2) The locations and/or identifiers where the purge gas or steam enters the

process equipment and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable-VOC concentration prior to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 31. The sampling point shall be upstream of the inlet to the control device or controlled recovery system to determine whether VOC concentrations are acceptable for uncontrolled venting. 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. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL, with the exception of the pressurized storage tanks which must be degassed to control until the VOC concentration is 2,000 ppmv or 2 percent of the LEL. Documented site procedures used to de-inventory 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.

31. 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:

        (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded.

        (2) 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, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an

instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

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

(1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

5,000*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 (5000 ppmv standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 5 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard at 10 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 10 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the LEL response is within 95 percent of that for the appropriate gas.

(4) Definitions

a. An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

b. The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be 10 percent of the LEL for that gas.

D. Lower explosive limit measured with a lower explosive limit detector (2 percent LEL standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 1 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard with a concentration between 2 and 3 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90% of the calibration gas certified value in ppmv. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 2 to 3 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the concentration response is within 95 percent of that for the appropriate gas.

(4) Definitions

a. An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

b. The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be the same concentration (between 2 and 3 percent of the LEL for that gas).

32. This permit authorizes MSS emissions (EPN MSS) from internal floating roof storage tanks during planned floating roof landings. Tank roof landings include all operations when the tank floating roof is on its supporting legs. The following requirements apply to tank roof landings.

    A. If the tank is to be completely drained, the tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank and tank sump have been drained to the maximum extent practicable without the use of a sump stripping pump or entering the tank. The sump shall be emptied within 4 hours unless the vapor space is routed to control.

    B. If the VOC vapor pressure of the liquid being drained from the tank is greater than 0.50 psia, a vapor recovery system shall be connected to the vapor space under the landed tank roof and the vapor space vented to a control device meeting the requirements of Special Condition 38. 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. The vapor space shall be vented to the control device during the period from the floating roof is landed until the tank has been degassed per part D of this condition or the tank has been filled so that the landed roof is floating on liquid. The vapor recovery system collection rate shall always be greater than 100 cubic feet per minute when the tank is idle and two times the fill rate when the tank is being refilled. There shall be no other gas/vapor flow out of the vapor space under the floating roof when the vapor space is directed to the control device. This shall be demonstrated as follows:

        (1) The concentration of organic vapor in the vapor space above the internal floating roof shall be sampled and verified not to exceed 30 percent of its LEL.

        (2) This sampling shall be performed annually on a tank being filled and on an idle tank, or as requested by the TCEQ Regional Office. The sampling shall be performed in the morning if the tank is idle or being filled, as applicable, during that period.

        (3) The vapor collection recovery system shall be maintained at the minimum vapor collection system pressure set point required prior to and during sampling.

        (4) The tank sampled, sampling results, flow rates, date and time shall be recorded. Sampling may be waived if a tank roof is not landed in a calendar year.

C. Tank roofs shall not be landed for more than 72 hours unless the tank has been completely drained and degassing commenced per part D of this condition.

D. If necessary, tanks shall be degassed as follows:

(1) If the tank had not been emptied, degassed, and entered within the last 24 months, the permit holder shall open at least one entry into the tank to perform a visual inspection of the tank floor and sump to confirm that there is no standing liquid present and the drain dry tank is operating as designed. This inspection shall be performed during controlled degassing, if applicable. If any standing liquid is noted, it must be removed prior to uncontrolled tank degassing.

(2) If the VOC vapor pressure of the liquid stored in the tank is greater than 0.10 psia, the gas or vapor removed from the vapor space under the floating roof must be routed to a control device through a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL as measured per Special Condition 32. Degassing shall continue until the VOC concentration is less than 2,000 ppmv or 2 percent of the LEL if the tank will be opened or ventilated without control as allowed by part E of this condition. 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.

(3) 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.

(4) The vent stream before the control device shall be sampled to determine whether VOC concentrations are acceptable for uncontrolled venting. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 31.

(5) 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.

E. The tank may be opened without restriction and ventilated without control after all standing liquid has been removed from the tank and the vapor space VOC concentration is less than 2000 ppmv or 2 percent of the LEL or the liquid previously stored in the tank had a VOC vapor pressure less than or equal to 0.10 psia. A tank shall not be ventilated without control more than once in any rolling 12 month period and only one tank shall be ventilated without restriction at any time.

F. The following requirements apply to filling tanks with landed roofs until the roof is off its legs (floating on the liquid).

(1) The vapor space under the landed floating roof shall be vented to control per part B of this condition prior to commencing the filling of an empty tank unless the tank is being filled with liquid with a VOC vapor pressure less than 0.50 psia and the tank has verified dry by visual inspection of the tank floor and sump.

(2) Tanks shall be refilled as rapidly as practicable.

G. 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:

(1) Identification of the tank and emission point number, liquid stored, and any control devices or recovery systems used to reduce emissions;

(2) reason for the tank roof landing;

(3) date, time, and the other information specified below for each of the following events:

a. the roof was initially landed,
b. volume in the tank when liquid withdrawal stopped or when the tank and sump were fully drained,
c. vapor space volume under the floating roof vented to control device and ventilation flow rate to the control device,
d. start and completion of controlled degassing, total volumetric flow, results of any tank inspection of the tank for liquid and any corrective actions taken, VOC concentration sampling results;
e. all standing liquid was removed from the tank,
f. tank refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and
g. tank roof off supporting legs and floating on liquid;

(4). the estimated quantity of each air contaminant, or mixture of air contaminants, emitted while the roof was landed 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 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.

33. Fixed roof tanks shall be emptied to the maximum extent possible prior to entry. If the tank has not been entered within the last 24 months, the permit holder shall open at least one entry into the tank to perform a visual inspection of the tank floor and sump to confirm that there is no standing liquid present and the drain dry tank is operating as designed. If any standing liquid is noted, it must be removed prior to uncontrolled tank degassing. A tank shall not be degassed more than once in any rolling 12 month period.

34. All permanent facilities must comply with all operating requirements, limits, and representations this permit during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for NOx and CO emissions from the heaters during planned startup and shutdown are 0.025 lb/MMBtu and 100 ppmv corrected to 3 percent oxygen, respectively, if the startup period does not exceed 8 hours in duration and the time it takes to complete the shutdown does not exceed 4 hours.

35. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:

A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.

B. The vacuum/blower exhaust shall be routed to a control device and the fill line intake equipped with a “duckbill” or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.

(1) 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.

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(2) 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 at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 31.A or B.

D. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.

E. 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.

36. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.

B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom. The tank vapor space shall be vented to a control device meeting the requirements of Special Condition 38.

C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.

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. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. 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.”

37. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity. Total VOC planned MSS emissions associated with the facilities authorized by this permit shall not exceed the quantity shown in the MAERT for EPN MSS.

38. Control devices required by this permit for emissions from planned 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. Storage tank emissions shall be controlled by a VCU or thermal oxidizer meeting the requirements of part B of this condition.

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

    A. Carbon Adsorption System (CAS).

        (1) The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.

        (2) The CAS shall be sampled downstream of the first canister 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. It may be extended to up to 30 percent of the minimum potential saturation time for a new canister of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.

            b. 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 the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.

(3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 31.A or B.

(4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. 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 four hours. 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.

(5) Records of CAS monitoring shall include the following:

a. Sample time and date.
b. Monitoring results (ppmv).
c. Canister replacement log.

(6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent 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.

B. Thermal Oxidizer/Vapor Combustor.

(1) If controlling storage tank emissions, the thermal oxidizer/vapor combustion unit shall provide no less than 99.8 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This shall be demonstrated per by having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor..

(2) If controlling MSS emissions from facilities other than atmospheric storage tanks,, the thermal oxidizer/vapor combustion unit shall provide no less than 99.5 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This may be demonstrated by:

a. maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than 1400°F with 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/combustor; or

b. having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor.

The thermal oxidizer/vapor combustor exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer/combustor. 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 ±0.75 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

C. Internal Combustion Engine.

(1) The internal combustion engine shall have a VOC destruction efficiency of at least 99.5 percent.

(2) The engine must have been stack tested with butane or propane to confirm the required destruction efficiency within the period specified in item (3) below. 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 following each occurrence of engine maintenance that may reasonably be expected to increase emissions including oxygen sensor replacement and catalyst cleaning or replacement. 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

32.A are also acceptable for this documentation.

(3) The engine shall be operated and monitored as specified below.

a. If the engine is 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. The engine must have been stack tested within the past 12 months in accordance with item (2) of this condition.

The test period may be extended to 24 months if the engine exhaust is sampled once an hour when waste gas is directed to the engine using a detector meeting the requirements of Special Condition 31.A. 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 engine. The concentrations shall be recorded and the MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background.

b. If an oxygen sensor-based AFR controller is not used, the engine exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the engine. 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 engine. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 31.A. 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 if the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded. The engine must have been stack tested within the past 24 months in accordance with part (2) of this condition.

D. The flare (EPN FL-101) shall be used to control the emissions from process train shutdowns. After the process train has been depressurized to the flare, the permit holder shall install and operate continuous flow monitors that provide a record of the exhaust vent stream and natural gas flows to the flare. The flow monitor sensor and analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is

measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. The monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be ±5.0%, temperature monitor shall be ±2.0% at absolute temperature, and pressure monitor shall be ±5.0 mm Hg. The exhaust vent gas from the process shall be assumed to have no net heating value so that the natural gas flow shall provide for sufficient heating value at the flare tip.

ATTACHMENT 5

Draft LAER Letter Regarding the Proposed Amendment to Permit No. 101199/N158

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 7, 2014

MR MATTHEW SKIDMORE
DIRECTOR EHS
KINDER MORGAN CRUDE & CONDENSATE LLC ("KMCC")
1100 ALDERMAN DR STE 200
ALPHARETTA GA 30005-5440

Re: Permit Amendment
Permit Numbers: 101199 and N158
Condensate Splitter
Galena Park, Harris County
Regulated Entity Number: RN100237452
Customer Reference Number: CN603935248
Account Number: HG-0262-H

DRAFT

Dear Mr. Skidmore:

During review of the above-referenced amendment, KMCC requested that I review the Lowest Achievable Emission Rate (LAER) determination for marine loading activities made prior to the initial issuance of the referenced permit. Based on the information submitted by KMCC, and for the reasons detailed below, I have determined that the earlier LAER determination was not made in error, and that I am therefore unable to determine a revised LAER limit.

The referenced amendment application was submitted by KMCC in order to authorize modifications to six storage tanks previously authorized as fixed roof tanks, but proposed to be constructed instead as internal floating roof tanks. In a November 13, 2013, meeting KMCC representatives requested that I review the earlier LAER determination. Since I did not expect review of the LAER issue to materially affect my review of the proposed modification to the storage tanks, I agreed to consider it.

Facilities which may emit precursors of ozone (which include VOC and NO_x) at a new major source in an ozone nonattainment area must comply with LAER as a requirement for obtaining a nonattainment permit. 30 TAC §116.150(d)(1). LAER is an emission rate of air contaminants that is the more stringent of EITHER "the most stringent emission limitation that is contained in the rules and regulations of any approved state implementation plan [SIP] for a specific class or category of facility, unless the owner or operator of the proposed facility determines that such limitations are not achievable" OR "the most stringent emission limitation that is achieved in practice by a specific class or category of facilities[.]" 30 TAC §116.12(15).

On February 23, 2012, KMCC applied to the Commission for authorization to construct a new major source of VOC in a severe ozone nonattainment area. LAER was applied to emissions of NO_x from process heaters and flares, and emissions of VOC from storage tanks, marine vessel loading activities, piping fugitives, and planned maintenance, startup and shutdown (MSS)

activities. The previous permit reviewer made the LAER determination relating to emission from marine vessel loading activities by locating the most stringent emission limitation contained in any approved SIP for the relevant class of facilities. South Coast Air Quality Management District (SCAQMD) Rule 1142 was determined at the time to represent the most stringent such limitation.

The applicability of SCAQMD Rule 1142 includes all events where a marine tank vessel is filled with an organic liquid. The rule forbids marine tank vessel loading events that do not comply with either of two emission limitations: EITHER total emissions of VOC are less than 2 lb/Mbbl liquid loaded; OR emissions of VOC are reduced by 95% from uncontrolled conditions.

In making the LAER determination, the previous permit reviewer determined that an emission limitation of 2 lb/Mbbl liquid loaded could be achieved without control for products having a vapor pressure of less than or equal to 0.10 psia at 95° F. Consequently, special Condition 20 of Permit Nos. 101199 and N158 as issued required control for all ship and barge loading emissions arising from the loading of products with vapor pressures greater than 0.10 psia at 95° F. As a method of control, KMCC proposed a Vapor Combustion Unit (VCU) achieving 99.8% destruction or removal efficiency (DRE).

In an August 24, 2012, email to KM representatives, the previous permit reviewer explained that he translated the emission factor-based limitation to a volatility-based limitation by considering the least volatile common organic liquid (i.e., nonane) with an uncontrolled emission rate in excess of 2 lb/Mbbl liquid loaded for loading of tanker ships, with the emission rate determined using equation (1) of AP-42, Chapter 5.

The previous permit reviewer's LAER determination was included in the permit's preliminary determination summary and was subject to public notice, including the opportunity for EPA comment on the determination. In the interest of ensuring meaningful public participation in the permitting process, I have been reluctant to consider revising the previous LAER determination in the course of an amendment project ***not*** subject to public notice requirements unless I determined that it was clearly erroneous.

SCAQMD Rule 1142 was reviewed by EPA and approved as a part of the California SIP on December 13, 1994 (59 FR 64133). The rule is listed as an approved part of the California SIP at 40 CFR §52.220(c)(187)(i)(C)(*1*). It is clear that SCAQMD Rule 1142 is "contained in the rules or regulations of [an] state implementation plan." There is no doubt that the rule was relevant to determining LAER for KMCC's facilities. Additionally, based on a phone conversation with representatives of SCAQMD and an internet search of Title V permits issued by SCAQMD, I have been able to determine that Rule 1142 is complied with in practice by facilities within SCAQMD's jurisdiction. KMCC has also indicated that although the emission limit is economically burdensome, it is "achievable".

For ease of demonstrating compliance with emission limits, permits issued by the Commission tend to employ volatility-based cutoffs (rather than emission factor-based cutoffs) for determining whether control is required for loading events. The Commission also accepts the use of AP-42, Chap. 5 equations in estimating potential to emit for loading activities. The permit

reviewer's choice to translate the SCAQMD Rule 1142 emission limit to a volatility-based standard, and the method of making the translation, were not clearly erroneous.

KMCC has argued, in documents submitted February 7, February 27 and March 7, 2014, that the real error in the earlier LAER determination is that SCAQMD Rule 1142 is not actually more stringent than the TCEQ presumptive BACT volatility-based cutoff of 0.50 psia. KMCC's argument is approximately as follows: SCAQMD Rule 1142 only requires control of VOC emissions with an efficiency of 95%, while KMCC's VCU achieves an efficiency of 99.8%. For example, adhering only to SCAQMD Rule 1142, loading of light naphtha at a pumping rate of 10 Mbbl/hr could be permitted with a controlled emission rate of up to 67.84 lb/hr (assuming 100% capture of collected vapors), while use of KMCC's VCU during the same loading event (again assuming 100% capture) would lead to a controlled emission rate of no more than 2.71 lb/hr. When estimated annual throughputs of all products to be loaded at KMCC's marine terminal are considered, adherence only to SCAQMD Rule 1142 would lead to a higher VOC emission rate (on an annual averaging period) than would adherence only to TCEQ presumptive BACT. TCEQ presumptive BACT is therefore more stringent than SCAQMD Rule 1142, so SCAQMD Rule 1142 need not have been consulted in making the LAER determination.

A careful review of SCAQMD Rule 1142 language suggests that the rule applies to marine loading ***events***, and its emission limits must be compiled with on an event-by-event basis, not an annual basis. Considering an event of loading a barge with atmospheric residuum with vapor pressure of 0.21 psia at 95° F, adherence only to TCEQ presumptive BACT would permit an emission rate in excess of 12 lb/Mbbl liquid loaded, which is less stringent than the SCAQMD Rule 1142 limit. Making the comparison on an event-by-event basis, I cannot concur with KMCC that the previous reviewer determined in error that SCAQMD Rule 1142 represented the most stringent relevant emission limit.

Thank you for your cooperation in this matter. If you have any questions, please contact me at (512) 239-1284, or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

Jesse Lovegren
Air Permits Division
Texas Commission on Environmental Quality

JL/jl

Project Number: 197190

EXHIBIT C

The Executive Director's Response to Comments Concerning Draft Permit No. O3764

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 10, 2017

MR KENT MILLER
DIRECTOR OF OPERATIONS
KINDER MORGAN CRUDE & CONDENSATE LLC
1001 LOUISIANA ST STE 1000
HOUSTON TX 77002-5089

Re: Notice of Proposed Permit and Executive Director's Response to Public Comment
Initial Issuance
Permit Number: O3764
Kinder Morgan Crude & Condensate LLC
Crude Condensate Splitter
Galena Park, Harris County
Regulated Entity Number: RN100237452
Customer Reference Number: CN603935248
Account Number: HG-0262-H

Dear Mr. Miller:

The Texas Commission on Environmental Quality (TCEQ) Executive Director's proposed final action is to submit a proposed federal operating permit (FOP) to the U.S. Environmental Protection Agency (EPA) for review. Prior to taking this action, all timely public comments have been considered and are addressed in the enclosed Executive Director's Response to Public Comment (RTC). The RTC also includes resulting modifications to the FOP, if applicable.

As of May 16, 2017 the proposed permit is subject to an EPA review for 45 days, ending on June 30, 2017.

If the EPA does not file an objection to the proposed FOP, or the objection is resolved, the TCEQ will issue the FOP. If you are affected by the decision of the Executive Director (even if you are the applicant) you may petition the EPA within 60 days of the expiration of the EPA's 45-day review period in accordance with Texas Clean Air Act § 382.0563, as codified in the Texas Health and Safety Code and the rules [Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122)] adopted under that act. This paragraph explains the steps to submit a petition to the EPA for further consideration. The petition shall be based only on objections to the permit raised with reasonable specificity during the public comment period, unless you demonstrate that it was impracticable to raise such objections within the public comment period, or the grounds for such objections arose after the public comment period. The EPA may only object to the issuance of any proposed permit which is not in compliance with the applicable requirements or the requirements of 30 TAC Chapter 122. The 60-day public petition period begins on July 1, 2017 and ends on August 29, 2017. Public petitions should be submitted to the TCEQ, the applicant and the EPA. Instructions on submitting a public petition to the EPA are available at the EPA website:

https://www.epa.gov/title-v-operating-permits/title-v-petitions

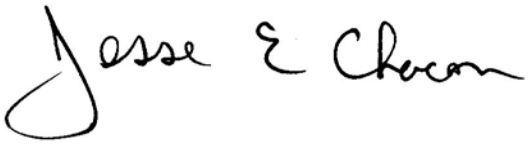
Public petitions should be submitted during the petition period to the TCEQ and the applicant at the following addresses:

Texas Commission on Environmental Quality
Office of Air
Air Permits Division
Operational Support Section, MC-163
P.O. Box 13087
Austin, Texas 78711-3087

Mr. Kent Miller
Director Of Operations
Kinder Morgan Crude & Condensate LLC
1001 Louisiana St Ste 1000
Houston TX 77002-5089

Thank you for your cooperation in this matter. If you have questions concerning the processing of this permit application, please contact Mr. Vasant V. Chaphekar, P.E., at (512) 239-1341.

Sincerely,



Jesse E. Chacon, P.E., Manager
Operating Permits Section
Air Permits Division
Texas Commission on Environmental Quality

JEC/vc

cc: Mr. Cliff McCowan, SME Air Programs Southeast, Kinder Morgan Crude & Condensate LLC, Galena Park
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6-Dallas (Electronic copy)

Enclosures: Executive Director's Response to Public Comment
Proposed Permit
Statement of Basis
Modifications Made from the Draft to the Proposed Permit

Project Number: 22119

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 10, 2017

MR GABRIEL CLARK-LEACH
ATTORNEY
ENVIRONMENTAL INTEGRITY PROJECT
707 RIO GRANDE SUITE 200
AUSTIN TX 78701

Re: Notice of Proposed Permit and Executive Director's Response to Public Comment
Initial Issuance
Permit Number: O3764
Kinder Morgan Crude & Condensate LLC
Crude Condensate Splitter
Galena Park, Harris County
Regulated Entity Number: RN100237452
Customer Reference Number: CN603935248
Account Number: HG-0262-H

Dear Mr. Clark-Leach:

The Texas Commission on Environmental Quality (TCEQ) Executive Director's proposed final action is to submit a proposed federal operating permit (FOP) to the U.S. Environmental Protection Agency (EPA) for review. Prior to taking this action, all timely public comments have been considered and are addressed in the enclosed Executive Director's Response to Public Comment (RTC). The RTC also includes resulting modifications to the FOP, if applicable. The proposed permit and statement of basis are available through the TCEQ Web site and can be accessed at https://webmail.tceq.texas.gov/gw/webpub.

As of May 16, 2017 the proposed permit is subject to an EPA review for 45 days, ending on June 30, 2017.

If the EPA does not file an objection to the proposed FOP, or the objection is resolved, the TCEQ will issue the FOP. If you are affected by the decision of the Executive Director (even if you are the applicant) you may petition the EPA within 60 days of the expiration of the EPA's 45-day review period in accordance with Texas Clean Air Act § 382.0563, as codified in the Texas Health and Safety Code and the rules [Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122)] adopted under that act. This paragraph explains the steps to submit a petition to the EPA for further consideration. The petition shall be based only on objections to the permit raised with reasonable specificity during the public comment period, unless you demonstrate that it was impracticable to raise such objections within the public comment period, or the grounds for such objections arose after the public comment period. The EPA may only object to the issuance of any proposed permit which is not in compliance with the applicable requirements or the requirements of 30 TAC Chapter 122. The 60-day public petition period begins on July 1, 2017 and ends on August 29, 2017. Public petitions should be submitted to the TCEQ, the applicant and the EPA. Instructions on submitting a public petition to the EPA are available at the EPA website:

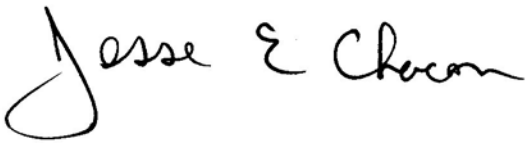
https://www.epa.gov/title-v-operating-permits/title-v-petitions

Texas Commission on Environmental Quality
Office of Air
Air Permits Division
Technical Program Support Section, MC-163
P.O. Box 13087
Austin, Texas 78711-3087

Mr. Kent Miller
Director Of Operations
Kinder Morgan Crude & Condensate LLC
1001 Louisiana St Ste 1000
Houston TX 77002-5089

Thank you for your cooperation in this matter. If you have questions concerning the processing of this permit application, please contact Mr. Vasant V. Chaphekar, P.E. at (512) 239-1341.

Sincerely,



Jesse E. Chacon, P.E., Manager
Operating Permits Section
Air Permits Division
Texas Commission on Environmental Quality

JEC/vc

cc: Mr. Cliff McCowan, SME Air Programs Southeast, Kinder Morgan Crude & Condensate LLC, Galena Park
Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6-Dallas (Electronic copy)

Enclosures: Executive Director's Response to Public Comment
Modifications Made from the Draft to the Proposed Permit

Project Number: 22119

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Work Leader, Final Documents Team, TCEQ Office of the Chief Clerk, MC-105, Austin
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Modifications Made from the Draft to the Proposed Permit

1. In Appendix B, added Attachment A to Permit No. 101199/N158. The Attachment A titled "Test Plan for the Direct Measurement of Uncollected VOC Loading Losses During Marine Vessel Loading" is referenced in Special Condition 25(D)(1) of the NSR permit.
2. In the New Source Review Authorization References table (page 68), deleted permit by rules (PBRs) in §§ 106.262, 106.263 (09/04/2000) and 106.511 since units authorized by these PBRs were not installed.
3. In the Statement of Basis (SOB), New Source Review Authorization References table (page 25), deleted permit by rules (PBRs) in §§ 106.262, 106.263 (09/04/2000) and 106.511 since units authorized by these PBRs were not installed.

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment (RTC or Response) on the application for a Federal Operating Permit (FOP) Permit No. O3764 filed by Kinder Morgan Crude & Condensate LLC (KMCC or the Applicant).

As required by Title 30 Texas Administrative Code (TAC) § 122.345 the ED sends a notice of the proposed final action, which includes a response to any comments submitted during the comment period, to any person who commented during the public comment period, the applicant, and to EPA. The Office of Chief Clerk (OCC) timely received comment letters from Mr. Gabriel Clark-Leach on behalf of the Environmental Integrity Project (EIP), Air Alliance Houston (AAH), the Sierra Club (SC), Texas Environmental Justice Advocacy Services (TEJAS), and Environment Texas (ET) (Commenters). If you need more information about this permit application or the permitting process, please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our Web site at www.tceq.texas.gov.

BACKGROUND

Procedural Background

The Texas Federal Operating Permit (FOP) Program requires that owners and operators of sites subject to 30 TAC Chapter 122 obtain a FOP that contains all applicable requirements in order to facilitate compliance and improve enforcement. The FOP does not authorize construction or modifications to facilities, nor does the FOP authorize emission increases. In order to construct or modify a facility, the facility must have the appropriate New Source Review (NSR) authorization. If the site is subject to 30 TAC Chapter 122, the owner or operator must submit a timely FOP application for the site, and ultimately must obtain the FOP in order to operate. Kinder Morgan Crude & Condensate LLC applied to the TCEQ for a FOP for a Special Warehousing and Storage plant located in Galena Park, Harris County on November 12, 2014. A notice in English was published on October 29, 2015 and a notice in an alternative language was published on November 1, 2015. The public comment period ended on December 1, 2015. Comments were received from Mr. Gabriel Clark-Leach on behalf of the Commenters on November 30, 2015. During the public comment period, the version of the FOP available for review and comment is the Draft Permit. Upon submittal of the notice of proposed final action to the commenter(s), the Applicant, and EPA, the version of the FOP is referenced as the Proposed Permit.

Description of Site

The Applicant has applied to the TCEQ for an FOP Initial Issuance that would authorize the applicant to operate the Galena Park Terminal Crude Condensate Splitter (facility or site). The facility is located 407 Clinton Drive in Galena Park, Harris County, Texas 77547-3460. The site also includes a for-hire "Kinder Morgan Liquid Terminals" process area operating under FOP O988.

KMCC's site is a new 100,000 bbl/day condensate splitter that consists of two trains which each process 50,000 bbl/day of hydrocarbon condensate material to obtain products suitable for commercial use. The process utilizes conventional distillation technology.

The hydrocarbon condensate is fed from storage tanks to the stabilizer column where the lightest fraction of the condensate is distilled from the overhead. Any uncondensed off-gas that may be produced (up to 1% of the total fuel usage) is used for fuel gas in the heaters. Water present in the feed is distilled in the stabilizer. The overhead liquid product from the stabilizer

column is stored in pressurized storage for transfer to the truck loading rack. The feed to this stabilizer column is preheated with waste heat recovered from hot product streams to reduce the amount of fired gas heat input required for distillation. The remaining reboiler heat required to achieve the desired separations is provided by a circulating hot oil circuit. The circulating hot oil is heated in a gas fueled direct fired heater. The bottom stream from the stabilizer column is pressured through a preheat exchanger that is heated by circulating hot oil in to the main fractionation column.

This main fractionation column splits the bottoms from the stabilizer column into four commercially acceptable streams. Three of these streams are taken off as side draws and fed to the top of individual stripping columns. Lighter material is stripped from the product draw in each of these side columns. The stripped side draw vapors are returned to the main fractionation column from the overhead of each stripper column and the stripped side draw products are used to preheat the feed to the process before final cooling and transfer to storage.

In addition to the side draw products, a bottom product and overhead product are produced from the main fractionation column. These products represent the heaviest fraction and the lightest fractions of the stabilized condensate. Lighter material is removed from the bottom product using natural gas for stripping. Both a liquid distillate product and a non-condensable gas stream saturated with heavier components is produced from the overhead vapor along with column reflux. The off-gas will be compressed and cooled to make it suitable for use as fuel gas and recover as much light naphtha as practical.

In addition to the main process equipment there are certain support processes that are required. An elevated flare is used in emergency overpressure situations to dispose of excess process vapors. This flare utilizes a continuous pilot to ensure that unexpected release events result in safe disposal. The pilot is fueled with natural gas. A standby natural gas fired emergency power generator is also provided to maintain critical electrical services during a power outage and minimize emergency flare loads. A new tank truck rack for the Y-Grade product loading is used for product transfer. Offsite docks are also utilized to transfer products.

COMMENTS AND RESPONSES

All comments received by TCEQ are listed below in their original, unedited format. An in-line comment-response format is used in this document. This format assigns a number to each actual comment received followed by a corresponding TCEQ response.

COMMENT A.1: The Draft Permit Fails to Properly Incorporate Applicable Monitoring Requirements in Permit No. 101199/N158

a. Marine Loading--The Draft Permit Fails to Include Applicable Requirements

The Draft Permit incorporates by reference requirements established by NSR Permit No. 101199/N158. Draft Permit, Special Condition 14 and New Source Review Authorization References Table. Permit No. 101199/N158, Special Condition 25(C) provides that "[u]ncaptured emissions (i.e., loading fugitives) from any ship shall not exceed 0.14 lb VOC per 1000 Bbl liquid loaded." To demonstrate compliance with this limit, Special Condition 25(D) requires that "[t]esting shall be conducted in accordance with the Testing Protocol in Attachment A of this permit." The emission limit in Special Condition 25(C) and the testing protocol referenced by 25(D) and contained in Attachment A to Permit No. 101199/N158 were established through a no-notice permit amendment that revised the permit's initial LAER determination and resulted in a reduction in the amount of emission offsets Kinder Morgan was required to obtain before commencing construction of facilities authorized by the permit:

> Revisions have been made to the estimated emission rates of VOC due to the loading of inerted tanker ships with high vapor pressure volatile organic liquids. Representatives of KM Liquids Terminals conducted negotiations with TCEQ Management between 2013 and early 2014 to develop a protocol for quantifying uncollected VOC vapors emitted from inerted, vapor-tight tank ships undergoing controlled loading. Based on test results, and an enforceable agreement by KMLT to conduct follow-up verification and compliance testing as specified by permit special condition 25, a site-specific emission factor for loading fugitives has been approved which is significantly lower than the standard assumption of 5% loss.
>
> And
>
> The amount of offsets required under permit N158 has been reduced due to additional emission reductions . . . due to revised estimates of VOC losses from loading activities. Attachment 1.

Though Attachment A to Permit No. 101199/N158, referenced in Special Condition 25(D), includes a testing protocol that constitutes an applicable requirement, was used to revise the TCEQ's LAER determination and offset requirements (which are applicable requirements), and is necessary to assure compliance with the Special Condition 25(C) emission limit, it was not included in the Draft Permit. The Draft Permit is therefore incomplete. While EPA has allowed Texas to incorporate applicable requirements in minor NSR permits into Title V permits by reference, EPA has objected to Texas's use of incorporation by reference ("IBR") to include applicable requirements in major NSR permits in Title V permits. *Objection to Federal Operating Permit No. O1626, Sweeny Refinery* (January 8, 2010) at ¶ 1. Accordingly, the Executive Director must include Attachment A as part of the Draft Permit. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(1); *In the Matter of WE—Oak Creek Power Plant*, Order on Petition to Object to Permit No 241007690-P10 (June 12, 2009) ("Oak Creek Order") at 25-26.

Additionally, because the Draft Permit and Permit No. 101199/N158 require compliance with the Attachment A testing protocol and because the TCEQ relied upon this testing protocol to revise the Galena Park Terminal's potential to emit, to revise its previous LAER determination, and to reduce the amount of offsets Kinder Morgan was required to obtain before constructing new facilities at its terminal, the content of the attachment is information necessary to impose applicable requirements and must be in the Title V permit application, 40 C.F.R. § 70.5(c), and available for review during the public comment period. 40 C.F.R. § 70.7(h)(2). Oak Creek Order at 25-26. Commenters have reviewed Kinder Morgan's Title V application file and Attachment A is not included in it.[1] Because Kinder Morgan's Title V application is incomplete and because the public did not have an opportunity to review Attachment A during the comment period, the Executive Director may not issue the Draft Permit. The Executive Director must require Kinder Morgan to submit a complete application and provide the public an opportunity to comment on it before he issues Kinder Morgan's Title V permit.

b. Marine Loading—The Executive Director Failed to Support his Determination that Testing Described in Attachment Assures Compliance with Applicable Requirements

Based on our review of *draft* versions of Attachment A contained in the permitting file for Permit No. 101199/N158, Commenters are concerned that the testing conducted to establish the Special Condition 25(C) emission limit and the follow-up testing protocol will fail to assure compliance with this limit, even if Attachment A is included in the Draft Permit, because (1) the testing used to establish the limit was only conducted on three relatively new and well-maintained ships and should not be presumed to represent actual emissions across all actual loading activities at the terminal; (2) only one of the three tests actually measured

1 Commenters did search for Attachment A on the TCEQ's remote document server and were unable to find a final version of the document. The version available was a draft that contained redlined edits. Commenters also reviewed the application file for Permit No. 101199/N158 and it did not contain a final version of the attachment. The, the various draft versions of the Attachment in the application file varied substantially from the draft attachment available on the TCEQ's document server.

emissions for a full loading run; and (3) follow up testing under the Attachment A protocol will use a different emission calculation methodology than was used in the initial test; (4) it is unclear that Kinder Morgan has the authority to require ships using the Galena Park terminal to conduct testing; and (5) the draft follow-up test protocol does not preclude Kinder Morgan from declining to test ships that will not be able to comply with the emission limit.[2]

The emission limit in Permit No. 101199/N158, Special Condition 25(C) is based on testing conducted on three relatively new tankers, constructed between 2005 and 2009. According to one version of Draft Attachment A found in Kinder Morgan's permit file:

> The above referenced tankers were required to perform annual leak vapor-tightness tests. In addition, the tank crews also conducted regular maintenance checks, adhered to standard operating procedures, routed loading loss emissions to pollution control devices, and maintained cargo tank pressures near atmospheric pressure throughout the loading process. As such, the potential for uncollected loading losses to occur during routine loading operations on these vessels was expected to be relatively low. As summarized below in Table 1-1, the results of these measurement studies confirmed this expectation. Attachment 2.

As this passage suggests, the three ships tested are not representative of all ships that utilize the Galena Park Terminal. Unless all ships that use the terminal are in similar condition and maintained with the same diligence as the tested ships, it is unreasonable to presume that the emission limit based on this testing, which is much lower than Texas's standard emission factor for loading losses, will be achieved in practice unless additional conditions on the kind and condition of ships using the terminal are added to the Draft Permit.

- Commenters request that the Executive Director identify information in the permitting record assuring that:

    - All ships using the Galena Park Terminal will be as new and as well-maintained as the tankers Kinder Morgan tested; and

    - All ships using the Galena Park Terminal will be of the same kind as the tankers Kinder Morgan tested.

According to Table 1-1 of Draft Attachment A, testing for two of the three ships used to establish the permit emission limit, "took place near the end of the load and results were conservatively extrapolated over the entire duration of the load." Commenters are concerned that these results may not be representative of actual emissions from the tested ships. While Kinder Morgan attempted to justify limited testing as consistent with MACT Y Method 21 and explained that the Attachment A testing protocol states that subsequent tests will be limited to the last 20 percent of the loading process, the proper citation relevant to vapor-tightness testing using Method 21 is 40 C.F.R. § 63.565(c)(2), which requires testing to be performed "…during the final 20 percent of loading of *each product tank* [rather than overall load]." (emphasis added). Accordingly, there is no way of knowing whether Kinder Morgan's partial load testing, which did not measure emissions during the final 20 percent loading *of each product tank*, reflects actual emissions throughout the loading process.

While Attachment A does require follow-up testing, the emissions calculation methodology for the follow up testing does not match the method used in the initial tests. *See*, Attachment 2, Table 1-1, note c ("The results in this table match the results provided in the three reports generated for these three studies. The process for calculating uncollected emissions has changed since the issuance of these three reports.") Because the testing process is suspect and follow-up testing emissions will be calculated using a different method than used in the initial tests, Commenters are concerned that the testing protocol contained in Attachment A to Permit No. 101199/N158 fails to assure compliance with applicable requirements.

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2 Commenters did not have an opportunity to comment on the testing protocol in Attachment A when it was added to Permit No. 101199/N158, because it was established through a no-notice permit amendment. Attachment 1.

Finally, unless Kinder Morgan has the authority to require ships using the Galena Park Terminal to conduct the testing described in Attachment A, follow-up testing cannot assure compliance with the applicable emission limit. It is unlikely that poorly maintained ships will submit to testing or that Kinder Morgan will opt to conduct testing on ships the Company believes cannot demonstrate compliance with the limit. Because Permit No. 101199/N158 and the draft Attachment A documents do not establish procedures for ensuring that ships must submit to the testing and that the ships Kinder Morgan selects for testing are representative of the full range of ships that use the Galena Park Teminal, Commenters are concerned that the test protocol is unenforceable and unreliable. Commenters ask that the Executive Director identify information in the permit record demonstrating that:

- Kinder Morgan has the authority to require ships using the Galena Park Terminal to consent to the testing protocol contained in Attachment A; and

- Kinder Morgan is required to select ships for follow up testing that are representative of the full range of ships that use the Galena Park Terminal.

Requested Revision to the Title V Permit:
The Executive Director must revise the Draft Permit to include Permit No. 101199/N158, Attachment A. The Executive Director must also revise the Statement of Basis to explain how the Attachment A testing protocol assures compliance with applicable requirements. If the Executive Director determines that additional monitoring requirements must be established to assure compliance with the uncontrolled loading emission limit in Permit No. 101199/N158, he must revise the Draft Permit to include such requirements. After these revisions have been made, the Executive Director must require Kinder Morgan to re-notice the Draft Permit to allow the public an opportunity to comment on the complete Title V permit and application.

RESPONSES to A.1.a and A.1.b: Permit No. 101199/N158, Attachment A, which describes a test protocol for measurement of fugitive emissions during marine loading operations, has been accessible as document number 518018 via TCEQ's Remote Document Server. Attachment A was inadvertently missing from the Draft Permit. The Proposed Permit is modified to include the missing Attachment A (Proposed Permit, Appendix B, last attachment).

Permit No. 101199/N158 was issued on 09/08/2014 in accordance with approved Texas SIP. Public notice for Project 197190, Permit No. 101199/N158 issued on 09/08/2014, was not required, per 30 TAC § 39.402(a)(3), since there was a decrease in VOC emissions. This Draft Permit issued 10/05/2015 incorporates by reference Permit No. 101199/N158 issued on 09/08/2014.

Although the Commenter may not have had an opportunity to submit comments related to Permit No. 101199/N158 issued on 09/08/2014 during a public notice phase since a public notice was not required, the ED notes that the public (including the Commenter) always have an opportunity to file a "Motion to Overturn" per 30 TAC § 50.139 within 23 days after the date that the TCEQ mailed the notice of the signed permit. No such filing was received by TCEQ for Permit No. 101199/N158 issued on 09/08/2014 within the allowable timeframe.

Commenters concerns about the adequacy of testing protocols described in Attachment A that assure compliance with the requirements of Permit No. 101199/N158 issued on 09/08/2014 are without merit for the following reasons:

1) Permit No. 101199/N158, which incorporates the test protocol by reference, was approved in accordance with the Texas State Implementation Plan (SIP) and the Proposed Permit is being issued in accordance with 30 TAC Chapter 122 regulations. Both the Texas SIP and the FOP program under 30 TAC Chapter 122 regulations for operating permits are EPA-approved.

2) The ED notes that it is not practical to measure emission rates associated with fugitive emissions caused by equipment leaks. Emission rates for computing fugitive emissions are often based on test data results and it is common practice to use emission factors for fugitive process components such as valves, flanges, pumps, connectors, etc. Permit No. 101199/N158 includes special conditions 13 through 15 to implement a Leak Detection and Repair program to minimize fugitive emissions and achieve a higher capture efficiency.
3) Commenters assertion that "the testing used to establish the limit was only conducted on three relatively new and well-maintained ships and should not be presumed to represent actual emissions across all actual loading activities at the terminal" is misplaced since TCEQ has conducted over 50 industry-wide[3] tests of marine vessels that had varying characteristics such as age and size of the vessel, material being transported, etc., to determine VOC capture efficiencies. The year the vessel was built varied from 1978 to 2015. The capture efficiency of these 50+ vessels varies from 99.497% minimum to 100% maximum. Contrary to the Commenter's assertion, capture efficiency was not dependent on the year the vessel was built. Therefore, test data from the industry-wide testing validates the fact that the test results and emission factors obtained for Permit No. 101199/N158 are consistent with the industry wide test results and emission factors.
4) Based on the analysis of the data collected during the industry-wide testing, TCEQ has issued a revised guidance[4] for marine loading collection efficiency and concluded that "collection efficiencies for inerted, ocean-going vessels were well beyond 95%, and in consideration of federal and state regulations applicable to ship loading, the TCEQ Air Permits Division (APD) agrees that a shift in our policy regarding collection efficiency is warranted". Testing frequency is now based on the control efficiency.
5) Any and all marine tanker vessels loading at the site are subject to the basic standards, compliance and testing requirements for vessels outlined in 40 CFR Part 63, Subpart Y - National Emission Standards for Marine Tank Vessel Loading Operations among other similar federal regulations. These regulations require that loading operations be limited to those vessels that are judged vapor-tight. A copy of the vapor-tightness pressure test documentation described in 40 CFR Part § 63.567(i) for each marine tank vessel must be provided to the liquid terminal operator prior to loading. If such documentation is not available, vapor-tightness must be demonstrated through a vapor-tightness test. This test must be conducted at least once every twelve months, and the vessel owner is required to maintain documentation of this test. Specific test methods and procedures are covered in 40 CFR Part § 63.565. TCEQ has similar state regulations that govern the loading of petroleum products under 30 TAC Chapter 115. Specifically, VOCs from the marine vessels are subject to the approved test methods listed under 30 TAC § 115.545.
6) As noted in Section 8.0 of Attachment A, the test protocol also incorporates best practices from international trade organizations such as International Maritime Organization (IMO) Protocol of 1997 - MARPOL Annex VI and Technical Information on Systems and Operation to Assist Development of VOC Management Plans. Regulation 15 of MARPOL Annex VI, requires that all tankers have an approved and effectively implemented ship specific VOC Management Plan. This plan prevents or minimizes VOC emissions through the use of established best practices.

3 International Liquid Terminals Association (ILTA)
4 https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/marine-load-guide.pdf

The Proposed Permit assures compliance with applicable requirements for fugitive emissions from marine loading operations for the following reasons:

1) Footnote 5 in the Major NSR Summary Table (Proposed Permit at page 76) states "marine loading fugitive emissions from leak checked vessels are estimates and are enforceable through compliance with the applicable special condition(s) and permit application representations".
2) Permit No. 101199/N158, Special Condition 6, requires the site to demonstrate compliance with 40 CFR 63, Subpart Y. This regulation requires the applicant to comply with several monitoring, testing, recordkeeping and reporting requirements related to leaks and leak testing for all marine tank vessel loading operations. Specifically monitoring requirements are specified in § 63.564, test methods and procedures are covered under § 63.565, and recordkeeping and reporting requirements are covered under § 63.567.
3) Monitoring, testing recordkeeping and reporting requirements to demonstrate compliance with applicable emission limits for fugitive emissions from marine operations are stated in Permit No. 101199/N158, Special Conditions 22.A through 22.D, 23.A through 23.C, 25.A through 25.I and 26. Special Condition 28 requires "the permit holder shall maintain and update monthly an emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12 month period".
4) Proposed Permit at page 10, Special Condition 16 requires the permit holder to maintain records for "fugitive data" amongst several other types of data to demonstrate compliance with emission limitations specified in a PBR listed in the New Source Authorization References table (Proposed Permit at page 68).
5) The Applicant must periodically submit permit compliance certification (PCC) and deviation reports to assure compliance with the requirements of the Proposed Permit, Special Term and Condition 17 at page 10; including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68. The annual PCCs are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request. Therefore, compliance and enforceability of the Proposed Permit requirements (including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68) is assured.

<u>COMMENT A.2a</u>: The Draft Permit Fails to Establish Periodic Monitoring to Assure Compliance with Applicable Requirements in Permit No. 101199/N158

a. Heater Emission Caps and Site-Wide Benzene Limit

According to the Draft Permit's Major NSR Summary Table, Permit No. 101199/N158 does not contain any monitoring, testing, recordkeeping, or reporting requirements that assure compliance with annual emission caps for Kinder Morgan's two heaters and the permit's site-wide annual benzene limit. Draft Permit at 74 and 76. Because the Draft Permit indicates that there are no requirements to assure compliance with these limits, it fails to assure compliance with them.

<u>Requested Revision to the Title V Permit:</u>

The Executive Director must revise the Draft Permit to identify monitoring, recordkeeping, and reporting requirements that assure compliance with Permit No. 101199/N158 heater emission caps and site-wide benzene limit. If Permit No. 101199/N158 does not establish such conditions, the Executive Director must add requirements to the Draft Permit that assure compliance with the limits. The Executive Director must also revise the Statement of Basis to explain how the monitoring, recordkeeping, and reporting requirements listed in the revised Draft Permit assure compliance with applicable requirements.

COMMENT A.2.b: The Draft Permit Fails to Establish Periodic Monitoring to Assure Compliance with Applicable Requirements in Permit No. 101199/N158

2b. Tank Drain and Fill Rates

Permit No. 101199/N158, Special Condition 16 establishes bbl/hr fill and drain rate limits for Kinder Morgan's tanks. These limits are applicable requirements of the Draft Permit. The Draft Permit is deficient because it does not include a method for determining compliance with these requirements.

Requested Revision to the Title V Permit:

The Executive Director must revise the Draft Permit to establish monitoring, recordkeeping, and reporting requirements that assure compliance with Permit No. 101199/N158 tank fill and drain rates. The Executive Director must also revise the Statement of Basis to explain how the monitoring, recordkeeping, and reporting requirements added to the Draft Permit assure compliance with applicable requirements.

RESPONSES to A.2.a and A.2.b:

Special Term and Conditions 9 and 10, Proposed Permit at page 8, contain various monitoring, testing recordkeeping and reporting requirements to demonstrate compliance with the site-wide benzene emission limit. Specifically, monitoring and testing requirements are specified in 40 CFR §§ 61.13, 61.14, 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3). Recordkeeping requirements are stated in 40 CFR §§ 61.356(a), 61.356(b), and 61.356(b)(1). Reporting requirements are stated in 40 CFR §§ 61.357(a) and 61.357(b).

Permit No. 101199/N158, Special Conditions 8, 9, 10 and 11 also contain various monitoring, testing recordkeeping and reporting requirements to demonstrate compliance with annual emission caps for heater units (EPNs F-101 and F-201). Specifically, Special Conditions 10 and 11 require a continuous emission monitoring system (CEMS) to monitor NO_x, CO and ammonia emissions from EPNs F-101 and F-201.

Permit No. 101199/N158, Special Conditions 17, 18 and 37.G contain various monitoring, testing recordkeeping and reporting requirements to assure compliance with the tank drain and fill rates. Specifically, Special Condition 18 requires the Applicant to maintain records for "VOC throughput". Applicant is required to perform visual inspections and seal gap measurements as specified in 40 CFR 60, Subpart Kb, § 60.113b. Special Condition 17.E, requires that all storage tanks that receive or store materials at or above ambient temperature monitor temperature and/or vapor pressure.

In addition, the Applicant must periodically submit the Permit Compliance Certification (PCC) Form (TCEQ 10490) and deviation reports to assure compliance with the requirements of the Proposed Permit, Special Term and Condition 17 at page 10; including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68. The annual PCCs are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request. Therefore, compliance and enforceability of the

Proposed Permit requirements (including Permit No. 101199/N158 and all PBRs listed in the Proposed Permit at page 68) is assured.

COMMENT A.3: Monitoring Requirements Incorporated into the Draft Permit Fail to Assure Compliance with Applicable Requirements in Kinder Morgan's NSR Permits

a. PBR Monitoring

Title V permits must specify monitoring methods that assure compliance with each applicable requirement. 42 U.S.C. § 7661c(c); *In the Matter of Wheelabrator Baltimore, L.P.,* Permit No. 24-510-01886 (April 14, 2010) at 10. Emission limits, terms, and conditions of claimed PBRs are applicable requirements. 30 Tex. Admin. Code § 122.10(2)(H). The Draft Permit is deficient because it fails to specify monitoring methods that assure compliance with applicable PBR requirements.

The Draft Permit incorporates by reference the following PBRs as applicable requirements: 106.261 (11/01/2003), 106.262 (11/01/2003), 106.263 (09/04/2000), 106.263 (11/01/2001), 106.454 (11/01/2001), 106.472 (09/04/2000), and 106.511 (09/04/2000). Draft Permit at 68.

Facilities authorized by these PBRs must comply with general PBR requirements listed at 30 Tex. Admin. Code § 106.4 as well as any requirements listed in the specific claimed PBRs. Draft Permit, Special Conditions 14 and 15. Requirements listed at § 106.4 include emission limits for facilities authorized by PBR, *id.* at § 106.4(a)(1), as well as a prohibition on the use of PBRs to authorize construction of a new major source or a major modification of an existing source. *Id.* at §§ 106.4(a)(2) and (3). Because the NO_x and VOC emissions limits established by 30 Tex. Admin. Code § 106.4(a)(1) exceed the netting trigger to determine major NSR applicability for sources in the HGB non-attainment area, § 106.4(a)(2) provides that persons claiming a PBR for a non-attainment source must comply with applicable netting requirements listed at 30 Tex. Admin. Code § 116.150. *Id.* at 106.4(a)(2). Additionally, because the CO, H_2SO_4, H_2S, and TRS emissions limits established by 30 Tex. Admin. Code § 106.4(a)(1) exceed the netting trigger to determine major NSR applicability for modifications in areas listed as attainment or unclassified for those pollutants, and because PBRs can be used to authorize increases of other pollutants—including PM, PM_{10}, and $PM_{2.5}$—at multiple facilities at levels that exceed applicable netting thresholds, projects authorized by PBR may trigger PSD netting requirements listed at 30 Tex. Admin. Code § 116.160(b).[5]

The emission limits established by 30 Tex. Admin. Code § 106(a)(1), the prohibition on emissions increases that trigger PSD and NNSR requirements at § 106(a)(2) and (3), and the requirement to conduct netting to determine major NSR applicability for PBR increases that exceed applicable netting thresholds (though remaining below the limits at § 106.4(a)(1)) are all applicable requirements and the Draft Permit must contain monitoring methods that assure compliance with them.

In addition to these general PBR requirements, the following emission limits and standards contained in the specific PBRs claimed by Kinder Morgan are also applicable requirements of the Draft Permit:

PBRs 106.261 and 106.262 claimed by Kinder Morgan establish hourly and annual emission limits for various contaminants, *Id.* at §§ 106.261(a)(2) and (3); 106.262(a)(2) and prohibit visible emissions exceeding five percent. *Id.* at §§ 106.261(a)(5); 106.262(a)(5). Additionally, 106.262(a)(4) limits the amount of certain chemicals that may be stored on property.

PBR 106.263 (11/01/2001), which applies to routine maintenance, start-up, and shutdown of facilities and temporary facilities establishes daily emission limits, *Id.* at § 106.263(d)(1), requires a case-by-case permit for activities that exceed these limits, *Id.* at §

5 While 30 Tex. Admin. Code § 106.4(a)(1) does not establish specific limits for H_2SO_4, H_2S, and TRS, it contains a 25 tons per year limit for unlisted contaminants. *Id*. at § 106.4(a)(1)(E).

106.263(d)(2), incorporates by reference emission limits and conditions established by various other PBRs for specific source categories, *Id.* at § 106.263(e)(1)-(5), requires a case-by-case permit for activities that exceed these limits, *Id.* at § 106.263(e)(6), and incorporates emission limits listed in 106.4(a)(1)-(3) in any rolling 12-month period. *Id.* at § 106.263(f).

PBR 106.511, which applies to portable and emergency engines and turbines, limits the maximum operation of such units authorized by PBR to ten percent of the normal annual operating schedule of the primary equipment.

Though the Draft Permit and Texas's Chapter 106 rules require Kinder Morgan to maintain records demonstrating compliance with applicable PBR requirements, *Id.* at §§ 106.8(c) and 106.263(g); Draft Permit, Special Condition 16, the Draft Permit is deficient because it does not specify the monitoring methods Kinder Morgan must use to determine compliance with each applicable PBR requirement. Instead, the Draft Permit outsources the TCEQ's obligation to specify the monitoring method(s) that will assure compliance with each applicable requirement to Kinder Morgan. Draft Permit, Special Condition 16 (establishing non-exhaustive list of data Kinder Morgan may consider, at its discretion, to determine compliance with PBR requirements). This outsourcing renders the Draft Permit deficient for three reasons: First, the Draft Permit is deficient because it fails to specify monitoring requirements for each applicable requirement. Second, the Draft Permit is deficient, because the permitting record does not explain how the Draft Permit assures compliance with PBR requirements. Finally, the Draft Permit is deficient, because the Executive Director's failure to specify monitoring methods for applicable PBR requirements or to identify the monitoring methods Kinder Morgan has selected prevented the public from evaluating whether Title V monitoring requirements have been met. *See In the Matter of United States Steel—Granite City* Works, Order on Petition No. V-2011-2 (December 3, 2012) ("Granite City II Order) at 9-12 (granting petition for objection, because the "permit fails to specify the monitoring methodology and also fails to provide a mechanism for review of the methodology by IEPA, the public, and EPA after the permit is issued. It is impossible to know whether the periodic monitoring chosen by the source assures compliance with the permit terms and conditions as required by 40 C.F.R. §§ 70.1(b) and 70.6(c)(1) because that monitoring has not been determined yet."). For example, Commenters would likely review and/or challenge PBR monitoring relying upon undefined "engineering calculations" to determine compliance without more information about how those calculations were to be made and evidence that operational conditions presumed by the calculations are consistent with actual conditions at the Galena Park Terminal.

The Draft Permit's Special Condition 16 recordkeeping requirement is deficient for an additional reason: It fails to require permit records demonstrating compliance to be made available to the public as required by Texas's Title V program. Deer Park Order at 15 ("[T]he permit records for demonstrating compliance with PBRs must be available to the public as required under the approved Texas title V program").

Requested Revision to the Title V Permit

To assure compliance with incorporated PBR requirements, the Executive Director should revise the Draft Permit to specify the monitoring method(s) that assure compliance with each applicable PBR requirement, and provide a reasoned basis for his determination that such methods assure compliance. The Executive Director must also revise the Draft Permit to require any records used to demonstrate compliance with PBR requirements be made available to the public on request. After these revisions are made, the Executive Director must re-notice the Draft Permit and allow the public an opportunity to comment on the monitoring methods for PBR requirements.

COMMENTS A.3.b: Permit No. 101199/N158 Monitoring

Tank Emissions: Permit No. 101199/N158, Special Condition 18 provides that "[e]missions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit." This Special Condition does not assure compliance with hourly and annual VOC limits in the MAERT,

because it does not identify the methods Kinder Morgan used to calculate tank emissions in its application(s), does not identify the application(s) that contains the relevant information, does not describe how this information should be applied to determine actual emissions from the tanks, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) assure compliance with the applicable limits. Granite City I Order at 43.

Loading Emissions: Permit No. 101199/N158, Special Conditions 25(G) and 28 require Kinder Morgan to maintain and records calculating emissions and tracking various operational parameters related to loading activities at the Galena Park Terminal. These conditions do not, however, explain how Kinder Morgan is to calculate loading emissions or how the parametric information should be used to determine compliance with applicable requirements, including hourly and annual emission limits, in the permit. Instead, these conditions provide that "emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit."

These special conditions do not assure compliance with the permit's emission limits and conditions for loading operations, because they do not identify the methods Kinder Morgan used to calculate loading emissions in its application(s), do not identify the application(s) that contains the relevant information, do not describe how this information should be applied to determine actual emissions from loading operations, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirement assures compliance with the applicable conditions and limits. Granite City I Order at 43.

Tank Landing Emissions: Permit No. 101199/N158, Special Condition 37(G) requires Kinder Morgan to maintain records regarding tank landings at the Galena Park Terminal and to estimate emissions resulting from these activities. According to the permit, "[t]he emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 – Storage of Organic Liquids" dated November 2006 and the permit application." Emissions from tank landings must be calculated to determine compliance with limits in the MAERT as well as the 5 TPY limit on tank transfer emissions established by Special Condition 20.

Special Condition 37 does not assure compliance with the permit's emission limits and conditions, because it does not identify the methods Kinder Morgan used to calculate tank landing emissions in its application(s), does not identify the application(s) that contains the relevant information, does not describe how this information should be applied to determine actual emissions from loading operations, does not describe how application information should be used with the identified AP-42 method, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirement in Special Condition 37 assures compliance with the applicable conditions and limits. Granite City I Order at 43.

Tank Transfer Emissions: Permit No. 101199/N158, Special Condition 20 provides that "[e]missions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site . . . is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period. To demonstrate compliance with this limit, Permit No. 101199/N158 requires Kinder Morgan to quantify emissions associated with working losses from filling, refilling, and loading. According to the permit, "[t]ank emissions shall be determined and documented in accordance with Special Conditions 18 and 37, as applicable. Loading emissions shall be determined and documented in accordance with Special Condition 28." These provisions fail to assure compliance with this limit, because, as explained above, the Draft Permit does not identify the required calculation methods required by Special Conditions 18, 28, and 37, and because the permit record does not demonstrate that these methods reliably indicate actual emissions from the Galena Park Terminal over the applicable compliance periods.

MSS Emissions: Permit No. 101199/N158, Special Conditions 34-40 authorize and establish various requirements related to emissions during planned MSS activities at the Galena Park Terminal. These special conditions require Kinder Morgan to calculate actual emissions from these activities to demonstrate compliance with applicable requirements. The permit,

however, does not explain how Kinder Morgan must calculate these emissions, and refers instead to methods and information contained in Kinder Morgan's application for Permit No. 101199/N158.

These special conditions do not assure compliance with the permit's emission limits and conditions for Planned MSS activities, because they do not identify the methods and information Kinder Morgan used in its application(s), do not identify the application(s) that contains the relevant information, do not describe how this information should be applied to determine actual emissions from planned MSS activities, and because the Executive Director has not explained how emission calculation methods described in Kinder Morgan's application(s) or the recordkeeping requirements in the Draft Permit assure compliance with the applicable conditions and limits. Granite City I Order at 43.

Requested Revision to the Title V Permit:

The Executive Director should revise the Draft Permit to expressly identify the calculation methods Kinder Morgan must use to determine compliance with applicable tank, loading, tank landing, tank transfer, and MSS emission limits. The Executive Director must also revise the Statement of Basis to explain how these calculation methods assure compliance with applicable requirements.

To the extent that the applicable methods rely on AP-42 emission factors or other non-source-specific emission factors, Commenters request that the Executive Director demonstrate that the emission factors accurately predict actual emissions from units at the Galena Park Terminal and identify requirements in the Draft Permit that assure Kinder Morgan will operate affected facilities consistent with conditions presumed by the emission factors.

RESPONSES to A.3.a and A.3.b:

The ED disagrees that specific monitoring has to be included for every PBR held at the site to assure compliance. Specifically, the ED disagrees with the Commenter's assertion that the Draft Permit is deficient because it fails to specify monitoring methods that assure compliance with applicable PBR requirements listed under PBRs in §§ 106.261 (11/01/2003), 106.263 (11/01/2001), 106.454 (11/01/2001), and 106.472 (09/04/2000). The ED has revised the New Source Review Authorization References table (Proposed Permit at page 68), to delete permit by rules (PBRs) in §§ 106.262, 106.263 (09/04/2000) and 106.511 since units authorized by these PBRs were not installed. Consistent with 40 CFR Part 70, the ED notes that a combination of monitoring, recordkeeping, and reporting requirements (and not monitoring requirements by themselves) are often used to assure compliance with applicable state and federal regulations and terms and conditions of the permit.

As stated in Special Term and Condition 16 of the Proposed Permit at page 10:

> The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time periods that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Assurance of compliance and federal enforceability of units authorized under PBRs in §§ 106.261 (11/01/2003), 106.263 (11/01/2001), 106.454 (11/01/2001), and 106.472

(09/04/2000) is demonstrated by listing the PBR as a pre-construction authorization for one or more units in the New Source Review Authorization References by Emissions Unit table, Proposed Permit at page 69-70, or by using a PBR registration and certification process to make the emissions authorized by the PBR federally enforceable.

In the New Source Review Authorization References by Emissions Unit table, Proposed Permit at page 69-70, PBR in § 106.454 (11/01/2001) is used as pre-construction authorization for unit DEGREASER, PBR in § 106.263 (11/01/2001) is used as pre-construction authorization for unit MISC-ADH and PBR in § 106.472 (09/04/2000) is used as pre-construction authorization for units TK-101 and TK-102.

PBRs in §§ 106.261 (11/01/2003) and 106.263 (11/01/2001) were registered as PBR 101674 in accordance with the approved Texas SIP. The Applicant also submitted a PI-7-CERT form within 10 days of installation to certify emission rates and all sources of air contaminants on the Applicant's property covered by the PBR registration. This assures federal enforceability of units authorized under PBRs in §§ 106.261 (11/01/2003) and 106.263 (11/01/2001). Copies of the PBR certification documents (e.g., PI-7-CERT form (TCEQ-20182) for registered PBRs or use of an APD-CERT form (TCEQ 10489) for other PBRs) are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request.

Per Special Term 17, Proposed Permit at page 10, the Applicant must submit an annual PCC certification in accordance with 30 TAC § 122.146, which provides the vehicle for certifying compliance with all Title V permit requirements, including the requirements of all PBRs listed in the Proposed Permit at page 68.

The ED disagrees with the Commenters' assertion that Special Conditions listed in Permit No. 101199/N158 must identify "specific" method(s) to calculate emissions that assure compliance with applicable emission limits. The Proposed Permit including Permit No. 101199/N158 provides operational flexibility to the Applicant while ensuring compliance with applicable emission limits. General Condition 6 in Permit No. 101199/N158 requires "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". In addition, Part 3 of the PCC form submittal requires the Applicant to list the selected Monitoring Option for each emission unit. These requirements assure compliance with the applicable requirements of the Proposed Permit and Permit No. 101199/N158.

Proposed Permit at page 74, Appendix B, Major NSR Summary table lists monitoring and testing, recordkeeping and reporting requirements specified in Permit No. 101199/N158. Specifically, tank emissions monitoring and testing requirements are stated in Special Condition 17 and recordkeeping requirements are listed in Special Conditions 17, 18 and 30. For loading emissions, monitoring and testing requirements are stated in Special Conditions 6, 22, 23, 25, 26, recordkeeping requirements are listed in Special Conditions 6, 22, 23, 25, 26, 28 and reporting requirements are listed in Special Conditions 6, 25. For tank landing emissions, monitoring and testing, recordkeeping and reporting requirements are specified in Special Condition 37.A through 37.G. For tank transfer emissions, monitoring and testing, recordkeeping and reporting requirements are specified in Special Conditions 20.A and 20.B, 23.A, and 35.C. For Maintenance Startup and Shutdown (MSS) emissions, monitoring and testing, recordkeeping and reporting requirements are specified in Special Conditions 34 through 43.

As described above, the Applicant must submit an annual PCC certification per 30 TAC § 122.146, which provides the vehicle for certifying compliance with all Title V permit requirements. Compliance with applicable requirements uses continuous or intermittent

compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. Applicable requirements under the Proposed Permit include requirements for all underlying NSR authorizations including PBR, Standard Permit, and Case-by-Case NSR permits (that also includes Title I permits). The PCC form is used to certify that the Applicant was in compliance with the requirements of the operating permit, and to indicate if any indications of non-compliance, or deviations, had occurred during the certification period.

COMMENTS B: The Draft Permit Omits or Fails to Assure Compliance with Applicable Requirements

1. The Draft Permit's Method of Incorporating Permit by Rule Requirements by Reference Fails to Assure Compliance

The Draft Permit incorporates by reference many PBR limits and requirements. *See* Draft Permit at 68-70 (listing PBRs incorporated by reference into the Draft Permit). To assure compliance with applicable requirements, the Executive Director must "ensure that Title V permits are clear and unambiguous as to how emission limits [established by PBRs] apply to particular emissions units." *In the Matter of Premcor Refining Group,* Order on Petition No. VI-2007-02 (May 28, 2009) at 6, n3. Though IBR of PBRs may be proper in some cases, Title V permits that incorporate PBRs by reference must provide enough information about facilities authorized by PBRs to allow readers to answer the following basic questions about how incorporated PBRs apply to Title V sources: (1) how much pollution may each facility emit under claimed PBRs, (2) which pollutants may each facility emit under claimed PBRs, and (3) which PBRs apply to each facility. The Draft Permit is deficient—not because it fails to directly include the text of the incorporated PBRs—but because it does not include information a reader needs to understand how PBRs apply to facilities at the Galena Park Terminal. *See, White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program* ("White Paper 2") (March 5, 1996) at 37 ("Citations, cross references, and incorporations by reference must be detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation").

a. How Much Pollution May Kinder Morgan Emit Under Claimed PBRs?

Before any actual work is begun on a new or modified facility, an operator must obtain a permit or permit amendment authorizing the project. 30 Tex. Admin. Code § 116.110(a). To authorize construction of new or modified facilities, an operator may apply for a new or amended case-by-case permit. *Id.* at §§ 116.110 and 116.111. In lieu of applying for a new or amended case-by-case permit under § 116.111, an operator may instead claim a PBR (or PBRs) to authorize construction or modification of a facility, so long as the proposed construction project complies with PBR requirements. *See*, *e.g., id.* at §§ 106.4(a) (listing general requirements that must be met to qualify for a PBR); 116.110(a)(4) (stating that construction may be authorized by PBR); and 116.116(d) (stating that a PBR may be used in lieu of a permit amendment to authorize construction). While each case-by-case permit is assigned a unique permit number[6] and includes source-specific emission limits and special conditions based on the Executive Director's review of the operator's application, PBRs establish generic emission limits and operating requirements that apply to all new and modified facilities authorized by PBR (unless the operator registers PBR emissions at lower rates—*see,* 30 Tex. Admin. Code § 106.6). These generic requirements are found in Texas's PBR rules. When construction of new or modified facilities is authorized by PBR, the PBR(s) claimed by the operator—*i.e., the rule*

6 The TCEQ's numbering conventions are actually a bit more complicated than this. A case-by-case permit may have up to three different unique numbers. Each PSD or NNSR permit will have two numbers: a state permit tracking number and a federal permit tracking number. So, for example, Permit No. 101199 and N158 listed in the Draft Permit refer to the same permit. Additionally, if an NNSR or PSD permit contains PAL provisions (see 30 Tex. Admin. Code 116, Subchapter C), the permit will also have a PAL permit number.

itself—is the permit authorizing the project. *See*, *e.g.*, 30 Tex. Admin. Code § 106.454 ("Any degreasing unit that satisfies the following conditions of this section is permitted by rule").

Thus, while the Draft Permit identifies the case-by-case permit it incorporates by reference by its unique permit numbers (101199 and N158) and date of issuance (October 8, 2014), it identifies the PBRs Kinder Morgan has claimed by rule number and the date that each rule was promulgated (not the date(s) it was claimed by Kinder Morgan). Draft Permit at 68. This way of listing applicable requirements is misleading, because it suggests that each claimed PBR, like the case-by-case permit identified in the Draft Permit, is a single permit. This suggestion is misleading because Kinder Morgan has claimed the same PBR to separately authorize construction of or modifications to different facilities, various modifications to a single facility, or various modifications that affect several different facilities at the Galena Park Terminal. *See*, *e.g.*, Attachment 3.

According to the TCEQ's Permit by Rule Applicability Checklist, PBRs may only be used to authorize construction or modification of facilities if (1) emissions from **each** facility are below the 106.4(a)(1) thresholds; and (2) emissions from **all** facilities covered by the PBR submittal are below the 106.4(a)(1) thresholds. PBR Checklist, Section 1.[7] Because PBR limits may apply to a single facility or establish caps that cover multiple facilities depending how many facilities are included in each PBR submission and how many submissions Kinder Morgan has made, one cannot tell from the Draft Permit and information in the incorporated PBR rules how much each facility at the Galena Park Terminal is authorized to emit under the various PBRs listed in the Draft Permit. For example, the Draft Permit's New Source Review Authorization References by Emission Unit chart indicates that Kinder Morgan has used the PBR at 106.472 to authorize emissions from two of its tanks, TK-101 and TK-102. Draft Permit at 70. This PBR does not include any emission limits, so the emission limits at 30 Tex. Admin. Code § 106.4(a)(1) apply. However, one cannot tell, based on information contained in the Draft Permit and the incorporated PBR, whether TK-101 and TK-102 were authorized as part of the same submission or as different projects. This matters, because if construction of each tank was separately authorized—*i.e.,* meaning the PBR has been claimed twice—each tank may emit up to the 30 Tex. Admin. Code §106.4(a)(1) emission limits, while the tanks' combined emissions must remain below those limits if they were authorized as part of the same construction project (and the PBR was only claimed once). Matters are even more complicated than this, because Texas's rules allow Kinder Morgan to certify and register PBR emissions at levels that are lower than the limits specified by the applicable rules to avoid triggering NNSR and/or PSD netting requirements. 30 Tex. Admin. Code § 106.6; *Approval and Promulgation of Implementation Plan; Texas; Revisions to Regulations for Permits by Rule,* 68 Fed. Reg. 64,543, 64,547 (November 14, 2003).("The [PBR] regulations allow a source to limits PTE of a pollutant below the level of a major source defined in the Act. This includes regulations which Texas revised to allow an owner or operator of a source to register and certify restrictions and limitations that the owner or operator will meet to maintain its PTE below the major source threshold"). Kinder Morgan has registered PBR emissions for various facilities at the Galena Park Terminal at levels well below the § 106.4(a)(1) limits. Attachment 3.

The Draft Permit is incomplete and fails to assure compliance with PBR requirements, because readers cannot determine, based on the text of the incorporated PBR rules and other information in the Draft Permit, how much pollution Kinder Morgan is authorized to emit from each facility under any of the claimed PBRs.

b. Which Pollutants May Kinder Morgan Emit Under Claimed PBRs?

Texas's General PBR requirements indicate that PBRs may be used to authorize emissions of *any* contaminant other than water, nitrogen, ethane, hydrogen, oxygen, and

7 Available electronically at https://www.tceq.texas.gov/assets/public/permitting/air/Forms/PermitsByRule/Checklists/10149.pdf

greenhouse gasses. 30 Tex. Admin. Code § 106.4(a)(1)(E).[8] However, claiming a PBR for a project does not authorize emissions of ***all*** pollutants up to the limits identified in 106.4 and the specific claimed PBR (*i.e.,* 250 tpy NO_x and CO+25 TPY of VOC, SO_2, and PM+15 TPY PM_{10}+10 TPY $PM_{2.5}$+25 TPY Lead+25 TPY H_2S+25 TPY H_2SO_4 etc). That would run afoul of the TCEQ's reading of 30 Tex. Admin. Code § 106.4 as precluding PBR submissions to authorize emissions increases exceeding the applicable major source threshold. PBR Checklist, Section 3. Instead, only emissions related to the particular construction project for which the PBR is claimed are authorized. *See, e.g.,* 30 Tex. Admin. Code § 106.4(a) (stating that emissions from a facility authorized by PBR must remain below that 106.4(a)(1) emission limits, "*as applicable*") (emphasis added). The Draft Permit does not contain any information about the projects or emissions authorized by PBR for any facility at the Galena Park Terminal. Thus, one cannot determine—based solely on the text of Texas's PBR rules incorporated by reference into the Draft Permit—which pollutants Kinder Morgan is authorized to emit from any PBR facility. Because the Draft Permit fails to provide sufficient information to allow a reader to determine which pollutants each PBR facility is authorized to emit, it is incomplete and fails to assure compliance with applicable PBR requirements. Because incorporated PBR emission limits and requirements are not enforceable, the Draft Permit is deficient.

c. Which Facilities are Subject to PBR Limits and Requirements?

While the Draft Permit incorporates the following PBRs, it does not identify any facility or group of facilities authorized by these permits: 106.262, 106.263 (09/04/2000), and 106.511. Because the Draft Permit does not even identify the facility or facilities authorized by and subject to the requirements of these PBRs, it fails to unambiguously describe how these permits apply to individual facilities at the Galena Park Terminal. Without this information, members of the public and federal regulators will not be able to determine which facilities must comply with these permits**.** *Objection to Title V Permit No. O2164, Chevron Phillips Chemical Company, Philtex Plant* (August 6, 2010) at ¶ 7 (draft permit fails to meet 40 C.F.R. § 70.6(a)(1), because it does not list any emission units authorized under specified PBRs). Moreover, even if an interested party is able to determine which facilities should be subject to one of these PBRs, a court is unlikely to enforce these requirements, because the Draft Permit fails to identify them as applicable for any specific facility or facilities at the Galena Park Terminal. *See United States v. EME Homer City Generation*, 727 F.3d 274, 300 (3rd Cir. 2013) (explaining that the Court lacks jurisdiction to enforce a requirement omitted from a Title V permit). Because this is so, the Draft Permit fails to identify and assure compliance with all applicable requirements.

- If the Executive Director contends that the Draft Permit's method of incorporating PBR requirements assures compliance, Commenters respectfully request that the Executive Director identify the information in the Draft Permit, the Statement of Basis, and the text of the incorporated PBRs that indicates which facilities are covered by each of the following PBRs: 106.262, 106.263 (09/04/2000), and 106.511.

Requested Revision to the Title V Permit
The Executive Director must revise the Draft Permit to identify which pollutants and how much of each pollutant facilities at the Galena Park Terminal are authorized to emit under claimed PBRs.

- 30 Tex. Admin. Code § 106.4(a)(1) states that "[t]otal actual emissions authorized under permit by rule from the facility shall not exceed the following limits[.]" Commenters read this language to mean that total emissions from each facility authorized by PBR may not exceed the limits listed at 106.4(a)(1), regardless of how many PBRs are claimed or how many PBR submittals are made for that facility (*i.e.*, regardless of how many PBRs are claimed and how many PBR submittals are made to

8 The term "contaminant," as defined by the Texas Clean Air Act encompasses all federally regulated NSR pollutants. *See*, Tex. Health & Safety Code § 382.003(2).

authorize changes to a particular tank, that tank may not emit more than 25 TPY of VOC without a case-by-case permit). Commenters ask that the Executive Director indicate whether this reading of the rule is correct;

- If the Executive Director contends that Commenters' reading of 106.4(a)(1) is incorrect, Commenters ask that he clarify the proper reading of the rule and identify applicable guidance documents supporting that reading.

2. The Draft Permit Omits Applicable PBR Requirements

a. The Draft Permit Fails to Identify and Incorporate PBR Registrations as Applicable Requirements

Texas Title V permits must include and assure compliance with all applicable requirements, including "[a]ll requirements under Chapter 106, Subchapter A . . . (relating to Permits by Rule)." 30 Tex. Admin. Code § 122.10(2)(H) (defining "applicable requirements" to include PBR requirements); 42 U.S.C. § 7661c(a).

Texas's Chapter 106, Subchapter A rules state that "[a]n owner or operator may certify and register the maximum emission rates from facilities permitted by rule under this chapter in order to establish federally-enforceable allowable emission rates which are below the emission limitations in § 106.4[.]" 30 Tex. Admin. Code § 106.6(a). Various PBRs also require operators to register emissions. *See, e.g., id.* at § 106.454(1)(A)(i). In cases where an operator registers emission rates, "[a]ll representations with regard to construction plans, operating procedures, and maximum emission rates in any certified registration become conditions upon which the facility permitted by rule shall be constructed and operated." *Id.* at § 106.6(b). These source-specific PBR emission limits and conditions are applicable requirements that must be included in Title V permits and Title V permits must include conditions necessary to assure compliance with them.

Kinder Morgan has certified and registered PBR emissions for various facilities at the Galena Park Terminal at levels substantially lower than the general PBR emission limits found at 30 Tex. Admin. Code § 106.4(a)(1) and the specific claimed PBRs. Attachment 3. The Draft Permit, however, does not identify Kinder Morgan's registrations as applicable requirements. Draft Permit at 68-70. Indeed, the Draft Permit fails to indicate that these registrations even exist. This omission suggests that all facilities authorized via PBR may emit up to the limits specified in § 106.4(a)(1). The Draft Permit's failure to identify and include source-specific § 106.6 registration requirements is contrary to 42 U.S.C. § 7661c(a) and renders them unenforceable under the prevailing doctrine of collateral attack. *See United States v. EME Homer City Generation*, 727 F.3d 274, 300 (3rd Cir. 2013) (explaining that the Court lacks jurisdiction to enforce a requirement omitted from a Title V permit).

Additionally, because Kinder Morgan's PBR registrations contain information necessary to impose applicable PBR requirements, these registrations must be included in Kinder Morgan's Title V permit application, 40 C.F.R. § 70.5(c), and available for review during the public comment period. *Id.* at § 70.7(h)(2). *In the Matter of WE—Oak Creek Power Plant*, Order on Petition to Object to Permit No 241007690-P10 (June 12, 2009) at 25-26. Commenters have reviewed Kinder Morgan's application file and it does not contain information about requirements in Kinder Morgan's registered PBRs. Because the application is incomplete and because the public did not have an opportunity to review the PBR registration requirements in the application during the comment period, the Executive Director may not issue the Draft Permit. The Executive Director must require Kinder Morgan to submit a complete application and provide the public an opportunity to comment on it before he issues Kinder Morgan's Title V permit.

b. The Draft Permit's Failure to Incorporate PBR Registration Requirements Fails to Assure Compliance with Major NSR Requirements

The Galena Park Terminal is located in the HGB sever ozone nonattainment area. Accordingly, Kinder Morgan is required to conduct netting to determine major NSR applicability for any construction or modification that has the potential to increase NO_x or VOC emissions more than 5 tons per year. 30 Tex. Admin. Code § 116.150(c).[9] Texas's general PBR requirements provide that facilities authorized by PBR may emit up to 250 tpy of NO_x and 25 tpy of VOC, which exceeds the applicable netting threshold. *Id.* at §§ 106.4(a)(1); 116.150(c). To avoid netting requirements that would otherwise be triggered by potential VOC and NO_x increases for PBR projects subject to § 106.4(a)(1) limits, Kinder Morgan has registered PBR emission rates at levels lower than the general limits. Attachment 3.

To be effective, Kinder Morgan's PBR registrations must be federally and practicably enforceable. *Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits*, Katie A. Stein, Director, EPA Air Enforcement Division ("Enforceability Guidance") (January 25, 1995).[10] EPA's guidance contains the following statement addressing rules like 30 Tex. Admin. Code § 106.6, which allow operators claiming a general permit to accept limits lower than provided by the general permit:

> A rule that allows sources to submit the specific parameters and associated limits to be monitored may not be enforceable because the rule itself does not set specific technical limits. The submission of these voluntarily accepted limits on parameters or monitoring requirements would need to be federally enforceable. Absent a source-specific permit and appropriate review and public participation of the limits, such a rule is not consistent with EPA's enforceability principles.

Enforceability Guidance at 8.

Thus, to ensure that registered PBRs limiting the PTE of facilities at the Galena Park Terminal are enforceable requirements of the Draft Permit, the Executive Director must incorporate the registered limits and operating parameters as source-specific NSR permit requirements. Otherwise, the only enforceable limits for PBR facilities at the Galena Park Terminal will be those established in 30 Tex. Admin. Code §106.4(a)(1) and the claimed PBRs, which are not low enough to ensure that PBR facilities do not trigger major NSR netting and preconstruction permitting requirements. By failing to specifically identify and incorporate PBR registrations, the Draft Permit fails to assure compliance with major NSR requirements and subjects Kinder Morgan to possible liability for failing to comply with netting requirements triggered by authorizations subject to § 106.4(a)(1) limits, because Kinder Morgan's PBR registrations are not enforceable and do not effectively limit the PTE of covered facilities. Enforceability Guidance at 11 ("[W]here a source is required to use another mechanism to limit potential to emit, i.e., a construction permit, the general permit may not be relied upon by the source or the State, to limit the potential to emit").

Requested Revision to the Title V Permit:

To ensure that Kinder Morgan's PBR registrations are federally enforceable and effectively limit the PTE of facilities at the Galena Park Terminal and to prevent circumvention of major NSR netting and preconstruction permitting requirements, the Executive Director should revise the Draft Permit to (1) identify and include registered PBR limits, conditions, and representations and (2) specify monitoring methods sufficient to assure compliance with them. The Executive Director should also revise the Statement of Basis to explain how these registered PBRs assure compliance

9 If and when Harris County is designated as attainment for the revoked 1-hour ozone standard, the netting trigger will increase to 40 tpy of NO_x or VOC, because the County is also designated as a marginal nonattainment area for the 2008 eight-hour ozone standard. *Id.* at § 116.150(c)(2).
10 Available electronically at http://www2.epa.gov/sites/production/files/2015-07/documents/potoem.pdf

with major NSR requirements and how the identified monitoring methods assure compliance with PBR registration requirements.

RESPONSES to B.1, B.1.a, B.1.b, B.1.c, B.2.a, and B.2.b:

Texas' Permits by Rule (PBR) are approved as part of the Texas SIP. 30 TAC Chapter 106 provides a list of authorizations for certain types of facilities or changes within facilities which the Commission has determined will not make a significant contribution of air contaminants to the atmosphere. In addition, Chapter 106, Subchapter A is a defined applicable requirement under Chapter 122 and the EPA-approved Texas operating permit program. Subchapter A includes applicability, requirements for permitting by rule, registration of emissions, recordkeeping and references to standard exemptions, and exemptions from permitting. Additionally, PBR authorizations can apply to distinct, insignificant sources of emissions (e.g., engine, production process, etc.) at a Title V site. As such, PBRs are approved into the Texas SIP, are consistent with EPA policy, and prior Texas SIP decisions and incorporation of PBRs into the Draft Permit is permissible. All current and historical PBRs and standard exemptions (SEs) (predecessors to PBRs) are available on the TCEQ website for review.

A PBR is a permit which is adopted under Chapter 106, and is only available to sources that belong to categories for which the Commission has adopted a PBR in that chapter. A PBR cannot be used to amend an NSR permit. 30 TAC § 116.116(d), which is SIP-approved, sets forth that all changes authorized under Chapter 106 to a permitted facility shall be incorporated into that facility's permit when the permit is amended or renewed.

It has been longstanding TCEQ policy to not list specific emission units in the Title V permit where the sole applicable requirement is the underlying NSR Authorization as stated under the Reading State of Texas's Federal Operating Permit section of the Statement of Basis (SOB). The ED notes that EPA has approved the incorporation by reference (IBR) for minor NSR requirements including PBRs, SEs and Standard Permits (SPs) in the Draft Permit. *See* White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995 and White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program, March 5, 1996.

However, the Proposed Permit was revised to clarify which emission units at the facility are subject to limits in the claimed PBRs and to delete unused PBRs. Specifically, the New Source Review Authorization References table (Proposed Permit at page 68), was revised to delete permit by rules (PBRs) in §§ 106.262, 106.263 (09/04/2000) and 106.511 since units authorized by these PBRs were not installed. The New Source Review Authorization References by Emissions Unit table, Proposed Permit at pages 69-70 table states which emission units at the facility are subject to limits in registered PBRs. Therefore, the New Source Review Authorization Reference table identifies all PBRs that apply to the facility, and includes PBRs that apply to specific units listed in the Proposed Permit as required. The table incorporates the requirements of all of KMCC's NSR Permits, including PBRs, by reference. All emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance are specified in the PBR, incorporated by reference, or cited in the Proposed Permit. If the emission limitation or standard is not specified in the referenced PBR, then the emissions authorized under permit by rule from the facility are specified in § 106.4(a)(1).

In regards to the Commenter's assertion "Matters are even more complicated than this, because Texas's rules allow Kinder Morgan to certify and register PBR emissions at levels that are lower than the limits specified by the applicable rules to avoid triggering NNSR and/or PSD netting requirements" is without merit since 30 TAC § 106.4 requires the Applicant to certify that: 1) the permitted facility qualifies for the use of the PBR, and 2) compliance with 30 TAC §§ 106.4(a)(2) and (3) prevents the use of PBRs if the project triggers federal (PSD or NA) review. Specifically, Applicant must "ensure that any applicable netting requirements have been satisfied" and must keep records according to 30 TAC § 106.8 to be able to demonstrate

compliance with the PBR requirements. Additionally, the Applicant certifies in a registered and/or certified PBR that the application will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. Furthermore, Applicant must file annual emissions inventory (EI) report for the site that is publicly accessible. The EI report may be used by the public to determine if there are any significant emission changes at the site that may potentially trigger NA and/or PSD netting requirements.

The ED further clarifies the use of PBRs to assure compliance and practical enforceability as follows:

The site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. The New Source Review Authorization References table in the Draft Permit incorporates the requirements of NSR Permits, including PBRs, by reference. All "emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance" are specified in the PBR incorporated by reference or cited in the Draft Permit. If the emission limitation or standard is not specified in the referenced PBR, then the emissions authorized under permit by rule from the facility are specified in 30 TAC § 106.4(a)(1).

All current permits by rule are contained in Chapter 106. Historical PBRs may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html.

Historical SE lists may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

TCEQ regulates facilities that release air contaminants, even in small amounts, under its air permit rules. Facilities with emissions that do not meet de minimis criteria but will not make a significant contribution of air contaminants to the atmosphere may be permitted by rule. All PBRs are adopted by the Commission in accordance with Texas Administrative Procedure Act rulemaking requirements and are found in 30 TAC Chapter 106. Facilities authorized by PBR must be constructed and operated with certain restrictions.

A PBR may be utilized as an authorization mechanism when both the following conditions are met:

1. The facility meets all applicable requirements of 30 TAC § 106.4. These requirements limit the amount of annual emissions to less than federal permit major source levels and require compliance with all state and federal regulations; and

2. The facility meets all applicable conditions of one or more individual PBRs contained in 30 TAC Chapter 106. These requirements may specify design requirements for certain facilities, production or material use limits, and operational restrictions.

Some PBRs do not require registration and can simply be claimed. These PBRs will not appear in TCEQ's NSR database. Certain PBRs require registration with TCEQ as stated in the specific PBR. In either case, the permit's New Source Review Authorization References table must include all PBRs and SEs authorizing construction or modification at the site; and the applicant must maintain sufficient records to demonstrate compliance with the emissions limits specified

in 30 TAC § 106, the specific PBR or the registration submittal, and maintain sufficient records to demonstrate compliance with the emission limits and specific conditions of the PBR and SE.

PBRs may not be used to authorize facilities which constitute a new major source or any change which constitutes a major modification. *See* 30 TAC § 106.4. Additionally, the ED notes that, as part of the PBR registration process, applicants are required to submit technical information about the units such as maximum emissions data and calculations, summary of emissions, etc. on a PI-7 form (TCEQ-10228). PBRs can only be authorized for facilities that do not exceed the 25/250 limit found in § 106.4(a)(1). Therefore, PBR registration process assures compliance with § 106.4(a) requirements.

Applicants may also certify emissions using a PI-7-CERT form (TCEQ-20182) for registered PBRs or use an APD-CERT form (TCEQ 10489) for other PBRs to establish federally enforceable emission limits below the emission limits of 30 TAC § 106.4 which establishes limits for production and planned MSS[11] for each facility (piece of equipment) to 250 tons per year (tpy) Nitrogen Oxides (NO_x) and Carbon Monoxide (CO); 25 tpy Volatile Organic Compounds (VOC), Particulate Matter (PM), Sulfur Dioxide ($S0_2$), and any other contaminant (except water, nitrogen, ethane, hydrogen, oxygen, and greenhouse gases); 15 tpy of particulate matter with diameters of 10 microns or less (PM_{10}); or 10 tpy of particulate matter with diameters of 2.5 microns or less ($PM_{2.5}$).

As previously described, PBRs may also be certified for practical enforceability and to demonstrate that allowable emissions for each facility claimed under the PBR are less than the netting or major source trigger levels under the PSD and Non-attainment NSR (NNSR) programs. Certifications may be required for sites subject to NO_x cap and trade programs under 30 TAC Chapter 101 and for ensuring that any PBR claims do not exceed permitted flexible caps for facilities permitted under 30 TAC Chapter 116, Subchapter G.

Concerning assuring compliance with applicable PBR requirements, the ED notes that the Proposed Permit at page 10 includes Special Terms and Conditions 15 and 16, which relate to PBRs. Special Condition 15 requires the Applicant to comply with the general requirements of 30 TAC Chapter 106, Subchapter A. Special Condition 16 requires recordkeeping and monitoring to demonstrate compliance with the PBRs. It reads as follows:

> The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time periods that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Therefore, the Proposed Permit assures that the Applicant must comply with any applicable emission limitation or standard for facilities that are permitted by PBRs and SEs. These

11 Please note that the terms "planned" MSS and "scheduled" MSS as described in this document are used interchangeably and the term 'scheduled' MSS is defined in accordance with 30 TAC § 101.1(90) and the requirements for "scheduled" MSS are stated in 30 TAC § 101.211.

requirements assure compliance and enforceability of PBRs and SEs. In addition, the Applicant must periodically submit permit compliance certification (PCC) and deviation reports to assure compliance with the requirements of the Proposed Permit, including Permit No. 101199/N158 and all PBRs and SEs listed on the Proposed Permit at page 68. The annual PCCs are available for public viewing at either the affected TCEQ Regional Office (Air Section), or the TCEQ Central File Room (TCEQ Main Campus, Bldg E, Rm 103). Non-confidential portions may also be provided in response to a public information request. Therefore, compliance and enforceability of the Proposed Permit requirements, including PBRs is assured.

<u>COMMENT B.3</u> The Draft Permit Incorporates Texas's Disapproved Affirmative Defense for Planned Maintenance, Startup, and Shutdown as a Federally Enforceable Requirement

Title V permits must assure compliance with all applicable federal requirements, including emission limits established by the Texas SIP and New Source Review permits. 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.2 (defining "applicable requirement" to include SIP limits and terms and conditions of NSR permits). To ensure that state-only requirements listed in a Title V permit may not be read to displace more stringent federal requirements, Title V permits must identify state-only provisions and explain that they are not federally-enforceable. 40 C.F.R. § 70.6(b)(2).

While the Draft Permit incorporates by reference many SIP limits and NSR permit requirements, it also incorporates by reference 30 Tex. Admin. Code §§ 101.222(h)-(j), which purport to establish an affirmative defense to penalties for unauthorized emissions during planned maintenance, startup, and shutdown activities. Draft Permit, Special Condition 2(I). This affirmative defense, which EPA disapproved,[12] interferes with federal enforcement of SIP limits and NSR permit requirements by limiting the means that EPA and the public may use to compel compliance with applicable requirements. Because EPA disapproved the affirmative defense, it is not a SIP requirement and the Draft Permit must state that it is not federally-enforceable.

Though EPA disapproved Texas's affirmative defense for planned MSS events, at least one federal court has held that unqualified incorporation of the disapproved defense into a Title V permit makes the defense federally enforceable. *Sierra Club v. Energy Future Holdings Corp.*, 2014 WL 2153913 at *11 (W.D. Texas March 28, 2014) (holding that Plaintiff's argument that the disapproved affirmative defense incorporated by reference into a Texas Title V permit was not federally enforceable amounted to a non-justiciable collateral attack on the Title V permit). In light of this decision and EPA's disapproval of the Commission's affirmative defense for excess emissions during planned MSS events, the Executive Director must revise the Draft Permit to state that the affirmative defense rules at 30 Tex. Admin. Code §§ 101.222(h)-(j) are not federally enforceable and that the Commission's affirmative defense for planned maintenance, startup, and shutdown events is not available in federal enforcement actions brought by EPA or citizen suits brought under 42 U.S.C. § 7604. 40 C.F.R. § 70.6(b)(2). Unless the Executive Director makes this revision, the Draft Permit may be read to improperly limit the ability of EPA and citizens to enforce and compel compliance with applicable requirements.

<u>Requested Revision to the Title V Permit</u>

<u>The Executive Director should revise the Draft Permit to indicate that the State's disapproved affirmative defense for planned MSS excess emissions is not federally-enforceable.</u>

- If the Executive Director contends that the affirmative defense for excess emissions during planned MSS activities is federally enforceable, Commenters ask that he provide the basis for that determination;

- If the Executive Director contends that the affirmative defense for excess emissions during planned MSS activities is not federally enforceable and that the Draft Permit does not make it so, we ask that he state that for the record.

12 75 Fed.Reg. 68,989, 68,992. EPA's disapproval was upheld by the Fifth Circuit Court of Appeals. *Luminant Generation Co. v. EPA*, 714 F.3d 841 (5th Cir. 2013).

RESPONSE to B.3:

Authorization of planned MSS activities in the NSR permits has not been disapproved by EPA. If emissions of planned MSS exceed the permit limits, they may be subject to an affirmative defense if those emissions are of the type covered by TCEQ's affirmative defense rule. EPA approved the TCEQ's rule § 101.222(b)–(e), which provides for an affirmative defense to emissions events and unscheduled MSS activities, provided the company makes the demonstrations required in the rules, as a revision to the SIP in 2010. However, this rule is subject to EPA's SSM SIP Call issued June 12, 2015. At this time, the rule remains a valid part of TCEQ's SIP and the approved Title V Federal Operating Permit Program. In addition, since the Applicant has obtained NSR authorization for its MSS activities, § 101.222(h) is no longer applicable. Furthermore, EPA's disapproval of § 101.222(h), (i), and (j) were based on the time periods associated with the phase-out schedule for an affirmative defense for planned MSS. Because those time periods have passed and the opportunity to claim an affirmative defense for planned MSS has expired, the disapproval of § 101.222(h), (i), and (j) is not relevant to the issuance of this Proposed Permit. Furthermore, Texas' 30 TAC § 101.222(k)-(l) rules were added effective November 24, 2016 to clarify federal enforceability of affirmative defense provisions.

COMMENT B.4 Texas's Title V Permits Have Been Interpreted to Preclude Use of Any Credible Evidence to Demonstrate Non-Compliance in Citizen Suits

a. Texas's Title V Permits Have Been Interpreted to Preclude Use of Credible Evidence to Demonstrate Non-Compliance in Citizen Suits

To assure compliance with applicable requirements, Title V permits must allow EPA, permitting agencies, and citizens to use any credible evidence to assess a source's compliance status and respond to noncompliance with Clean Air Act requirements. Deer Park Order at 38; 62 Fed. Reg. 8,314, 8,315, 8,318 (February 24, 1997). A Title V permit may not preclude any entity, including the EPA, citizens or the state, from using any credible evidence to enforce any provision of a Title V permit. 62 Fed. Reg. 54,900, 54,907-08 (October 22, 1997).

> The Draft Permit includes Special Condition 17, which states:
> The permit holder shall certify compliance in accordance with 30 TAC § 122.146.
> The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and *any other credible evidence or information.*

(emphasis added) .

This special condition is the only statement regarding credible evidence contained in the Draft Permit. Commenters read this condition to allow members of the public to rely on any credible evidence to demonstrate non-compliance with applicable requirements, because Kinder Morgan is required to consider all such evidence before certifying compliance. This reading of the Draft Permit was, however, not adopted by the United States District Court for the Western District of Texas when it considered a different Texas Title V permit with an identical compliance certification special condition. *See,* Order Granting Motion for Partial Summary Judgment, *Sierra Club v. Energy Future Holdings Corp.*, No. W-12-CV-108 (W.D. Tex. February 10, 2014) at 15-16. Despite permit language requiring the operator to consider all credible evidence to determine compliance, the Court held that "a concerned citizen is limited to the compliance requirements, as defined in the Title V permit, when pursuing a civil lawsuit for CAA violations." *Id.* According to the Court, Title V permits must be read to limit applicable compliance demonstration methods to those specifically identified in a permit, because a different reading would undermine the "permit's objective as the source-specific bible for Clean Air Act compliance." *Id.* at 16.

- In light of this decision, we ask the Executive Director to state whether the Draft Permit, as written, limits the ability of EPA, the State, or citizens to rely on any credible evidence

to demonstrate non-compliance with applicable requirements in a federal enforcement proceeding.

b. The TCEQ Has Taken the Position That Credible Evidence May Not be Used to Determine Compliance with Applicable Requirements

In a contested case hearing concerning ExxonMobil Chemical Company's application for Permit No. 102982, authorizing construction of a new ethylene production unit at the Baytown Olefins Plant in Harris County, Protestants introduced evidence—ExxonMobil's own Emissions Inventory Reports—to demonstrate that ExxonMobil had emitted more particulate matter than its existing permit allowed, and that exceedances of this limit triggered major NSR preconstruction permitting requirements for the proposed project. Protestants' Exhibit No. 100, Expert Testimony of William Powers, P.E., TCEQ Docket No. 2013-0657-AIR at 35-40. In a deposition conducted prior to the contested case hearing, the TCEQ's permit engineer testified that, "based on the best information . . . available" it was his opinion that ExxonMobil had exceeded its limit. Protestants' Exhibit No. 106, Deposition Testimony of Kyle Virr, TCEQ Docket No. 2013-0657-AIR at 35-36.

Nonetheless, in post-hearing briefing, the Executive Director took the position that ExxonMobil's self-reported Emissions Inventory information could not be used to demonstrate non-compliance with the applicable limit, because ExxonMobil's Title V permit established a different and authoritative method for demonstrating compliance with applicable requirements. *Executive Director's Reply to Closing Argument,* TCEQ Docket No. 2013-0657-AIR at 3 ("The Protestants contend, and the Executive Director does not dispute, that EI data shows that ExxonMobil reported PM emissions greater than the PM PAL cap of 365.62 tons for several years. However, TCEQ rules clearly provide that compliance with PAL limits is evidenced through annual compliance certifications under the Title V program and semi-annual reports"). In its order approving ExxonMobil's permit application, the TCEQ adopted this position:

> 91. The Semi-Annual Report (SAR) is used to determine compliance with PAL6.
>
> 93. PAL6 specifies the methods that must be used by Applicant to demonstrate compliance with the PALs. All SARs prepared by Applicant have demonstrated compliance with the PALs contained in PAL6.

Order, TCEQ Docket No. 2013-0657-AIR (February 18, 2014).

The position taken by the Executive Director in his briefing and endorsed by the Commission in its order granting ExxonMobil's permit application appears to conflict with EPA's position that the State, citizens, and EPA must be allowed to rely on any credible evidence to demonstrate non-compliance with applicable requirements. In light of this conflict, Commenters request that the Executive Director (1) state whether the Draft Permit, as written, limits the ability of citizens, the State, or EPA to rely on any credible evidence to demonstrate non-compliance with applicable requirements; and (2) revise the Draft Permit to expressly state that Texas, citizens, and EPA may rely on any credible evidence to demonstrate non-compliance with applicable requirements.

Requested Revision to the Title V Permit

To ensure that the Draft Permit is read to allow citizens, the State, and EPA to use any credible evidence to demonstrate non-compliance with applicable requirements, Commenters request that the Executive Director revise the Draft Permit to include the following Special Condition: "Nothing in this permit shall be interpreted to preclude the use of any credible evidence to demonstrate non-compliance with any term of this permit."

c. Permit No. 101199/N158 Improperly Limits Use of CEMS to Demonstrate Non-Compliance with Applicable Requirements

Permit No. 101199/N158 establishes the following limits for CO and NO_x emissions from Kinder Morgan's heaters (EPNs F-101 and F-201):

Special Condition 8

Pollutant	Hourly Average	Rolling 12 Month Average
NO_x	0.01 lb/MMBtu	0.006 lb/MMBtu
CO	50 ppmv	n/a

Special Condition 39 (Alternate Conditions for NO_x and CO emissions from the heaters during planned startup and shutdown)

Pollutant	Emission Rate Limit
NO_x	0.025 lb/MMBtu
CO	100 ppmv

Maximum Allowable Emission Rates Table

Unit	Pollutant	Emission Limit (lbs/hr)
F-101	NO_x (routine operation)	2.47
	NO_x (planned MSS)	5.00
	CO (routine operation)	9.13
	CO (planned MSS)	14.78

Unit	Pollutant	Emission Limit (lbs/hr)
F-201	NO_x (routine operation)	2.47
	NO_x (planned MSS)	5.00
	CO (routine operation)	9.13
	CO (planned MSS)	14.78

Unit	Pollutant	Emission Limit (TPY)
F-101 and F-201	NO_x	11.83
Emission Caps	CO	72.84

Each of these emissions limits is an applicable requirement incorporated by reference into the Draft Permit.

Permit No. 101199/N158, Special Condition 10 requires Kinder Morgan to install CEMS to measure and record the in-stack concentration of CO, NO_x, and oxygen from its heaters and establishes various conditions to ensure that information generated by the CEMS accurately reflects actual emissions from the heaters. Special Condition 10(C) requires CEMS data to be reduced to units of pounds per hour and pounds per million BTU once every week. Thus, the CEMS provide credible and relevant data indicative of Kinder Morgan's compliance or non-compliance with the above-listed NO_x and CO limits. Nonetheless, Special Condition 10(D) provides that "[t]he data from the CEMS may, *at the discretion of the TCEQ,* be used to determine compliance with the conditions of this permit" (emphasis added).

This special condition, which is incorporated by reference into the Draft Permit, is contrary to EPA's longstanding position on credible evidence and undermines the enforceability of applicable requirements, because it presumptively precludes EPA and citizens from using credible evidence generated by Kinder Morgan's CEMS to enforce requirements in the Draft Permit, unless the TCEQ exercises its discretion to require Kinder Morgan to consider the data. Draft Permit, Special Condition 10(D) also improperly relieves Kinder Morgan of its obligation to consider credible evidence to determine compliance with applicable requirements, as required by Draft Permit, Special Condition 17.

Requested Revision to the Title V Permit:

The Executive Director should revise the Draft Permit to indicate that Kinder Morgan's CEMS provide credible evidence concerning its heaters' CO and NO_x emissions that must be considered to determine compliance with applicable requirements in Permit No. 101199/N158.

RESPONSES to B.4.a, B.4.b and B.4.c:

Nothing in the Proposed Permit prohibits the use of credible evidence to demonstrate compliance (or noncompliance) with the applicable requirements in the permit. Special Term 17 in the Proposed Permit at page 10 requires "The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and *any other credible evidence or information*" (emphasis added).

In addition, Special Term 16 in the Proposed Permit at page 10 incorporates the deviation reporting requirements of 30 TAC § 122.145. A deviation is defined in 30 TAC § 122.10(6) as "any indication of noncompliance with a term or condition of the permit as found using compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and *any other credible evidence* or information." (emphasis added). Any data generated by a CEMS operating in compliance with the requirements stated in Permit No. 101199/N158 may be used as credible evidence. Since the Proposed Permit already requires credible evidence to be used in conjunction with reporting requirements, the ED does not see the need to revise the Proposed Permit.

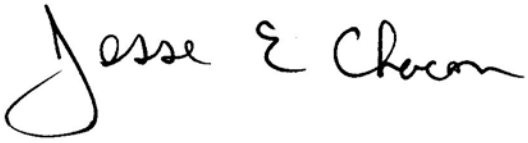
<u>COMMENT B.5</u> Request for Clarification Regarding Permit No. 101199/N158 Loading Losses Control Requirement

When Permit No. 101199/N158 was initially issued, it established a LAER-based requirement that "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F." Attachment 4,[13] Permit No. 101199/N158 (June 12, 2013), Special Condition 20. This vapor threshold cutoff was established to ensure compliance with an emission limitation of 2 lb/Mbbl liquid loaded, found in SCAQMD Rule 1142, which was determined to represent LAER for the project. Attachment 5. This Special Condition was amended on October 8, 2014 without any public notice, and now reads "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F, *or has a vapor pressure greater than 0.50 psia at actual loading conditions*." Draft Permit at Appendix B (Permit No. 101199/N158) (emphasis added). While the amended condition appears to require Kinder Morgan to direct loading emissions from loaded liquids with a vapor pressure greater than 0.10 psia at 95°F to its VCU, regardless of vapor pressure at actual loading conditions, Commenters are concerned that the condition is intended to provide an alternative, less stringent vapor pressure cutoff than the original permit required. Commenters are concerned, because the new language was added to the permit to address Kinder Morgan's request to "update the vapor control threshold from 0.1 psia to 0.5 psia." Attachment 5. Commenters ask the Executive Director to confirm that Permit No. 101199/N158 requires Kinder Morgan to direct all barge loading emissions to its VCU if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F.

<u>RESPONSE to B.5</u>: The logarithmic relationship between VOC vapor pressure and boiling point may be calculated using the Antoine equation. In general terms, the higher the vapor pressure of a VOC, the higher the volatility and the lower the normal boiling point of the VOC. The requirement "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F, or has a vapor pressure greater than 0.50 psia at actual loading conditions." is more stringent compared to the previous requirement "[a]ll ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F." since the revised requirement captures additional VOC emissions having higher volatility and lower boiling points (lower than 95°F) at actual loading conditions.

13 Attachment 4 is labeled as a "draft." It is the only version of the permit conditions that Commenters could locate on the TCEQ's remote document server searching by project number 174745, which was assigned to the initial issuance of Permit No. 101199/N158.

Respectfully submitted,



Jesse E. Chacon, P.E., Manager
Operating Permits Section
Air Permits Division

EXHIBIT D

Proposed Permit No. O3764

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Kinder Morgan Crude & Condensate LLC

AUTHORIZING THE OPERATION OF
Galena Park Terminal
Crude Condensate Splitter
Special Warehousing and Storage

LOCATED AT
Harris County, Texas
Latitude 29° 43' 58" Longitude 95° 13' 13"
Regulated Entity Number: RN100237452

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O3764 Issuance Date: _____

_____
For the Commission

Table of Contents

Section **Page**

General Terms and Conditions 1

Special Terms and Conditions: 1
- Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting 1
- Additional Monitoring Requirements 8
- New Source Review Authorization Requirements 8
- Compliance Requirements 9
- Risk Management Plan 10
- Permit Location 11
- Permit Shield (30 TAC § 122.148) 11

Attachments 12
- Applicable Requirements Summary 13
- Additional Monitoring Requirements 62
- Permit Shield 64
- New Source Review Authorization References 71

Appendix A 75
- Acronym List 76

Appendix B 77

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

   A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

   B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

   C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart CC, EEEE, ZZZZ and DDDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §§ 113.340, 113.880, 113.1090 and 113.1130, which incorporates the 40 CFR Part 63 Subpart by reference.

F. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:

(i) Title 30 TAC § 101.352 (relating to General Provisions)

(ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)

(iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)

(iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)

(v) Title 30 TAC § 101.358 (relating to Emission Monitoring and Compliance Demonstration)

(vi) Title 30 TAC § 101.359 (relating to Reporting)

(vii) Title 30 TAC § 101.360 (relating to Level of Activity Certification)

(viii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

C. Permit holders for sites that have materials handling, construction, roads, streets, alleys, and parking lots shall comply with the following requirements:

(i) Title 30 TAC § 111.143 (relating to Materials Handling)

(ii) Title 30 TAC § 111.145 (relating to Construction and Demolition)

(iii) Title 30 TAC § 111.147 (relating to Roads, Streets, and Alleys)

(iv) Title 30 TAC § 111.149 (relating to Parking Lots)

D. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: Storage of Volatile Organic Compounds, the permit holder shall comply with the requirements of 30 TAC § 115.112(e)(1).

5. For industrial wastewater specified in 30 TAC Chapter 115, Subchapter B, the permit holder shall comply with the following requirements:

A. Title 30 TAC § 115.145 (relating to Approved Test Methods)

B. Title 30 TAC § 115.146 (relating to Recordkeeping Requirements)

C. Title 30 TAC § 115.147(1) (relating to Exemptions)

D. Title 30 TAC § 115.148 (relating to Determination of Wastewater Characteristics)

E. Title 30 TAC § 115.147(7), (7)(A) and (B) (relating to Exemptions)

6. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter D requirements:

A. Title 30 TAC § 115.312(a)(1) (relating to Control Requirements), for emissions during Process Unit Shutdown or Turnaround

B. Title 30 TAC § 115.316(a)(2) (relating to Recordkeeping Requirements), for Process Unit Shutdown or Turnaround

7. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

8. For petroleum refinery facilities subject to 40 CFR Part 60, Subpart QQQ, the permit holder shall comply with the following requirements:

A. Title 40 CFR § 60.692-1(a) - (c) (relating to Standards: General)

B. Title 40 CFR § 60.692-2(a) - (c), (e) (relating to Standards: Individual Drain Systems)

C. Title 40 CFR § 60.692-6(a) - (b) (relating to Standards: Delay of Repair)

D. Title 40 CFR § 60.692-7(a) - (b) (relating to Standards: Delay of Compliance)

E. Title 40 CFR § 60.693-1(a) - (d), (e)(1) - (3) (relating to Alternative Standards for Individual Drain Systems)

F. Title 40 CFR § 60.697(a), (b)(1) - (3) (relating to Recordkeeping Requirements), as applicable to Individual Drain Systems

G. Title 40 CFR § 60.697(f)(1) - (2), (g) (relating to Recordkeeping Requirements), as applicable to Individual Drain Systems

H. Title 40 CFR § 60.697(h) (relating to Recordkeeping Requirements), as applicable to excluded Stormwater Sewer Systems

I. Title 40 CFR § 60.698(a), and (b)(1) (relating to Reporting Requirements), as applicable to Individual Drain Systems

J. Title 40 CFR § 60.698(c) (relating to Reporting Requirements), for water seal breaches in Drain Systems

K. Title 40 CFR § 60.698(e) (relating to Reporting Requirements), as applicable to Individual Drain Systems

9. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 61.05 (relating to Prohibited Activities)

B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)

C. Title 40 CFR § 61.09 (relating to Notification of Start-up)

D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)

E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)

F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)

G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)

H. Title 40 CFR § 61.15 (relating to Modification)

I. Title 40 CFR § 61.19 (relating to Circumvention)

10. For facilities where total annual benzene quantity from waste is less than 1 megagram per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:

A. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures

B. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

C. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)

D. Title 40 CFR § 61.357(a), and (b) (relating to Reporting Requirements)

11. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

12. For sources subject to emission standards in 40 CFR Part 63, Subpart CC, the permit holder shall comply with the following requirements (Title 30 TAC Chapter 113, Subchapter C, § 113.340 incorporated by reference):

A. Title 40 CFR § 63.640(l)(3) - (4) (relating to Applicability and Designation of Affected Source), for units and equipment added to an existing source

B. Title 40 CFR § 63.640(m)(1) - (2) (relating to Applicability and Designation of Affected Source), for units and emission points changing from Group 2 to Group 1 status

C. Title 40 CFR § 63.642(c) (relating to General Standards), for applicability of the General Provisions of Subpart A

D. Title 40 CFR § 63.642(e) (relating to General Standards), for recordkeeping

E. Title 40 CFR § 63.642(f) (relating to General Standards), for reporting

Additional Monitoring Requirements

13. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

14. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

    A. Are incorporated by reference into this permit as applicable requirements

    B. Shall be located with this operating permit

    C. Are not eligible for a permit shield

15. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

16. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data

indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

17. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

18. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:

    A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:

        (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:

            (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)

    B. The permit holder shall comply with the Initial Control Plan unit listing requirement in 30 TAC § 117.350(c) and (c)(1).

    C. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.

19. Use of Emission Credits to comply with applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:

        (i) Title 30 TAC Chapter 115

        (ii) Title 30 TAC Chapter 117

        (iii) Offsets for Title 30 TAC Chapter 116

    B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

        (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)

        (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1

(iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

20. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

21. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Permit Location

22. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

23. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 14

Applicable Requirements Summary 20

Note: A "none" entry may be noted for some emission sources in this permit's "Applicable Requirements Summary" under the heading of "Monitoring and Testing Requirements" and/or "Recordkeeping Requirements" and/or "Reporting Requirements." Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
100-11	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-11	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-12	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-12	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-13	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	True Vapor Pressure = True vapor pressure is less than 1.0 psia
100-13	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia
100-13	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641), Existing Source = The storage vessel is at a new source., True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa), Emission Control Type = Fixed roof and an internal floating roof, Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					between the wall of the storage vessel and the edge of the internal floating roof
100-13	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	Group 1 Storage Vessel = The storage vessel is a Group 2 vessel., Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-14	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-14	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
100-15	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-15	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
100-20	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-20	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
100-21	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
100-21	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-22	STORAGE	N/A	R5112-01	30 TAC Chapter 115,	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	TANKS/VESSELS			Storage of VOCs	
120-22	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-23	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-23	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
120-24	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-24	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
120-25	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
120-25	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
150-10	STORAGE TANKS/VESSELS	N/A	R5112-01	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
150-10	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
200-1	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
200-1	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
200-2	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
200-2	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
200-3	STORAGE TANKS/VESSELS	N/A	R5112-03	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
200-3	STORAGE TANKS/VESSELS	N/A	63CC-01	40 CFR Part 63, Subpart CC	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	R5112-02	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	60Kb-01	40 CFR Part 60, Subpart Kb	No changing attributes.
5-0	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.
DEGREASER	SOLVENT DEGREASING MACHINES	N/A	R5412-01	30 TAC Chapter 115, Degreasing Processes	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	R7303-01	30 TAC Chapter 117, Subchapter B	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	60JJJJ-01	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EGEN-1	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
F-101	PROCESS HEATERS/FURNACES	N/A	R7310-01	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = No second fuel
F-101	PROCESS HEATERS/FURNACES	N/A	R7310-02	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
F-101	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-01	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas D-Series Fuel Type #2 = No second fuel
F-101	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-02	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural Gas D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.
F-101	FCCU CAT REGEN/FUEL GAS COMBUSTION/CLAUS SRU	N/A	60Ja-01	40 CFR Part 60, Subpart Ja	No changing attributes.
F-101	PROCESS HEATERS/FURNACES	N/A	63DDDDD-01	40 CFR Part 63, Subpart DDDDD	No changing attributes.
F-201	PROCESS HEATERS/FURNACES	N/A	R7310-01	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = No second fuel
F-201	PROCESS HEATERS/FURNACES	N/A	R7310-02	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases
F-201	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db-01	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural gas D-Series Fuel Type #2 = No second fuel
F-201	BOILERS/STEAM GENERATORS/STEAM	N/A	60Db-02	40 CFR Part 60, Subpart Db	D-Series Fuel Type #1 = Natural Gas

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
	GENERATING UNITS				D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas.
F-201	FCCU CAT REGEN/FUEL GAS COMBUSTION/CLAUS SRU	N/A	60Ja-01	40 CFR Part 60, Subpart Ja	No changing attributes.
F-201	PROCESS HEATERS/FURNACES	N/A	63DDDDD-01	40 CFR Part 63, Subpart DDDDD	No changing attributes.
FL-101	FLARES	N/A	R1111-01	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FL-101	FLARES	N/A	60A-01	40 CFR Part 60, Subpart A	No changing attributes.
FL-101	FCCU CAT REGEN/FUEL GAS COMBUSTION/CLAUS SRU	N/A	60Ja-02	40 CFR Part 60, Subpart Ja	No changing attributes.
FUG	FUGITIVE EMISSION UNITS	N/A	R5352-01	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	No changing attributes.
FUG	FUGITIVE EMISSION UNITS	N/A	60GGGa-01	40 CFR Part 60, Subpart GGGa	No changing attributes.
FUG	FUGITIVE EMISSION UNITS	N/A	63EEEE-01	40 CFR Part 63, Subpart EEEE	No changing attributes.
MISC-ADH	SURFACE COATING OPERATIONS	N/A	R5471-01	30 TAC Chapter 115, Subchapter E, Division 7	No changing attributes.
TK-101	STORAGE TANKS/VESSELS	N/A	63CC-02	40 CFR Part 63, Subpart CC	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
100-11	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-11	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-12	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-12	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-13	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						the requirements of this division.			
100-13	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-13	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
100-13	EU	63CC-02	112(B)	40 CFR Part 63,	§ 63.640(c)(2)	All Group 2 storage	§ 63.646(b)(1)	§ 63.646(b)(1)	§ 63.655(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
			HAPS	Subpart CC		vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(2)	§ 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-14	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-14	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
									§ 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
100-15	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
100-15	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
									[G]§ 63.655(h)(6)
100-20	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-20	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
100-21	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
100-21	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-22	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						vapor pressure less than 1.5 psia is exempt from the requirements of this division.			
120-22	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-23	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
120-23	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
120-24	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					115.112(e)(2)(I) § 115.114(a)(1)(A)	atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
120-24	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
120-25	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
120-25	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
150-10	EU	R5112-01	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
150-10	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
									§ 63.655(h)(6)(ii)
200-1	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)
200-1	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
200-2	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of	§ 115.112(e)(1) § 115.112(e)(2)	No person shall place, store, or hold VOC in any	§ 115.114(a)(1) § 115.114(a)(1)(A)	§ 115.118(a)(3) § 115.118(a)(5)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				VOCs	§ 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.	[G]§ 115.117	§ 115.118(a)(6)(C) § 115.118(a)(7)	
200-2	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
200-3	EU	R5112-03	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C)	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§ 115.112(e)(2)(I) § 115.114(a)(1)(A)	pressure sufficient at all times to prevent any vapor or gas loss to the atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
200-3	EU	63CC-01	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.646(a) § 63.119(a)(1) [G]§ 63.119(b)(1) § 63.119(b)(2) § 63.119(b)(3)(iii) § 63.119(b)(4) [G]§ 63.119(b)(5) § 63.119(b)(6) § 63.120(a)(4) § 63.120(a)(7) § 63.646(g)	Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §63.119 - §63.121 except as provided in §63.646(b)-(l).	§ 63.120(a)(3)(i) § 63.120(a)(3)(ii) § 63.120(a)(3)(iii) § 63.646(b)(1)	§ 63.120(a)(4) § 63.642(e) § 63.646(b)(1) § 63.655(h)(1) [G]§ 63.655(i)(1) § 63.655(i)(5)	§ 63.120(a)(5) § 63.120(a)(6) § 63.642(f) § 63.655(f) § 63.655(f)(6) § 63.655(g) § 63.655(g)(2) [G]§ 63.655(g)(2)(ii) § 63.655(h) § 63.655(h)(1) § 63.655(h)(2)(i) § 63.655(h)(2)(i)(A) § 63.655(h)(2)(i)(B) § 63.655(h)(2)(i)(C) [G]§ 63.655(h)(6)
5-0	EU	R5112-02	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(e)(1) § 115.112(e)(2) § 115.112(e)(2)(A) § 115.112(e)(2)(B) § 115.112(e)(2)(C) § 115.112(e)(2)(D) § 115.112(e)(2)(F) [G]§	No person shall place, store, or hold VOC in any storage tank unless the storage tank is capable of maintaining working pressure sufficient at all times to prevent any vapor or gas loss to the	§ 115.114(a)(1) § 115.114(a)(1)(A) [G]§ 115.117	§ 115.118(a)(3) § 115.118(a)(5) § 115.118(a)(6)(C) § 115.118(a)(7)	§ 115.114(a)(1)(B) § 115.118(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					115.112(e)(2)(I) § 115.114(a)(1)(A)	atmosphere or is in compliance with the control requirements specified in Table 1 of this paragraph for VOC other than crude oil and condensate or Table 2 of subsection (a)(1) of this paragraph for crude oil and condensate.			
5-0	EU	60Kb-01	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(B) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.113b(a)(1) [G]§ 60.113b(a)(3) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b) § 60.116b(c) § 60.116b(e) § 60.116b(e)(1) § 60.116b(e)(2)(i)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b) § 60.116b(c)	§ 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(4)
5-0	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)
DEGREASER	EU	R5412-01	VOC	30 TAC Chapter 115, Degreasing Processes	§ 115.412(1) [G]§ 115.412(1)(A) § 115.412(1)(C) [G]§ 115.412(1)(F) § 115.417(1)	Cold solvent cleaning. No person shall own or operate a system utilizing a VOC for the cold solvent cleaning of	[G]§ 115.415(1) § 115.415(3) ** See Periodic Monitoring Summary	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						objects without the controls listed in §115.412(1)(A)-(F).			
EGEN-1	EU	R7303-01	EXEMPT	30 TAC Chapter 117, Subchapter B	§ 117.303(a)(6)(D)	Units exempted from the provisions of this division, except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1), and 117.354(a)(5), include stationary gas turbines and stationary internal combustion engines that are used exclusively in emergency situations, except that operation for testing or maintenance purposes is allowed for up to 52 hours per year, based on a rolling 12-month average.	None	§ 117.340(j) [G]§ 117.345(f)(6)	None
EGEN-1	EU	60JJJJ-01	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 4.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(e)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4) § 60.4245(b)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)
EGEN-1	EU	60JJJJ-01	NO_x	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234	Owners and operators of stationary emergency SI ICE with a maximum	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a NOx emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4244(b) § 60.4244(c) § 60.4244(d)	§ 60.4245(a)(4) § 60.4245(b)	
EGEN-1	EU	60JJJJ-01	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(2) § 60.4243(b)(2)(ii) [G]§ 60.4243(d) § 60.4243(g) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a VOC emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(a) § 60.4243(b)(2)(ii) § 60.4244(a) § 60.4244(b) § 60.4244(c) § 60.4244(f) § 60.4244(g)	§ 60.4243(b)(2)(ii) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(4) § 60.4245(b)	[G]§ 60.4245(c) § 60.4245(d) [G]§ 60.4245(e)
EGEN-1	EU	63ZZZZ-01	EXEMPT	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(b)(1) § 63.6595(c) § 63.6640(f)(1) [G]§ 63.6640(f)(2) § 63.6640(f)(3)	An affected source which meets either of the criteria in paragraphs §63.6590(b)(1)(i)-(ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).	None	None	§ 63.6645(c) § 63.6645(f)
F-101	EU	R7310-01	NO_x	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)	§ 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F-101	EU	R7310-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		
F-101	EU	R7310-01	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-101	EU	R7310-02	NO_x	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-101	EU	R7310-02	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O_2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		[G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-101	EU	R7310-02	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)		[G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-101	EU	60Db-01	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-01	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed,	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			
F-101	EU	60Db-01	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-01	NO_x	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-02	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.	§ 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)		§ 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-101	EU	60Db-02	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-02	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-101	EU	60Db-02	NO_x	40 CFR Part 60,	§ 60.44b(l)(1)	Affected facilities	§ 60.46b(c)	[G]§ 60.48b(b)	§ 60.49b(a)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart Db	§ 60.44b(h) § 60.44b(i) § 60.46b(a)	combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	§ 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-101	EU	60Ja-01	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
F-101	EU	63DDDDD-01	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
F-201	EU	R7310-01	NO_v	30 TAC Chapter	§ 117.310(d)(3)	An owner or operator	[G]§ 117.335(a)(1)	§ 117.345(a)	§ 117.335(b)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				117, Subchapter B	§ 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§	§ 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
F-201	EU	R7310-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) §	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)		
F-201	EU	R7310-01	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-201	EU	R7310-02	NO_x	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3,	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(f)(2) § 117.335(g) § 117.340(a) § 117.340(c)(1) [G]§ 117.340(c)(3)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(p)(1) § 117.340(p)(3)	except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
F-201	EU	R7310-02	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(A) § 117.310(c)(3) § 117.340(f)(1)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(7)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.335(f) § 117.335(f)(3) § 117.335(g) § 117.340(a) § 117.340(e) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(B)(iii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8120 § 117.8120(1) § 117.8120(1)(A)	§ 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
F-201	EU	R7310-02	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(A)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(d) § 117.8000(b) § 117.8000(c) § 117.8000(c)(3) § 117.8000(c)(4) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8130 § 117.8130(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
F-201	EU	60Db-01	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e) [G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	Except as provided in §60.42b(k)(2)-(4) on and after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat	§ 60.45b(b) § 60.45b(c) § 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	[G]§ 60.47b(a) [G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						input.			
F-201	EU	60Db-01	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-01	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-01	NO_x	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-201	EU	60Db-02	SO_2	40 CFR Part 60, Subpart Db	§ 60.42b(k)(1) § 60.42b(e)	Except as provided in §60.42b(k)(2)-(4) on and	§ 60.45b(b) § 60.45b(c)	[G]§ 60.47b(a) [G]§ 60.49b(d)	§ 60.49b(a) § 60.49b(a)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 60.42b(f) § 60.42b(g) § 60.45b(a)	after the §60.8 tests, no facility for which construction, reconstruction, or modification began after February 28, 2005, that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall discharge SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.	§ 60.45b(c)(1) § 60.45b(f) § 60.45b(g) § 60.45b(h) [G]§ 60.47b(a) § 60.47b(c) § 60.47b(d) [G]§ 60.47b(e)	§ 60.49b(o)	§ 60.49b(a)(3) § 60.49b(b) § 60.49b(j) § 60.49b(k) § 60.49b(k)(1) § 60.49b(k)(10) § 60.49b(k)(11) § 60.49b(k)(2) § 60.49b(k)(3) § 60.49b(k)(4) § 60.49b(k)(5) § 60.49b(k)(6) § 60.49b(k)(8) § 60.49b(k)(9) [G]§ 60.49b(n) § 60.49b(v) § 60.49b(w)
F-201	EU	60Db-02	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
F-201	EU	60Db-02	PM (OPACITY)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).			
F-201	EU	60Db-02	NO_x	40 CFR Part 60, Subpart Db	§ 60.44b(l)(1) § 60.44b(h) § 60.44b(i) § 60.46b(a)	Affected facilities combusting coal, oil, or natural gas, or a mixture of these fuels, or any other fuels: a limit of 86 ng/JI (0.20 lb/million Btu) heat input unless the affected facility meets the specified requirements.	§ 60.46b(c) § 60.46b(e) § 60.46b(e)(1) § 60.46b(e)(4) [G]§ 60.48b(b) § 60.48b(c) § 60.48b(d) § 60.48b(e) [G]§ 60.48b(e)(2) § 60.48b(e)(3) § 60.48b(f) § 60.48b(g)(1)	[G]§ 60.48b(b) § 60.48b(c) [G]§ 60.49b(d) [G]§ 60.49b(g) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3) § 60.49b(b) § 60.49b(h) § 60.49b(h)(4) § 60.49b(i) § 60.49b(v) § 60.49b(w)
F-201	EU	60Ja-01	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
F-201	EU	63DDDD D-01	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					specification requirements of 40 CFR Part 63, Subpart DDDDD				
FL-101	EU	R1111-01	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FL-101	CD	60A-01	OPACITY	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(5) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (c)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(6)	None	None
FL-101	EU	60Ja-02	PM, NOX, SO2, CO	40 CFR Part 60, Subpart Ja	§ 60.100a(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Ja	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Ja
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(10)	Instrumentation systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet 40 CFR	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						§63.169 (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(11)	Sampling connection systems, as defined in 40 CFR §63.161 (January 17, 1997), that meet the requirements of 40 CFR §63.166(a) and (b) (June 20, 1996) are exempt from the requirements of this division except §115.356(3)(C) of this title.	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.357(2) § 115.352(9)	Each pressure relief valve equipped with a rupture disk must comply with §115.352(9) and §115.356(3)(C).	None	§ 115.356 § 115.356(3) [G]§ 115.356(3)(C)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(7) § 115.357(1)	No process drains shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(7)	No process drains shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(9) § 115.357(1) § 115.357(8) § 115.357(9)	No pressure relief valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(2) § 115.354(4) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(9)	No pressure relief valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(4) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.357(12) § 115.357(8) § 115.357(9)	or exuding of process fluid based on sight, smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(1) § 115.357(8) § 115.357(9)	No open-ended valves or lines shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(12) § 115.357(8) § 115.357(9)	No open-ended valves or lines shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A)	No valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3)	[G]§ 115.354(7)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(1) § 115.357(8) § 115.357(9)	screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(9) [G]§ 115.355 § 115.357(1)	[G]§ 115.356(3)(C) § 115.356(5)	
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(B) § 115.352(3) § 115.352(4) § 115.352(5) § 115.352(6) § 115.352(7) § 115.357(12) § 115.357(8) § 115.357(9)	No valves shall be allowed to have a VOC leak, for more than 15 days after discovery, which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) [G]§ 115.354(7) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	[G]§ 115.354(7)
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(1) § 115.357(12) § 115.357(8)	No flanges or other connectors shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight,	§ 115.354(1) § 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(A) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(3) § 115.352(5) § 115.352(7) § 115.352(8) § 115.357(12) § 115.357(8)	No flanges or other connectors shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 500 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(11) § 115.354(3) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(4) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	[G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(1) § 115.357(8)	greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.357(1)	§ 115.356(5)	
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No compressor seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight,	[G]§ 115.355	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.352(7) § 115.357(4) § 115.357(8)	smell, or sound.			
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(1) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355 § 115.357(1)	§ 115.352(7) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	R5352-01	VOC	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	§ 115.352(1)(B) § 115.352(1) § 115.352(10) § 115.352(2) § 115.352(2)(A) § 115.352(2)(C) § 115.352(2)(C)(i) § 115.352(2)(C)(ii) § 115.352(2)(C)(iii) § 115.352(3) § 115.352(5) § 115.352(7) § 115.357(12) § 115.357(8)	No pump seals shall be allowed to have a VOC leak, for more than 15 days after discovery which exceeds a screening concentration greater than 10,000 parts per million by volume above background as methane, or the dripping or exuding of process fluid based on sight, smell, or sound.	§ 115.354(1) § 115.354(10) § 115.354(2) § 115.354(5) § 115.354(6) § 115.354(9) [G]§ 115.355	§ 115.352(7) § 115.354(10) § 115.356 [G]§ 115.356(1) [G]§ 115.356(2) § 115.356(3) § 115.356(3)(A) § 115.356(3)(B) [G]§ 115.356(3)(C) § 115.356(5)	None
FUG	EU	60GGGa-01	VOC	40 CFR Part 60, Subpart GGGa	[G]§ 60.590a(a) The permit holder shall	The permit holder shall comply with the applicable requirements	The permit holder shall comply with the applicable	The permit holder shall comply with the applicable	The permit holder shall comply with the applicable reporting

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 60, Subpart GGGa	of 40 CFR Part 60, Subpart GGGa	monitoring and testing requirements of 40 CFR Part 60, Subpart GGGa	recordkeeping requirements of 40 CFR Part 60, Subpart GGGa	requirements of 40 CFR Part 60, Subpart GGGa
FUG	EU	63EEEE-01	112(B) HAPS	40 CFR Part 63, Subpart EEEE	§ 63.2338(b) The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart EEEE	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart EEEE
MISC-ADH	PRO	R5471-01	VOC	30 TAC Chapter 115, Subchapter E, Division 7	§ 115.471(a) [G]§ 115.473(d)	The owner or operator of application processes located on a property with actual combined emissions of volatile organic compounds (VOC) < 3.0 tons per calendar year, when uncontrolled, from all adhesives, adhesive primers, and solvents used during related cleaning operations, is exempt from the requirements of this	None	§ 115.478(b)(2) § 115.478(b)(4)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						division, except as specified in §115.478(b)(2). When calculating the VOC emissions, adhesives and adhesive primers that are exempt under subsections (b) and (c) are excluded.			
TK-101	EU	63CC-02	112(B) HAPS	40 CFR Part 63, Subpart CC	§ 63.640(c)(2)	All Group 2 storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section are part of the affected source.	§ 63.646(b)(1) § 63.646(b)(2)	§ 63.646(b)(1) § 63.655(g)(7)(ii) § 63.655(i)(1)(iv) § 63.655(i)(5)	§ 63.655(f) § 63.655(f)(1)(i)(A) § 63.655(g) § 63.655(g)(7) § 63.655(g)(7)(i) § 63.655(h) § 63.655(h)(6) § 63.655(h)(6)(ii)

Additional Monitoring Requirements

Periodic Monitoring Summary 63

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: DEGREASER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412-01
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Monthly	
Averaging Period: n/a	
Deviation Limit: Monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of 30 TAC 115.412(1)(A)-(F) shall be considered and reported as a deviation.	
Periodic Monitoring Text: Inspect equipment and record data monthly to ensure compliance with any applicable requirements in § 115.412(1)(A)-(F). Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of § 115.412(1)(A)-(F) shall be considered and reported as a deviation.	

Permit Shield

Permit Shield 65

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
100-11	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-11	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-12	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-12	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-13	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
100-13	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-14	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
100-14	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-15	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
100-15	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-20	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-20	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
100-21	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
100-21	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-22	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
120-22	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-23	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
120-23	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-24	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
120-24	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
120-25	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
120-25	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			complying with another 40 CFR Part 63 subpart.
150-10	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 m3 and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
150-10	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-1	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
200-1	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-2	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
200-2	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
200-3	N/A	40 CFR Part 60, Subpart Kb	A Group 1 storage vessel that is part of a new source and is subject to 40 CFR part

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			60, subpart Kb is required to comply only with 40 CFR part 63, subpart CC.
200-3	N/A	40 CFR Part 63, Subpart EEEE	Unit is part of an affected source complying with another 40 CFR Part 63 subpart.
5-0	N/A	40 CFR Part 60, Subpart QQQ	Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the standards in §60.112b and associated requirements are not subject to the requirements of §60.692-3.
CHILLER	N/A	40 CFR Part 63, Subpart CC	The unit does not meet the definition of a heat exchange system because it does not use water to cool down the process stream.
FUG	N/A	40 CFR Part 63, Subpart CC	Equipment leaks that are also subject to the provisions of 40 CFR part 60, subpart GGGa, are required to comply only with the provisions specified in 40 CFR part 60, subpart GGGa.
TK-101	N/A	30 TAC Chapter 115, Storage of VOCs	Process tanks/vessels are not included in the definition of a storage tank.
TK-101	N/A	40 CFR Part 60, Subpart Kb	Process tanks/vessels are not included in the definition of a storage vessel.
TK-102	N/A	30 TAC Chapter 115, Storage of VOCs	Process tanks/vessels are not included in the definition of a storage tank.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TK-102	N/A	40 CFR Part 60, Subpart Kb	Process tanks/vessels are not included in the definition of a storage vessel.
TK-102	N/A	40 CFR Part 60, Subpart QQQ	The tank is part of a stormwater sewer system and is not subject to the requirements of 40 CFR part 60, subpart QQQ.
TK-102	N/A	40 CFR Part 63, Subpart CC	Emission point is associated with stormwater from segregated stormwater sewers.

New Source Review Authorization References

New Source Review Authorization References 72

New Source Review Authorization References by Emission Unit 73

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Nonattainment (NA) Permits	
NA Permit No.: N158	Issuance Date: 10/08/2014
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 101199	Issuance Date: 10/08/2014
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
100-11	TANK NO. 100-11	101199, N158
100-12	TANK NO. 100-12	101199, N158
100-13	TANK NO. 100-13	101199, N158
100-14	TANK NO. 100-14	101199, N158
100-15	TANK NO. 100-15	101199, N158
100-20	TANK NO. 100-20	101199, N158
100-21	TANK NO. 100-21	101199, N158
120-22	TANK NO. 120-22	101199, N158
120-23	TANK NO. 120-23	101199, N158
120-24	TANK NO. 120-24	101199, N158
120-25	TANK NO. 120-25	101199, N158
150-10	TANK NO. 150-10	101199, N158
200-1	TANK NO. 200-1	101199, N158
200-2	TANK NO. 200-2	101199, N158
200-3	TANK NO. 200-3	101199, N158
5-0	TANK NO. 5-0	101199, N158
CHILLER	CHILLER	106.261/11/01/2003
DEGREASER	DEGREASER	106.454/11/01/2001
EGEN-1	EMERGENCY GENERATOR	101199, N158

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
F-101	NAPHTHA SPLITTER REBOILER TRAIN I	101199, N158
F-201	NAPHTHA SPLITTER REBOILER TRAIN II	101199, N158
FL-101	FLARE NO. 101	101199, N158
FUG	FUGITIVES	101199, N158
MISC-ADH	MISCELLANEOUS ADHESIVES	106.263/11/01/2001
TK-101	TANK NO. 101	106.472/09/04/2000
TK-102	TANK NO. 102	106.472/09/04/2000

Appendix A

Acronym List 76

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
COMS ..... continuous opacity monitoring system
CVS ..... closed-vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
DR ..... Designated Representative
ElP ..... El Paso (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
GF ..... grandfathered
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MMBtu/hr ..... Million British thermal units per hour
MRRT ..... monitoring, recordkeeping, reporting, and testing
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PM ..... particulate matter
ppmv ..... parts per million by volume
PSD ..... prevention of significant deterioration
RO ..... Responsible Official
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table 78

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number[1] (EPN)	Source Name[2]	Air Contaminant Name[3]	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	(TPY)[4]	Spec. Cond.	Spec. Cond.	Spec. Cond.
F-101	Naphtha Splitter Reboiler Train I	CO CO[6] NO_x NO_x[6] VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	9.13 14.78 2.47 5.00 1.33 1.48 1.11 1.11 1.11 1.83	— — — — — — — — — —	3, 4, 9, 10, 11, 31	3, 4, 10, 11, 31	3, 4, 10, 30, 31
F-201	Naphtha Splitter Reboiler Train II	CO CO[6] NO_x NO_x[6] VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	9.13 14.78 2.47 5.00 1.33 1.48 1.11 1.11 1.11 1.83	— — — — — — — — — —	3, 4, 9, 10, 11, 31	3, 4, 10, 11, 31	3, 4, 10, 30, 31
F-101 F-201	Heater Annual Emission Cap	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$ Ammonia	— — — — — — — —	72.84 11.83 10.63 11.83 8.87 8.87 8.87 14.57			
FL-101	Flare No. 101	CO NO_x VOC SO_2	0.63 0.16 0.03 0.00	2.75 0.69 0.12 0.00	3, 4, 12	3, 4, 12	4
200-1	Tank No. 200-1	VOC	2.27	4.59	17	17, 18, 20	
200-2	Tank No. 200-2	VOC	2.27	4.59	17	17, 18, 20	
200-3	Tank No. 200-3	VOC	2.27	4.59	17	17, 18, 20	
100-20	Tank No. 100-20	VOC	0.80	0.20	17	17, 18, 20	

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number[1] (EPN)	Source Name[2]	Air Contaminant Name[3]	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	(TPY)[4]	Spec. Cond.	Spec. Cond.	Spec. Cond.
150-10	Tank No. 150-10	VOC	0.78	0.68	17	17, 18, 20	
120-24	Tank No. 120-24	VOC	1.24	2.67	17	17, 18, 20	
100-21	Tank No. 100-21	VOC	0.88	0.20	17	17, 18, 20	
100-11	Tank No. 100-11	VOC	0.88	0.20	17	17, 18, 20	
100-14	Tank No. 100-14	VOC	1.22	1.79	17	17, 18, 20	
5-0	Tank No. 5-0	VOC	1.30	0.90	4, 17	4, 17, 18, 20	4
120-22	Tank No. 120-22	VOC	0.91	0.59	17	17, 18, 20	
100-12	Tank No. 100-12	VOC	0.88	0.20	17	17, 18, 20	
120-25	Tank No. 120-25	VOC	1.24	2.67	17	17, 18, 20	
100-13	Tank No. 100-13	VOC	1.22	0.32	17	17, 18, 20	
120-23	Tank No. 120-23	VOC	0.91	0.59	17	17, 18, 20	
100-15	Tank No. 100-15	VOC	1.22	1.79	17	17, 18, 20	
FUG	Process Fugitive Components[5]	VOC	1.74	7.60	4, 13, 14, 15	4, 13, 15	4, 13
MAR-LOADFUG	Marine Loading Fugitives Emissions Cap	VOC	141.96	6.70	6, 22, 23, 25, 26	6, 22, 23, 25, 26, 28	6, 25
MAR-VCU	Marine Loading VCU Emission Caps	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$	6.91 5.18 8.59 0.05 0.64 0.64 0.64	3.40 2.55 3.39 0.03 0.32 0.32 0.32	3, 26, 27, 31	3, 27, 28, 31	26, 30, 31
EGEN-1	Emergency Generator	CO NO_x VOC SO_2 PM PM_{10} $PM_{2.5}$	12.90 6.23 2.02 5.79 0.37 0.37 0.37	3.22 1.56 0.50 1.45 0.09 0.09 0.09	4, 6	4, 6	4, 6

Major NSR Summary Table

Permit Number: 101199 and N158			Issuance Date: October 8, 2014				
Emission Point Number[1] (EPN)	Source Name[2]	Air Contaminant Name[3]	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	(TPY)[4]	Spec. Cond.	Spec. Cond.	Spec. Cond.
MSS	MSS Activities	VOC NO_x CO SO_2 PM PM_{10} $PM_{2.5}$	382.50 37.20 131.39 2.42 2.23 2.23 2.23	3.25 0.46 1.35 0.01 0.08 0.08 0.08	35, 36, 37, 40, 43	34, 35, 36, 37, 40, 41, 43	
All	All authorized by permit	Benzene	—	0.30			

Footnotes:

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NOx - total oxides of nitrogen

SO2 - sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented

PM10- total particulate matter, suspended in the atmosphere, equal to or less than 10 microns in diameter, including PM2.5, as represented

PM2.5- particulate matter equal to or less than 2.5 microns in diameter

CO - carbon monoxide

(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

(5) Process component fugitive emissions and marine loading fugitive emissions from leak checked vessels are estimates and are enforceable through compliance with the applicable special condition(s) and permit application representations.

(6) Rates apply to planned startup periods as specified in Special Condition 34.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

A Permit Is Hereby Issued To
Kinder Morgan Crude & Condensate LLC
Authorizing the Construction and Operation of
Galena Park Terminal Condensate Splitter
Located at **Galena Park, Harris County, Texas**
Latitude 29° 43′ 30″ Longitude −95° 14′ 45″

Permits: 101199 and N158

Amendment Date : October 8, 2014

Renewal Date: June 12, 2023

For the Commission

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 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)(iii)]
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 30 TAC 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 not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **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)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. 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.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

Special Conditions

Permit Numbers 101199 and N158

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources — Maximum Allowable Emission Rates" (MAERT) and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions.

2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) or ammonia at a concentration of greater than 1 percent are not authorized by this permit. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC or ammonia at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions with the exception of those on floating or fixed roof storage tanks.

3. The following requirements apply to capture systems for the heater selective catalytic reduction (SCR) systems, flare, and marine loading vapor combustion unit.

   A. Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

   B. If there is a bypass for the control device, comply with either of the following requirements :

      (1) 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

      (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out of the bypass.

      A deviation shall be reported if the monitoring or inspections indicate bypass of the control device.

   C. The date and results of each inspection performed shall be recorded. If the results of any inspection are not satisfactory, the deficiencies shall be recorded and the permit holder shall promptly take necessary corrective action, recording each action with the date completed.

Federal Applicability

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60): **(10/14)**

   A. Subpart A, General Provisions.

B. Subpart Ja, Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007.

C. Subpart Kb, Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

D. Subpart QQQ, VOC Emissions from Petroleum Refinery Wastewater Systems.

E. Subpart GGGa, Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after November 7, 2006.

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants in 40 CFR Part 61: **(10/14)**

A. Subpart A, General Provisions.

B. Subpart FF, Benzene Waste Operations.

6. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63: **(10/14)**

A. Subpart A, General Provisions.

B. Subpart R, Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations).

C. Subpart Y, Marine Tank Vessel Loading Operations.

D. Subpart CC, Petroleum Refineries.

E. Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters.

7. If any condition of this permit is more stringent than the applicable regulations in Special Condition Nos. 4, 5, and 6, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

Heaters and Flare

8. Nitrogen oxides (NO_x), carbon monoxide (CO), and ammonia emissions from each heater (Emission Point Numbers [EPNs] F-101 and F-201) shall not exceed the following rates/concentrations (ppmv is corrected to 3 percent oxygen).

Pollutant	Hourly Average	Rolling 12 Month Average
NO_x	0.01 lb/MMBtu	0.006 lb/MMBtu
CO	50 ppmv	n/a
Ammonia	10 ppmv	n/a

9. Combustion units shall be fired with fuel gas containing no more than 2.2 grains of total sulfur per 100 dry standard cubic feet (dscf). Fuel gas shall consist of natural gas and uncondensed off-gas not to exceed 1% of total fuel gas usage. The natural gas shall be sampled every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement. **(10/14)**

10. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of CO, NO_x, and oxygen from the heaters (EPNs F-101 and F-201).

    A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

    B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

        (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

        (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

    Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

    All CGA exceedances of ±15 percent accuracy indicate that the CEMS is out of control.

C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The permit holder shall install and operate a fuel flow meter to measure the gas fuel usage for each heater. The monitored data shall be reduced to an hourly average flow rate at least once every day, using a minimum of four equally-spaced data points from each one-hour period. Each fuel flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent. In lieu of monitoring fuel flow, the permit holder may monitor stack exhaust flow using the flow monitoring specifications of 40 Code of Federal Regulations (CFR) Part 60, Appendix B, Performance Specification 6 or 40 CFR Part 75, Appendix A.

The individual average concentrations shall be reduced to units of pounds per hour and pounds per million BTU at least once every week as follows:

The measured hourly average concentration from the CEMS shall be multiplied by the exhaust flow rate as measured directly, or determined by monitoring fuel flow, stack oxygen concentration, and the natural gas heating value, to determine the hourly emission rate. The emission rate and fuel gas flow and heating value shall be used to determine the lb NO_x/MMBtu heat input.

D. All monitoring data and quality-assurance data shall be maintained by the permit holder. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the heater is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the heater operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

11. The permit holder shall continuously monitor ammonia emissions from the heater SCR systems (EPNs F-101 and F-201) using one of the following methods:

A. Install and operate two NO_x CEMS, one located upstream of the SCR system and the other located downstream of the SCR system, which are used in association with ammonia injection rate and the following calculation procedure to estimate ammonia slip.

Ammonia slip, ppmvd = ((a – (b x c / 1,000,000)) x 1,000,000 / b) x d

where:

a = ammonia injection rate (lb/hr)/17 (lb/lb-mole);

b = dry exhaust gas flow rate (lb/hr)/29 (lb/lb-mole);

c = change in measured NO_x concentration, ppmvd, across catalyst; and

d = correction factor.

The correction factor shall be derived during compliance testing by comparing the measured and calculated ammonia slip. The ammonia injection rate and exhaust gas flow rate shall be recorded at least every 15 minutes and be recorded as hourly averages. Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, or at least annually, whichever is more frequent, and shall be accurate to within 2 percent of span or 5 percent of the design value.

B. Install and operate a dual stream system of NO_x CEMS at the exit of the SCR system. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

C. Install an ammonia CEMS approved by TCEQ.

All CEMS specified in this condition must meet the requirements of Special Condition No. 10. Quality-assured (or valid) data must be generated when gas is directed to the SCR system. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time that gas is directed to the SCR system over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

12. Flares shall be designed and operated in accordance with the following requirements:

A. The flare system 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 air assist to the flare

Leak Detection and Repair

13. Piping, Valves, Pumps, Agitators, and Compressors - Intensive Directed Maintenance — 28LAER

Except as may be provided for in the special conditions of this permit, the following requirements apply to the above-referenced equipment:

A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (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 or by one of the methods described below to be made readily available upon request.

The exempted components may be identified by one or more of the following methods:

(1) piping and instrumentation diagram (PID);

(2) a written or electronic database or electronic file;

(3) color coding;

(4) a form of weatherproof identification; or

(5) designation of exempted process unit boundaries.

B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.

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. Difficult-to-monitor and unsafe-to-monitor valves, as defined by Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made readily available upon request. The difficult-to-monitor and unsafe-to-monitor valves may be identified by one or more of the methods described in subparagraph A above. If an unsafe to monitor component is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times. A difficult to monitor component for which quarterly monitoring is specified may instead be monitored annually.

E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service

or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be 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. In addition, all connectors shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer with a directed maintenance program in accordance with items F thru J of this special condition.

In lieu of the monitoring frequency specified above, connectors may be monitored on a semiannual basis if the percent of connectors leaking for two consecutive quarterly monitoring periods is less than 0.5 percent.

Connectors may be monitored on an annual basis if the percent of connectors leaking for two consecutive semiannual monitoring periods is less than 0.5 percent.

If the percent of connectors 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.

The percent of connectors leaking shall be determined using the following formula:

$$(Cl + Cs) \times 100/Ct = Cp$$

Where:

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

Cs = the number of connectors for which repair has been delayed and are listed on the facility shutdown log.

Ct = the total number of connectors in the facility subject to the monitoring requirements, as of the last day of the monitoring period, not including non-accessible and unsafe to monitor connectors.

Cp = the percentage of leaking connectors for the monitoring period.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the 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;

(1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or

(2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the

open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

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. Non accessible valves shall be monitored by leak-checking for fugitive emissions at least annually 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. A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

The gas analyzer shall conform to requirements listed in Method 21 of 40 CFR Part 60, Appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, than the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

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.

G. All new and replacement pumps, compressors, and agitators 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, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly.

H. Damaged or leaking valves, connectors, compressor seals, pump seals, and agitator seals found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, 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. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 TAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown as calculated in accordance with 30 TAC 115.782 (c)(1)(B)(i)(I), the TCEQ Regional Manager and any local programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.

I. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times , test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

J. Compliance with the requirements of this condition does not assure compliance with requirements of 30 TAC Chapter 115, an applicable New Source Performance Standard (NSPS), or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS), and does not constitute approval of alternative standards for these regulations.

K. 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.

L. The percent of valves leaking used in paragraph K shall be determined using the following formula:

$$(Vl + Vs) \times 100 / Vt = Vp$$

Where:

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

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

Vt = 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.

Vp = the percentage of leaking valves for the monitoring period.

M. Any component found to be leaking by physical inspection (i.e., sight, sound, or smell) shall be repaired or monitored with an approved gas analyzer within 15 days to determine whether the component is leaking in excess of 500 ppmv of VOC. If the component is found to be leaking in excess of 500 ppmv of VOC, it shall be subject to the repair and replacement requirements contained in this special condition.

14. All components in heavy liquid service shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through in the same manner as required for connectors in Special Condition 13.E.

15. Piping, valves, pumps, and compressors in greater than one weight percent ammonia service are subject to the following requirements.

A. Audio, olfactory, and visual checks for ammonia leaks within the operating area shall be made every shift.

B. Immediately, but no later than twelve hours 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.

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.

Tanks

16. Tanks are authorized to store the liquids identified below with the maximum tank fill/drain rates. **(10/14)**

Tank ID	Tank Type	Service	Maximum fill/drain rate (bbl/hr)
200-1 200-2 200-3	Internal floating roof	Condensate	15,000
150-10 100-11 100-12 100-20 100-21 120-22 120-23	Internal floating roof	Distillates	10,000
100-13	Internal floating roof	Condensate and Distillates	10,000
100-14	Internal floating roof	Condensate and Light Naphtha	10,000
100-15 100-24 100-25	Internal floating roof	Light Naphtha and Heavy Naphtha	10,000
PV-410 PV-411	Pressurized	Y-grade product	n/a
5-0	Internal floating roof	Wastewater	5,000

"Distillates" may include Atmospheric Residuum ("Resid"), Kerosene, Diesel fuel and other heavy fuel oils.

17. Atmospheric storage tanks are subject to the following requirements:

    A. Uninsulated tank exterior surfaces exposed to the sun shall be white. Storage tanks must be equipped with permanent submerged fill pipes.

    B. Each tank shall be designed to completely drain its entire contents to a sump in a manner that leaves no more than 9 gallons of free-standing liquid in the tank sump.

    C. Tanks storing liquids with VOC vapor pressures greater than 0.10 psia shall meet the following requirements.

        (1) An internal floating deck or "roof" or equivalent control shall be installed in all tanks. The floating roof shall be equipped with two continuous seals mounted one above the other between the wall of the storage vessel and the edge of the internal floating roof:

(2) The permit holder shall perform the visual inspections and any seal gap measurements as specified in Title 40 Code of Federal Regulations § 60.113b (40 CFR § 60.113b) Testing and Procedures (as amended at 54 FR 32973, Aug. 11, 1989) to verify fitting and seal integrity. Records shall be maintained of the dates the inspection was performed, any measurements made (including raw data), results of the inspections, and actions taken to correct any deficiencies noted.

(3) The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650 dated November 1, 1998 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. The floating roof shall be welded (not bolted).

(4) The concentration of organic vapor in the vapor space above the internal floating roof shall not exceed 30 percent of its lower explosive limit (LEL). The permit holder shall visually inspect the rim seal system and roof openings and use an explosimeter to measure the LEL on a semiannual basis. Records shall be maintained of the dates the inspections and measurements were made, results of inspections and measurements made (including raw data), and actions taken to correct any deficiencies noted.

(5) Tanks shall be constructed or equipped with a connection to a vapor recovery system that routes vapors from the vapor space under the landed roof (roof not floating on liquid) to a control device.

D. For tanks storing liquids with VOC vapor pressures greater than 0.50 psia, an internal floating deck of welded design shall be installed. **(10/14)**

E. The following requirements apply to storage tanks receiving or storing materials at above ambient temperature: **(10/14)**

(1) The permit holder shall reduce the temperature and/or vapor pressure of the stored material as needed to maintain a vapor pressure of less than 11.0 psia at actual storage conditions in each storage tank.

(2) For products stored in bolted deck storage tanks (EPNs 150-10, 100-11, 100-12, 100-21, 120-22 and 120-23), the permit holder shall reduce the temperature and/or vapor pressure of the stored material as needed to maintain a vapor pressure of less than 0.50 psia at actual storage conditions.

(3) For all tanks storing compounds requiring temperature and/or vapor pressure monitoring per items (1)–(2) of this special condition, the following sampling, monitoring and recordkeeping requirements apply:

(a) The liquid surface temperature shall be measured and recorded on a daily basis. The temperature measurement device shall be calibrated on an annual basis.

(b) No later than 90 days following the start of operation, the permit holder shall undertake sampling to determine the vapor pressure-temperature

relationship for each product subject to temperature and/or vapor pressure monitoring per items (1)–(2) of this special condition.

Vapor pressure-temperature relationship shall be determined by ASTM D2879 (1997 or later revision). An alternate ASTM standard may be used if the permit holder determines the alternate standard to be more appropriate. Additional sampling methods can be approved by the TCEQ Regional Director.

Records of vapor pressure-temperature relationship sampling shall include an indication of the method employed for analysis, and the correlation equation developed.

(c) The permit holder shall repeat the sampling procedure required in (b) on a quarterly basis.

(d) Compliance with items (1)–(2) of this special condition shall be determined from temperature monitoring data using the most recent vapor pressure-temperature relationship, with the following exceptions:

i. Prior to 90 days following the start of operations, vapor pressure may be estimated from process knowledge.

ii. If changes in product specifications affecting the vapor pressure properties of the liquid have occurred since the most recent sampling event, a suitable vapor pressure-temperature relationship having been determined within the past two years can be used.

(4) If measured temperature and/or vapor pressure indicate an excursion above the maximum vapor requirements of items (1)–(2) of this special condition, the permit holder may take up to 72 hours to lower the product temperature such that the liquid vapor pressure is below the permissible level. The method used to lower the product temperature shall be documented.

18. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. EPA Tanks 4.09 average monthly temperatures may be used for determining the monthly emissions from unheated tanks which receive liquids that are at or below ambient temperatures.

Emissions for tanks shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of this permit at the terminal.

19. Construction of additional volatile organic liquid storage tanks can be authorized only through the mechanisms detailed in this special condition. **(10/14)**

    A. Construction permit or permit amendment.

    B. Permit by Rule (PBR), provided that:

        (1) New storage tanks comply with the design and operational requirements of Special Condition 17; and

        (2) New floating roof storage tanks are designed to be drain dry, and designed with connections to control vapors under a landed roof.

20. Emissions associated with the transfer between storage tanks authorized in this permit and other storage tanks at this site in service prior to the start of operation of the last tank authorized by this permit (all storage tanks authorized by NSR Permit 2193 on September 1, 2012; subsequently referred to as existing tanks) is limited such that the annual emissions from these activities shall not exceed 5.0 tons in any rolling 12 month period. These emissions shall be determined as follows:

    A. If liquid is transferred from a tank authorized by this permit to an existing tank, the emissions due to filling (i.e., working losses) the existing tank shall be quantified. If the liquid transferred to the existing tank is subsequently loaded, those emissions must also be quantified.

    B. For transfer of liquid from an existing tank to a tank authorized by this permit, the emissions associated with refilling (i.e., working losses) the existing tank shall be quantified. If the roof of the existing tank is landed, also add the emissions from the existing tank from the time the transfer to the new tank was completed until the existing tank roof is floated again.

    Tank emissions shall be determined and documented in accordance with Special Conditions 18 and 37, as applicable. Loading emissions shall be determined and documented in accordance with Special Condition 28. The permit holder shall maintain an emissions record which includes calculated emissions of VOC identified in paragraphs A and B during the previous calendar month and the past consecutive 12 month period.

Marine Loading and Vapor Combustors

21. Marine loading of product from these facilities shall not exceed the following rates: **(10/14)**

Type of Vessel Loaded	Product loaded	Loading Rate (bbl/hr)
Ship	Naphthas, Kerosene/Distillate, Resid	10,000
Barge	Kerosene/Distillate, Resid	10,000
Barge	Naphthas	7,500

22. Notwithstanding any contrary requirement of Special Condition 21, the permit holder shall comply with one of the following restrictions for the barge loading of Resid **(10/14):**

    A. Loading shall not occur at more than one barge during any sixty minute period.

    B. The combined fill rate for barge loading shall not exceed 5,000 Bbl/hr over any sixty minute period.

    C. The vapor pressure of the material to be loaded shall be determined following the procedure in Special Condition 17.E(3)(b), and that vapor pressure shall be no greater than 0.10 psia at actual loading conditions.

    D. The permit holder shall submit a permit amendment application which includes sitewide modeling results for residual fuel emissions. Sitewide modeling results shall be subject to approval by the TCEQ Toxicology Division.

23. All loading lines (hoses) and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections. Flanged connections shall be used for all loading operations. The following actions shall be taken prior to removing loading lines/hoses from marine vessels and shore facilities.

    A. After the transfer is complete, the loading line/hose shall be isolated at the connection to the shore piping. The loading line/hose shall be vented at the shore piping and shall be gravity drained into the marine vessel per the site operating procedure.

    B. The loading line/hose may be disconnected from the shore and/or marine vessel piping after the liquid has been removed to the extent possible by gravity draining to the vessel being loaded. If it is necessary to further empty the line/hose, any residual liquid in the line/hose shall be immediately drained directly into a covered sump. If the line/hose is not emptied, the open end(s) of the line/hose shall be immediately capped, plugged, or blinded to prevent leakage.

    C. After the loading line/hose has been removed from the vessel, the vapor return line shall be immediately isolated.

    The actions shall be documented as part of the loading procedure.

24. All ship and barge loading emissions shall be directed to a vapor combustor for control if the liquid loaded has a vapor pressure greater than 0.10 psia at 95°F, or has a vapor pressure greater than 0.50 psia at actual loading conditions. Marine vessels shall not be loaded with liquid unless the vapor collection system is properly connected and the entire collection and destruction system is working as designed. **(10/14)**

25. If the liquid to be loaded has a VOC vapor pressure is greater than 0.10 psia at 95°F, or has a vapor pressure greater than 0.50 psia at actual loading conditions, the following requirements apply. The requirements of paragraphs C–H apply to all controlled ship

loading activities at the Galena Park Terminal (Regulated Entity Number [RN] 100237452). **(10/14)**

A. Unless the vessel must be inerted during loading due to safety requirements, the marine loading vapor collection system shall be operated such that the vacuum maintained in the collection system during loading is no less than one inch of water and that the vessel being loaded is also under a vacuum. The collection system vacuum shall be continuously monitored and recorded at least once every 15 minutes. The vacuum monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±5 percent of the vacuum being measured or ±0.15 inches of water.

B. If the vessel must remain inerted during loading (it is not possible to draw a vacuum on the marine vessel) due to safety concerns, the marine vessel must have passed an annual vapor tightness test as specified in 40 CFR § 63.565(c) (September 19, 1995) or 40 CFR § 61.304(f) (October 17, 2000). The permit holder shall record the leak test documentation for all ships loaded.

C. Uncaptured emissions (i.e., loading fugitives) from any ship shall not exceed 0.14 lb VOC per 1000 Bbl liquid loaded.

D. For the purposes of demonstrating compliance with the emission standard of paragraph C, VOC collection tests of ships received at the Galena Park Terminal shall be conducted as follows:

(1) Testing shall be conducted in accordance with the Testing Protocol in Attachment A of this permit.

(2) Compliance with the emission standard in paragraph C shall be demonstrated individually for each ship tested.

(3) The initial testing period begins after the first full calendar month from the date the permit is issued.

(4) Testing shall be completed at least 6 times per rolling 12-months period, and at least once per rolling 3-months period.

(5) Upon completion of regular testing as specified by this condition over a 60-month period, the permit holder may request approval to discontinue testing from the TCEQ, Air Permits Division.

(6) The same ship shall not be tested consecutively.

(7) Revisions to the test protocol in Attachment A of this permit shall not be made without the approval of the TCEQ, Air Permits Division.

(8) The Regional Office shall be notified at least 48 hours prior to each testing required by this condition.

E. The permit holder shall maintain the following records for each ship tested for a period of 5 years from the date of testing:

(1) The most recent vapor tightness certificate.

(2) A recent, completed form Q88.

F. Records of each testing conducted in accordance with paragraph D shall be maintained on site for a period of 5 years from the date of testing.

G. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all marine ship loading during the previous calendar month and the past consecutive 12 month period (i.e. 12-month rolling basis). The record shall include ship name and the total barrels loaded. Emissions from marine loading shall be calculated using the methods that were used to determine the MAERT limits in the permit application.

H. Records relating to ship testing shall be submitted to the TCEQ, Air Permits Division, as follows:

(1) During the first 12 months for which testing is required by this condition, test results shall be submitted for each testing event, no later than 60 days following the testing event.

(2) Following the initial period referred to in paragraph (1), the permit holder may submit either:

(a) Individual test results within 60 days of each testing event; or

(b) A summary of all testing results during the preceding 12-months, for each 12 month period following the initial period referred to in paragraph (1).

(3) Notwithstanding the requirements of paragraph (2), if testing is not conducted in accordance with the requirements of paragraph D of this condition, then the initial period referred to in paragraph (1) shall be extended so that it only covers months during which the permit holder was in compliance with the requirements of paragraph D.

I. Records shall be made available upon request by authorized representatives of the TCEQ, Air Permits Division or the TCEQ Office of Compliance and Enforcement.

26. The vapor combustors (EPNs: VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) used to control emissions shall achieve 99.8 percent control of the carbon compounds directed to it or reduce the VOC concentration in the exhaust to no greater than 10 ppmv corrected to 3 percent oxygen. This shall be ensured by maintaining the temperature in the combustion chamber above 1400°F prior to the initial stack test performed in accordance with Special Condition 26. Following the completion of that stack test, the six minute average temperature shall be maintained above the minimum one hour average temperature maintained during the last satisfactory stack test.

The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature monitor shall be installed, calibrated at least annually, and maintained according to the manufacturer's specifications. The device shall have an accuracy of the greater of ±2 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

Quality assured (or valid) data must be generated when the VCU is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the VCU operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

27. Each vapor combustor shall be operated with no visible emissions and have a constant pilot flame during all times waste gas could be directed to it. 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.

28. The permit holder shall maintain and update monthly an emissions record which includes calculated emissions of VOC from all loading operations over the previous rolling 12 month period. The record shall include the loading spot, control method used, quantity loaded in gallons, name of the liquid loaded, vapor molecular weight, liquid temperature in degrees Fahrenheit, liquid vapor pressure at the liquid temperature in psia, liquid throughput for the previous month and rolling 12 months to date. Records of VOC temperature are not required to be kept for liquids loaded from unheated tanks which receive liquids that are at or below ambient temperatures. Loading emissions shall be calculated using the methods used to determine the MAERT limits in the permit application for the facilities authorized by this permit. Sample calculations from the application shall be attached to a copy of the permit at the terminal.

29. Additional loading facilities, and throughput increases at existing facilities, shall not be authorized except in accordance with the requirements of this condition.

    A. Additional barge loading facilities, or increased throughput in barge loading, can be authorized by:

        (1) Permit amendment; or

        (2) Permit by Rule, provided that the control, monitoring and recordkeeping procedures are consistent with applicable requirements of Special Conditions 22–28.

    B. Additional ship loading facilities can be authorized by permit amendment. No additional ship loading facilities shall be constructed under Permit by Rule (PBR) without written approval of the TCEQ Executive Director.

    C. Increased throughput in ship loading can be authorized by:

        (1) Permit amendment; or

        (2) Permit by Rule, provided that the control, monitoring and recordkeeping procedures are consistent with applicable requirements of Special Conditions 22–28.

Stack Sampling

30. Sampling ports and platform(s) shall be incorporated into the design of the heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

31. The permit holder 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 heaters (EPNs F-101 and F-201) and vapor combustors (EPNs VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU) to demonstrate compliance with the MAERT, and Special Conditions 8 and 26. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods.

    Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

    A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

        (1) Proposed 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.

        (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

        (7) Procedure/parameters to be used to determine worst case emissions during the sampling period.

        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 the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

    B. Air contaminants emitted from the heaters to be tested for include (but are not limited to) CO, NO_x, $PM_{2.5}$ (condensable and filterable), and ammonia. Air

contaminants emitted from the vapor combustors to be tested for include (but are not limited to) VOC, CO, and NO_x. **(10/14)**

C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

Sampling associated with VCU-1A, VCU-1B, VCU-2A, VCU-2B, VCU-2C, and SD-4-VCU and authorized by the nonattainment permit N158 shall occur within 60 days after achieving the maximum operating rate authorized by nonattainment permit N158, but no later than 180 days after initial start-up of the facilities and at such other times as may be required by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate TCEQ Regional Office. Existing stack test records may be used to demonstrate compliance in lieu of conducting a new stack test on a VCU.

D. The heater being sampled shall operate at the maximum firing rate during stack emission testing. The VCU shall be operated with maximum waste gas flow (loading rate) and VOC concentration (loading light naphtha or equivalent gasoline blend) to demonstrate compliance with the maximum allowable emission rate limits. The VCU shall be operated with maximum waste gas flow when determining the minimum operating temperature and demonstrating compliance with the minimum destruction efficiency requirement. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the waste gas flow rate to the vapor combustor is greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.

One copy to each local air pollution control program.

Offsets

32. The following requirements apply to offsets: **(10/14)**

A. This Nonattainment New Source Review (NNSR) permit is issued based on the use of 82.9 tons per year (tpy) VOC emission reduction credits (ERCs) from TCEQ Emission Reduction Credit Certificate (ERCC) No. 2778. This ERCC provides offsets at the ratio of 1.3 to 1 for 63.76 tpy of VOC emissions authorized from the following facilities under this permit:

(1) Naphtha Splitter Reboiler Train I (EPN: F-101) — 6.9 tpy

(2) Naphtha Splitter Reboiler Train II (EPN: F-102) — 6.9 tpy

(3) Flare No. 101 (EPN: FL-101) — 0.2 tpy

(4) Tank No. 200-1 (EPN: 200-1) — 6.0 tpy

(5) Tank No. 200-2 (EPN: 200-2) — 6.0 tpy

(6) Tank No. 200-3 (EPN: 200-3) — 6.0 tpy

(7) Tank No. 100-20 (EPN: 100-20) — 0.3 tpy

(8) Tank No. 150-10 (EPN: 150-10) — 0.9 tpy

(9) Tank No. 120-24 (EPN: 120-24) — 3.5 tpy

(10) Tank No. 100-21 (EPN: 100-21) — 0.3 tpy

(11) Tank No. 100-11 (EPN: 100-11) — 0.3 tpy

(12) Tank No. 100-14 (EPN: 100-14) — 2.3 tpy

(13) Tank No. 5-0 (EPN: 5-0) — 1.2 tpy

(14) Tank No. 120-22 (EPN: 120-22) — 0.8 tpy

(15) Tank No. 100-12 (EPN: 100-12) — 0.3 tpy

(16) Tank No. 120-25 (EPN: 120-25) — 3.5 tpy

(17) Tank No. 100-13 (EPN: 100-13) — 0.4 tpy

(18) Tank No. 120-23 (EPN: 120-23) — 0.8 tpy

(19) Tank No. 100-15 (EPN: 100-15) — 2.3 tpy

(20) Process Fugitive Components (EPN: FUG) — 9.9 tpy

(21) Marine Loading Fugitives (EPN: MAR-LOADFUG) — 8.7 tpy

(22) Marine Loading VCU (EPN: MAR-VCU) — 4.4 tpy

(23) Emergency Generator (EPN: EGEN-1) — 0.7 tpy

(24) MSS Activities (EPN: MSS) — 4.2 tpy

(25) Transfers between tanks authorized under Special Condition 20 — 6.1 tpy

The offset requirement associated with item (25) is adjusted to ensure that the total offset requirement equals 82.9 tpy VOC.

B. This NNSR permit is issued on the condition that the permit holder obtain and provide 22.2 tpy of NOx ERCs to offset the 17.09 tpy NOx project emission increase for the facilities authorized by this permit at a ratio of 1.3 to 1, through participation in the TCEQ Emission Banking and Trading (EBT) Program.

The permit holder shall use 0.9 tpy NOx ERCs from TCEQ ERCC No. 2771 in order to provide offsets at the ratio of 1.3 to 1 for 0.69 tpy of NO_x emissions authorized from Flare No. 101 (EPN FL 101).

The permit holder shall, prior to the commencement of operation, obtain approval from the TCEQ EBT Program for the ERCs being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ ERCC number.

C. In addition to using ERCs for NO_x, or in place of using ERCs for NO_x, the permit holder may utilize Mass Emission Cap and Trade (MECT) Program allowances to satisfy all, or a portion (with the balance of the offset requirement being obtained through the use of Emission Reduction Credit Certificates) of the NO_x offset requirement for facilities required to participate in the MECT Program. The permit holder shall, prior to the commencement of operation, obtain approval from the TCEQ Emission Banking and Trading Program for the use of MECT allowances. If this offset option is chosen, the permit holder shall comply with the following:

(1) To satisfy the 1:1 portion of the 1.3:1 offset requirement for the project's increase of NOx emissions from facilities subject to the MECT Program, the permit holder shall permanently set aside 16.2 tons per year (tpy) of MECT allowances prior to the start of operation of the following facilities. At the end of each control period, the full amount of allowances set aside to satisfy any part of the 1:1 portion will be deducted, regardless of whether the actual NOx emissions from the following facilities are less than this amount.

(a) Naphtha Splitter Reboiler Train I (EPN: F-101) – 5.9 tpy

(b) Naphtha Splitter Reboiler Train II (EPN: F-201) – 5.9 tpy

(c) Marine Loading VCU Emissions Cap (EPN: MAR-VCU) – 2.6 tpy

(d) Emergency Generator (EPN: EGEN-1) – 1.6 tpy

(e) MSS Emissions from sources subject to MECT (EPN: MSS) – 0.2 tpy

(2) To satisfy the 0.3 portion of the 1.3:1 offset requirement for the project's increase of NOx emissions from facilities subject to the MECT program, the permit holder shall permanently transfer to the TCEQ 4.8 tpy of MECT allowances prior to the start of operation of the following facilities.

(a) Naphtha Splitter Reboiler Train I (EPN: F-101) – 1.8 tpy

(b) Naphtha Splitter Reboiler Train II (EPN: F-201) – 1.8 tpy

(c) Marine Loading VCU Emissions Cap (EPN: MAR-VCU) – 0.8 tpy

(d) Emergency Generator (EPN: EGEN-1) – 0.3 tpy

(e) MSS Emissions from sources subject to MECT (EPN: MSS) – 0.1 tpy

The offset requirement associated with item (d) is adjusted to ensure that the total offset requirement in paragraph (2) equals 4.8 tpy NO_x.

(3) If MECT allowances set aside to satisfy the 1:1 portion of the 1.3:1 offset requirement devalue due to future regulatory changes, the permit holder shall acquire additional MECT allowances equivalent to the allowance devaluation to make up for the devaluation change. Allowances used to satisfy the 0.3:1 portion of the offset requirement will not devalue due to future regulatory changes. The TCEQ EBT Program shall verify the use of these allowances.

(4) The permit holder may use MECT allowances to satisfy the 1.3:1 offset requirement for MSS Emissions from sources not subject to MECT (EPN: MSS). The permit holder shall permanently transfer to the TCEQ 0.3 tpy of MECT allowances to satisfy the offset requirement for the 0.24 tpy NO_x project emission increases for MSS emissions from sources not subject to MECT.

Maintenance, Startup, and Shutdown

33. This permit authorizes emissions from the following temporary facilities used to support the planned MSS activities identified in Special Condition 34 at permanent site facilities: frac tanks, vacuum trucks, portable control devices identified in Special Condition 43, and controlled recovery systems. Emissions from temporary facilities are authorized provided the temporary facility (a) does not remain on the plant site for more than 12 consecutive months, (b) is used solely to support planned MSS activities at the permanent site facilities authorized by this permit, and (c) does not operate as a replacement for an existing authorized facility.

34. This permit authorizes the emissions from the facilities authorized by this permit for the planned maintenance, startup, and shutdown (MSS) activities summarized in the table below.

Facility	Activity	EPN
Process Line	Shutdown, depressurize, and degas to flare. Vent to atmosphere.	MSS
Heater	Heater startup.	F-101, F-201
Storage Tanks	Drain, degas, and open tank.	MSS
Storage Tanks	Refill empty tank with landed roof.	MSS
Vessels and Piping	Empty and degas to control.	MSS
Piping	Degas to atmosphere.	MSS
Piping	Drain liquid.	MSS
Air movers and vacuum trucks	Remove liquid from storage tanks, piping, and other facilities for planned maintenance.	MSS

Facility	Activity	EPN
Frac tanks	Store liquid from tanks, piping, and other facilities undergoing planned MSS.	MSS
Minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet	Isolate, drain, degas to atmosphere, and refill to support planned maintenance.	MSS

Maintenance activities associated with minor facilities: pumps, valves, piping, filters, etc. with an isolated volume of less than 85 cubic feet in the table above may be tracked through work orders or equivalent. Emissions from these activities identified shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of and emissions associated with each planned MSS activity performed on the facilities identified as storage tanks, air movers, vacuum trucks, and frac tanks shall be documented in accordance with the applicable Special Condition(s).

The performance of each planned MSS activity associated with pressurized tanks and the facility identified as vessels and piping in the table above and the emissions associated with it shall be recorded and include at least the following information:

A. the process equipment at which emissions from the MSS activity occurred, including the emission point number and common name of the process equipment;

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.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

35. Permanent facilities, with the exception of atmospheric storage tanks, shall be depressurized, emptied, degassed, and placed in service in accordance with the following requirements.

A. 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 psi at the normal process temperature and 95°F may be opened to atmosphere and

drained in accordance with paragraph C of this special condition. 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 psi 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 equipment is no longer vented to atmosphere.

C. All liquids from process equipment must be removed to the maximum extent practical prior to opening equipment to commence degassing and/or maintenance. Liquids must be transferred into a storage tank authorized by this permit or a vessel meeting the requirements of Special Condition 41 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 psi 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. The facilities to be degassed shall not be vented directly to atmosphere, except as necessary to establish isolation of the work area or to monitor VOC concentration following controlled depressurization. The venting shall be minimized to the maximum extent practicable and actions taken recorded. The control device or recovery system utilized shall be recorded with the estimated emissions from controlled and uncontrolled degassing calculated using the methods that were used to determine allowable emissions for the permit application.

(1) For MSS activities that may be tracked through work orders, the following option may be used in lieu of (2) below. The facilities being prepared for maintenance shall not be vented directly to atmosphere until the VOC concentration has been verified to be less than 5 percent of the lower explosive limit (LEL) per documented site procedures used to de-inventory equipment to a control device for safety purposes (i.e., hot work or vessel entry procedures).

(2) The locations and/or identifiers where the purge gas or steam enters the process equipment and the exit points for the exhaust gases shall be recorded (process flow diagrams [PFDs] or piping and instrumentation diagrams [P&IDs] may be used to demonstrate compliance with the requirement). If the process equipment is purged with a gas, two system volumes of purge gas must have passed through the control device or controlled recovery system before the vent stream may be sampled to verify acceptable VOC concentration prior

to uncontrolled venting. The VOC sampling and analysis shall be performed using an instrument meeting the requirements of Special Condition 36. The sampling point shall be upstream of the inlet to the control device or controlled recovery system to determine whether VOC concentrations are acceptable for uncontrolled venting. 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. If there is not a connection (such as a sample, vent, or drain valve) available from which a representative sample may be obtained, a sample may be taken upon entry into the system after degassing has been completed. The sample shall be taken from inside the vessel so as to minimize any air or dilution from the entry point. The facilities shall be degassed to a control device or controlled recovery system until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL, with the exception of the pressurized storage tanks which must be degassed to control until the VOC concentration is 2,000 ppmv or 2 percent of the LEL. Documented site procedures used to de-inventory 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.

36. 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:

        (1) The instrument shall be calibrated within 24 hours of use with a calibration gas such that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored shall be less than 2.0. The calibration gas and the gas to be measured, and its approximate (RF) shall be recorded.

        (2) 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, recording VOC concentration each minute. As an alternative the VOC concentration may be monitored over a five-minute period with an instrument designed to continuously measure concentration and record the highest concentration read. The highest measured VOC concentration shall be recorded and shall not exceed the specified VOC concentration limit prior to uncontrolled venting.

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

        (1) The air contaminant concentration measured as defined in (3) is less than 80 percent of the range of the tube and is at least 20 percent of the maximum range of the tube.

(2) The tube is used in accordance with the manufacturer's guidelines.

(3) At least 2 samples taken at least 5 minutes apart must satisfy the following prior to uncontrolled venting:

measured contaminant concentration (ppmv) < release concentration.

Where the release concentration is:

5,000*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 (5000 ppmv standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 5 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard at 10 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90 percent of the calibration gas certified value. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 10 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the LEL response is within 95 percent of that for the appropriate gas.

(4) Definitions

(a) An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

(b) The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be 10 percent of the LEL for that gas.

D. Lower explosive limit measured with a lower explosive limit detector (2 percent LEL standard). If a LEL detector is used to verify compliance with this standard rather than a Method 21 instrument, it must read a LEL of 1 percent or lower.

(1) The detector shall be calibrated monthly with an appropriate certified gas standard with a concentration between 2 and 3 percent of the lower explosive limit (LEL) for the appropriate gas. Records of the calibration date/time and calibration result (pass/fail) shall be maintained.

(2) A daily functionality test shall be performed on each detector using the same type of certified gas standard. The LEL monitor shall read no lower than 90% of the calibration gas certified value in ppmv. Records, including the date/time and test results, shall be maintained.

(3) A certified methane gas standard equivalent to 2 to 3 percent of the LEL for the appropriate gas may be used for calibration and functionality tests provided that the concentration response is within 95 percent of that for the appropriate gas.

(4) Definitions

(a) An appropriate gas is one which when used for calibration of the detector, ensures that the response factor (RF) of the VOC (or mixture of VOCs) to be monitored is less than 1.2.

(b) The same type of certified gas standard is a standard consisting of the same gas as used for calibration, certified to be the same concentration (between 2 and 3 percent of the LEL for that gas).

37. This permit authorizes MSS emissions (EPN MSS) from internal floating roof storage tanks during planned floating roof landings. Tank roof landings include all operations when the tank floating roof is on its supporting legs. The following requirements apply to tank roof landings.

A. If the tank is to be completely drained, the tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank and tank sump have been drained to the maximum extent practicable without the use of a sump stripping pump or entering the tank. The sump shall be emptied within 4 hours unless the vapor space is routed to control.

B. If the VOC vapor pressure of the liquid being drained from the tank is greater than 0.50 psia, a vapor recovery system shall be connected to the vapor space under the landed tank roof and the vapor space vented to a control device meeting the requirements of Special Condition 43. 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. The vapor space shall be vented to the control device during the period from the floating roof is landed until the tank has been degassed per part D of this condition or the tank has been filled so that the landed roof is floating on liquid. The vapor recovery system collection rate shall always be greater than 100 cubic feet per minute when the tank is idle and two times the fill rate when the tank is being refilled. There shall be no other gas/vapor flow out of the vapor space under the floating roof when the vapor space is directed to the control device. This shall be demonstrated as follows:

(1) The concentration of organic vapor in the vapor space above the internal floating roof shall be sampled and verified not to exceed 30 percent of its LEL.

(2) This sampling shall be performed annually on a tank being filled and on an idle tank, or as requested by the TCEQ Regional Office. The sampling shall be

performed in the morning if the tank is idle or being filled, as applicable, during that period.

(3) The vapor collection recovery system shall be maintained at the minimum vapor collection system pressure set point required prior to and during sampling.

(4) The tank sampled, sampling results, flow rates, date and time shall be recorded. Sampling may be waived if a tank roof is not landed in a calendar year.

C. Tank roofs shall not be landed for more than 72 hours unless the tank has been completely drained and degassing commenced per part D of this condition.

D. If necessary, tanks shall be degassed as follows:

(1) If the tank had not been emptied, degassed, and entered within the last 24 months, the permit holder shall open at least one entry into the tank to perform a visual inspection of the tank floor and sump to confirm that there is no standing liquid present and the drain dry tank is operating as designed. This inspection shall be performed during controlled degassing, if applicable. If any standing liquid is noted, it must be removed prior to uncontrolled tank degassing.

(2) If the VOC vapor pressure of the liquid stored in the tank is greater than 0.10 psia, the gas or vapor removed from the vapor space under the floating roof must be routed to a control device through a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 5,000 ppmv or 5 percent of the LEL as measured per Special Condition 36. Degassing shall continue until the VOC concentration is less than 2,000 ppmv or 2 percent of the LEL if the tank will be opened or ventilated without control as allowed by part E of this condition. 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.

(3) 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.

(4) The vent stream before the control device shall be sampled to determine whether VOC concentrations are acceptable for uncontrolled venting. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 36.

(5) 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.

E. The tank may be opened without restriction and ventilated without control after all standing liquid has been removed from the tank and the vapor space VOC concentration is less than 2000 ppmv or 2 percent of the LEL or the liquid previously stored in the tank had a VOC vapor pressure less than or equal to 0.10 psia. A tank shall not be ventilated without control more than once in any rolling 12 month period and only one tank shall be ventilated without control at any time.

F. The following requirements apply to filling tanks with landed roofs until the roof is off its legs (floating on the liquid).

(1) The vapor space under the landed floating roof shall be vented to control per part B of this condition prior to commencing the filling of an empty tank unless the tank is being filled with liquid with a VOC vapor pressure less than 0.50 psia and the tank has verified dry by visual inspection of the tank floor and sump.

(2) Tanks shall be refilled as rapidly as practicable.

G. 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:

(1) Identification of the tank and emission point number, liquid stored, and any control devices or recovery systems used to reduce emissions;

(2) reason for the tank roof landing;

(3) date, time, and the other information specified below for each of the following events:

(a) the roof was initially landed,

(b) volume in the tank when liquid withdrawal stopped or when the tank and sump were fully drained,

(c) vapor space volume under the floating roof vented to control device and ventilation flow rate to the control device,

(d) start and completion of controlled degassing, total volumetric flow, results of any tank inspection of the tank for liquid and any corrective actions taken, VOC concentration sampling results;

(e) all standing liquid was removed from the tank,

(f) tank refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and

(g) tank roof off supporting legs and floating on liquid;

(4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted while the roof was landed 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 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.

38. Reserved.

39. All permanent facilities must comply with all operating requirements, limits, and representations this permit during planned startup and shutdown unless alternate requirements and limits are identified in this permit. Alternate requirements for NO_x and CO emissions from the heaters during planned startup and shutdown are 0.025 lb/MMBtu and 100 ppmv corrected to 3 percent oxygen, respectively, if the startup period does not exceed 8 hours in duration and the time it takes to complete the shutdown does not exceed 4 hours.

40. The following requirements apply to vacuum and air mover truck operations to support planned MSS at this site:

    A. Prior to initial use, identify any liquid in the truck. Record the liquid level and document the VOC partial pressure. After each liquid transfer, identify the liquid, the volume transferred, and its VOC partial pressure.

    B. The vacuum/blower exhaust shall be routed to a control device and the fill line intake equipped with a "duckbill" or equivalent attachment if the hose end cannot be submerged in the liquid being collected.

    C. A daily record containing the information identified below is required for each vacuum truck in operation at the site each day.

        (1) 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.

        (2) 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 at least every hour during each transfer shall be recorded, measured using an instrument meeting the requirements of Special Condition 36.A or B.

    D. Record the volume in the vacuum truck at the end of the day, or the volume unloaded, as applicable.

    E. 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.

41. The following requirements apply to frac, or temporary, tanks and vessels used in support of MSS activities.

    A. The exterior surfaces of these tanks/vessels that are exposed to the sun shall be white or aluminum. This requirement does not apply to tanks/vessels that only vent to atmosphere when being filled, sampled, gauged, or when removing material.

    B. These tanks/vessels must be covered and equipped with fill pipes that discharge within 6 inches of the tank/vessel bottom. The tank vapor space shall be vented to a control device meeting the requirements of Special Condition 43.

    C. These requirements do not apply to vessels storing less than 450 gallons of liquid that are closed such that the vessel does not vent to atmosphere except when filling, sampling, gauging, or when removing material.

    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. This record must be updated by the last day of the month following. The record shall include tank identification number, dates put into and removed from service, control method used, tank capacity and volume of liquid stored in gallons, name of the material stored, VOC molecular weight, and VOC partial pressure at the estimated monthly average material temperature in psia. 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."

42. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity. Total VOC planned MSS emissions associated with the facilities authorized by this permit shall not exceed the quantity shown in the MAERT for EPN MSS.

43. Control devices required by this permit for emissions from planned 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. Storage tank emissions shall be controlled by a VCU or thermal oxidizer meeting the requirements of part B of this condition.

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

    A. Carbon Adsorption System (CAS).

        (1) The CAS shall consist of 2 carbon canisters in series with adequate carbon supply for the emission control operation.

(2) The CAS shall be sampled downstream of the first canister 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) It may be extended to up to 30 percent of the minimum potential saturation time for a new canister of carbon. The permit holder shall maintain records including the calculations performed to determine the minimum saturation time.

(b) 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 the VOC concentration on the initial sample downstream of the first carbon canister following a new polishing canister being put in place is greater than 100 ppmv above background, it shall be assumed that breakthrough occurred while that canister functioned as the final polishing canister and a permit deviation shall be recorded.

(3) The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 36.A or B.

(4) Breakthrough is defined as the highest measured VOC concentration at or exceeding 100 ppmv above background. 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 four hours. 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.

(5) Records of CAS monitoring shall include the following:

(a) Sample time and date.

(b) Monitoring results (ppmv).

(c) Canister replacement log.

(6) Single canister systems are allowed if the time the carbon canister is in service is limited to no more than 30 percent 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.

B. Thermal Oxidizer/Vapor Combustor.

(1) If controlling storage tank emissions, the thermal oxidizer/vapor combustion unit shall provide no less than 99.8 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This shall be demonstrated per by

having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor..

(2) If controlling MSS emissions from facilities other than atmospheric storage tanks, the thermal oxidizer/vapor combustion unit shall provide no less than 99.5 percent DRE control of the waste gas directed to it, or allow a VOC exit stream concentration of no greater than 10 ppmv, dry corrected to 3 percent oxygen. This may be demonstrated by:

(a) maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than 1400°F with 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/combustor; or

(b) having completed a control efficiency demonstration (stack test) in accordance with the approved test methods in 30 TAC 115.545 (relating to Approved Test Methods) within the past 12 months and maintaining thermal oxidizer/vapor combustor firebox exit temperature at not less than that temperature maintained during the demonstration with waste gas flow limited to that maintained during the demonstration while waste gas is being fed into the oxidizer/combustor.

The thermal oxidizer/vapor combustor exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer/combustor. 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 ±0.75 percent of the temperature being measured expressed in degrees Fahrenheit or ±4.5°F.

C. Internal Combustion Engine.

(1) The internal combustion engine shall have a VOC destruction efficiency of at least 99.5 percent.

(2) The engine must have been stack tested with butane or propane to confirm the required destruction efficiency within the period specified in item (3) below. 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 following each occurrence of engine maintenance that may

reasonably be expected to increase emissions including oxygen sensor replacement and catalyst cleaning or replacement. 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 36.A are also acceptable for this documentation.

(3) The engine shall be operated and monitored as specified below.

(a) If the engine is 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. The engine must have been stack tested within the past 12 months in accordance with item (2) of this condition.

The test period may be extended to 24 months if the engine exhaust is sampled once an hour when waste gas is directed to the engine using a detector meeting the requirements of Special Condition 36.A. 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 engine. The concentrations shall be recorded and the MSS activity shall be stopped as soon as possible if the VOC concentration exceeds 100 ppmv above background.

(b) If an oxygen sensor-based AFR controller is not used, the engine exhaust to atmosphere shall be monitored continuously and the VOC concentration recorded at least once every 15 minutes when waste gas is directed to the engine. 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 engine. The method of VOC sampling and analysis shall be by detector meeting the requirements of Special Condition 36.A. 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 if the VOC concentration exceeds 100 ppmv above background for more than one minute. The date and time of all alarms and the actions taken shall be recorded. The engine must have been stack tested within the past 24 months in accordance with part (2) of this condition.

D. The flare (EPN FL-101) shall be used to control the emissions from process train shutdowns. After the process train has been depressurized to the flare, the permit holder shall install and operate continuous flow monitors that provide a record of the exhaust vent stream and natural gas flows to the flare. The flow monitor sensor and

analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. The monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be ±5.0%, temperature monitor shall be ±2.0% at absolute temperature, and pressure monitor shall be ±5.0 mm Hg. The exhaust vent gas from the process shall be assumed to have no net heating value so that the natural gas flow shall provide for sufficient heating value at the flare tip.

Date: October 8, 2014

Attachment A

Permit 101199 and N158

Test Plan for the Direct Measurement of Uncollected VOC Loading Losses During Marine Vessel Loading

KM Liquids Terminals LLC
Galena Park Terminal

Date: September 26, 2014

Table of Contents

Page

1.0 Introduction 1-1

2.0 Loading Process Description 2-1

2.1 VOC Emissions Regulations 2-3
2.2 Potential Uncollected Loading Loss Leak Points 2-3

3.0 Measurements Approach 3-1

3.1 Leak Detection Approach 3-1
3.1.1 FLIR Camera Survey (primary leak detection method) 3-2
3.1.2 EPA Method 21 Screening (alternate leak detection method) 3-2
3.2 Leak Emission Measurement Approach 3-4

4.0 Sampling and Measurement Equipment 4-1

4.1 FLIR Camera 4-1
4.2 Thermo TVA-1000 4-2
4.3 Bacharach Hi Flow Sampler 4-3

5.0 Other Measurement Data 5-1

6.0 Quality Assurance and Quality Control Procedures 6-1

6.1 FLIR GF320 Camera 6-1
6.2 Thermo TVA-1000 6-2
6.3 Bacharach Hi Flow Sampler 6-3

7.0 Data Reduction and Reporting 7-1

8.0 References 8-1

List of Figures

Page

2-1 Aerial images of Panamax tanker docked at Kinder Morgan Galena Park Terminal Ship Dock #3 and Ship Dock #4 2-2
2-2 Process diagram and study area boundary 2-2
2-3 P/V valves, P/V breaker and mast riser on the deck of a tanker 2-5

4-1 The FLIR GF320 Camera 4-2
4-2 The Thermo TVA-1000 4-2
4-3 Bacharach Hi Flow Sampler 4-3

List of Tables

Page

1-1 Ship Loading Uncollected/Fugitive Emissions Testing Summary……1-2
2-1 Potential sources of vapor leaks on a typical Panamax tanker 2-4

STATEMENT OF LIMITATIONS

This document was developed for the sole use of KM Liquids Terminals, LLC. The scope of this study may not be appropriate to satisfy the needs of other users. Any use of the information provided in this document by any other user is at the sole risk of said user.

1.0 Introduction

KM Liquids Terminals, LLC (KMLT) currently operates the Galena Park Terminal marine docks as a loading/offloading terminal for ships and barges. KMLT obtained the appropriate New Source Review (NSR) authorization required to load gasoline and gasoline blendstocks onto marine vessels and utilizes marine vapor control equipment that allows for the collection of vapors generated during ship loading operations. Collected vapors are routed to a vapor combustion unit (VCU) with a minimum destruction efficiency of 99.8%.

KMLT submitted a document entitled "Test Plan for the Direct Measurement of Uncollected VOC Loading Losses during Marine Vessel Loading" in May 2013 to the Texas Commission on Environmental Quality (TCEQ) and was granted approval on June 4, 2013 to conduct the proposed ship testing. The test plan was later updated to incorporate lessons learned during initial testing efforts to streamline the testing approach while maintaining high data quality objectives and ensuring testing objectives are achieved. The first field measurement study took place on June 11 – 14, 2013 while a tanker, the Atlantic Pisces, was loaded with 305,000 barrels of gasoline blendstock. The second study took place on September 6, 2013 while the Apollon was loaded with 253,000 barrels of gasoline blendstock. The third study took place on September 19, 2013 while the Norient Star was loaded with 295,400 barrels of gasoline blendstock. Each of these measurement studies was successfully executed and all study objectives were accomplished.

Leaking components on all three ships were identified using a portable flame ionization detector (FID) following the general guidance of EPA Method 21. Remote screening using a specialized infrared camera (FLIR GF250) was also used where allowed. Leak rates were measured using a Bacharach Hi Flow® Sampler. Potential fugitive leak points on the tankers included tank tops, tank cleaning machines, and pressure/vacuum (P/V) valves and manifold vapor connection spools.

The above referenced tankers were required to perform annual leak vapor-tightness tests. In addition, the tanker crews also conducted regular maintenance checks, adhered to standard operating procedures, routed loading loss emissions to pollution control devices, and maintained cargo tank pressures near atmospheric pressure throughout the loading process. As such, the potential for uncollected loading losses to occur during routine loading operations on these vessels was expected to be relatively low. As summarized below in Table 1-1, the results of these measurement studies confirmed this expectation.

Table 1-1.
Ship Loading Uncollected/Fugitive Emissions Testing Summary

Parameter	Tanker Name		
	Atlantic Pisces	**Apollon**	**Norient Star**
Year Ship Built	2009	2005	2008
Loaded Volume (barrels)	305,000	253,000	295,400
Loading Duration (hours)	64	42	79
Testing Duration (hours)	64	12[a]	12[a]
Number of Components Monitored	109	130	108
Number of Components with a Detectable Leak Rate[b]	9	3	10
Total Uncollected/Fugitive Emissions (lbs.)	5.2	34.2	17.3
Uncollected/Fugitive Emissions Factor (lbs./1,000 barrel loaded)	0.017	0.135	0.059

a – Testing took place near the end of the load and results were conservatively extrapolated over the entire duration of the load.
b – Measurement sensitivity was approximately 4 grams/hour.

Upon completion of the above referenced measurement studies, KMLT submitted the test results to the TCEQ as part of a collaborative effort to evaluate the accuracy of the long standing collection efficiency value of 95% the TCEQ currently assumes for ocean going vessels. Upon review of the test results, the TCEQ drafted New Source Review (NSR) Boilerplate Special Conditions that would apply to companies who proposed ship loading emissions rates based on collection efficiencies which are greater than the long standing TCEQ collection efficiency of 95%. The Boilerplate Special Condition requires companies to commit to a ship testing regiment to be conducted over a period of time that is intended to demonstrate compliance with the specific uncollected/fugitive emission factor that was utilized to establish NSR federally enforceable emission rate limits.

In support of NSR Permit No. 101199, KMLT submitted this test plan to outline the required measurement studies that will be conducted to demonstrate continued compliance with the Permit No. 101199 annual average ship loading uncollected/fugitive emission factor of 0.14 lbs/1,000 bbls loaded.

2.0 Loading Process Description

It is anticipated that product will be loaded onto ocean-going tankers, which include but are not limited to Panamax tankers with capacities of approximately 300,000 barrels (bbl). Panamax vessels are mid-size tankers whose size makes them ideally suited to operate in areas of reduced draft or where restrictions prevent the use of larger vessels. An aerial image of a Panamax tanker docked at the KMLT Galena Park Terminal is shown in Figure 2-1.

The product loaded on the tanker during testing is expected to be gasoline and/or gasoline blendstock. The anticipated average loading rate is approximately 6,300 bbl/hr with lower rates near the beginning and end of loading and higher rates in between. The entire loading process is expected to take approximately 48 hours.

Gasoline or gasoline blendstock can be ignited and its vapors are explosive when mixed with air in certain concentrations. Therefore, an inert atmosphere will be delivered into each cargo tank on the vessel prior to loading. The inert atmosphere is typically stack gas from on-board diesel-fired combustion sources (e.g., boilers) that has been scrubbed through water. Before loading takes place, KMLT personnel will board the tanker to review paperwork and ensure that all of the necessary testing and operational equipment is in place and in working order consistent with the requirements of the ship's Captain and governance of the owners of the ship.

Once all pre-transfer preparations are completed, product loading can begin. Loading the tanker primarily consists of pumping product into the vessel's cargo tanks. As product enters the cargo tanks, the vapors inside the tanks will be routed to the vapor control unit on the dock. Loading typically begins slowly at a low pressure to ensure that equipment is working correctly and that connections are tight. Steady pressure is eventually achieved and held until the "topping-off" phase when the tanks are nearly full. As the tanker approaches capacity, personnel will direct the flow of product and maintain close contact with the pumping facility to decrease and ultimately stop the flow of product.[1]

The dockside portion of the vapor recovery system is operated under sub-atmospheric pressure. Therefore, the measurement of uncollected loading losses in this study is restricted to those components located on the ship which are under positive pressure. A loading process diagram along with this test plan's study boundary is provided in Figure 2-2.

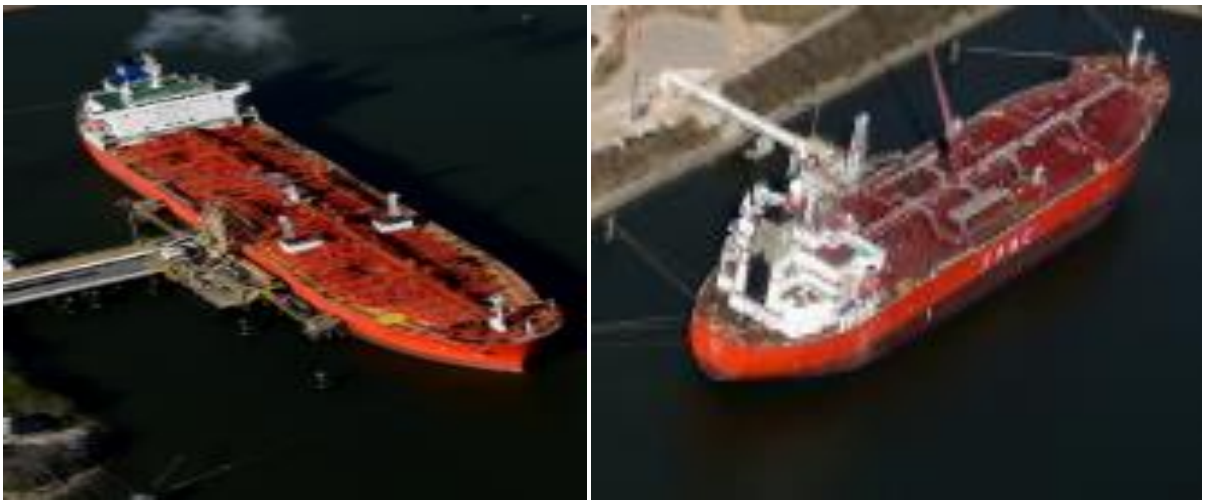


Figure 2-1. Aerial images of Panamax tanker docked at KMLT Galena Park Terminal Ship Dock #3 and Ship Dock #4

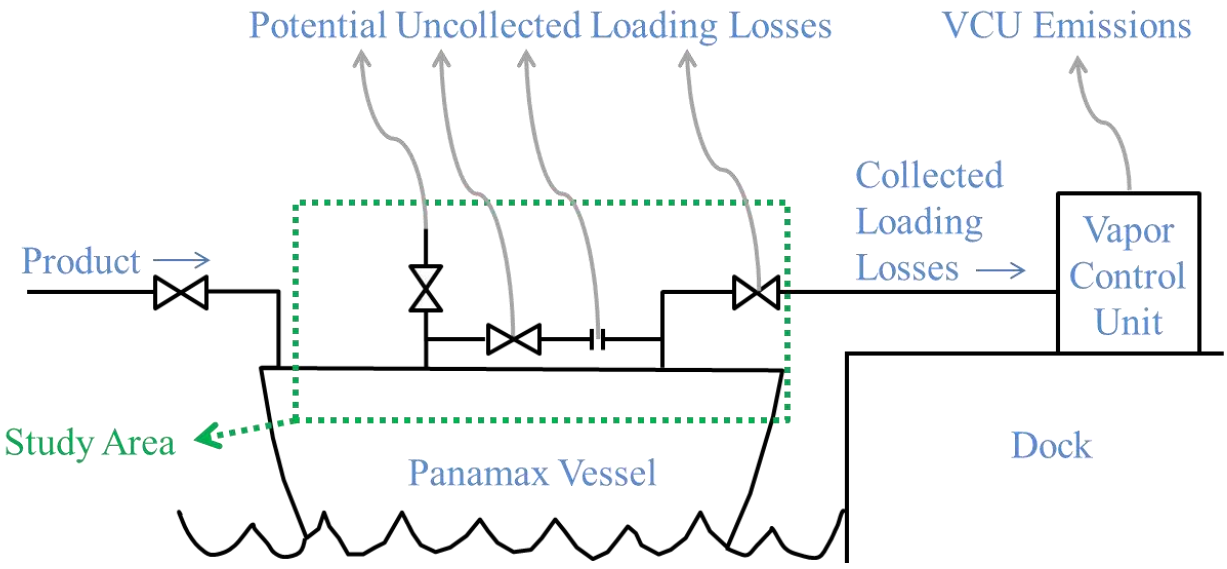


Figure 2-2. Process diagram and study area boundary

2.1 VOC Emissions Regulations

Tankers like the Panamax Class vessels to be tested in this study are generally subject to the basic standards, compliance and testing requirements for vessels outlined in CFR Title 40: Part 63 – Subpart Y - National Emission Standards for Marine Tank Vessel Loading Operations[2] among other similar federal regulations. These regulations require that loading operations be limited to those vessels that are judged vapor-tight, which is demonstrated through a vapor-tightness test. This test must be conducted at least once every twelve months, and the vessel owner is required to maintain documentation of this test. Specific test methods and procedures are covered in 40 CFR §63.565. TCEQ has similar state regulations that govern the loading of petroleum products under 30 TAC Chapter 115.[3]

The tanker to be tested will also be subject to Regulation 15 of MARPOL Annex VI, which outlines international requirements for air emissions of VOCs from tankers[4]. This regulation requires that all tankers have an approved and effectively implemented ship specific VOC Management Plan. This plan prevents or minimizes VOC emissions through the use of established best practices.

By performing annual vapor-tightness tests, conducting regular maintenance checks, adhering to the procedures outlined in the VOC Management Plan, routing loading loss emissions to a vapor collection unit, and maintaining cargo tank pressures near atmospheric pressure throughout the loading process, the potential for uncollected loading losses to occur during routine operations should be negligible.

2.2 Potential Uncollected Loading Loss Leak Points

The vapor system of a typical tanker is interconnected throughout the ship's cargo tanks. It is also connected with the inert gas deck main piping running from the deck isolation valve throughout the length of the cargo block. Branch lines go into the top of each cargo tank. Any uncollected loading losses should originate from the cargo tank top access points or the vapor system itself. Potential leak points in the vapor system include various valves, sampling ports and piping/manifold connections. For the tank tops, potential leak points include the access points for gauging, maintenance, and the portable tank cleaning machines.

Table 2-1 includes types of potential sources of uncollected loading losses on a typical Panamax tanker. These potential leak sources are inspected during regular maintenance conducted by tanker personnel. Typical maintenance checks are also listed in Table 2-1.

Figure 2-3 shows the deck of a tanker and highlights the vapor system's primary pressure control and release mechanisms, including the mast riser, the individual tank pressure/vacuum (P/V) valves, and the secondary safety mechanism of the P/V breaker. None of these pressure control mechanisms are designed to release emissions during routine loading operations.

Table 2-1. Potential sources of vapor leaks on a Panamax tanker

Potential Leak Source	Typical Maintenance Checks
Tank tops	Inspect seals, gaskets and portable tank gauging accesses
Tank cleaning machine access plates	Inspect seal areas between plate and tank
Inert gas main piping couplings	Inspect seal areas around circumference of coupling
Inert gas main drains	Check threaded connections
Manifold vapor connection spool	Check vapor spools at each flanged end and at each manifold
Sampling ports	Check any threaded connections and shut off valves
Deck isolation valve	Check area between valve stem and packing and connection flanges
P/V Valves (one per tank)	Check exhaust areas and connection flanges
P/V Breaker	Check exhaust areas

Figure 2-3. P/V valves, P/V breaker and mast riser on the deck of a tanker (source IMO MEPC.1 Circ 680[5])

3.0 Measurements Approach

The primary objective of this study is the quantitation of uncollected VOC loading losses occurring on a tanker during routine loading operations. This will be done as follows:

- Identify any leaking components listed in Table 2-1 during loading using an infrared camera,
- Identify any leaking components listed in Table 2-1 during loading using EPA Method 21 screening,
- Measure emission rates of leaking components using a Bacharach Hi Flow Sampler,
- Sum the VOC emissions from all leaking components to determine the cumulative uncollected loading emissions (L_{LF}) of VOCs from the tanker during loading, and
- Calculate VOC loading loss emissions factor (lbs/1,000 bbl loaded).

Hydrocarbon concentrations in the headspace of the cargo tanks reach their highest levels at the end of the loading process. KMLT proposes to conduct field measurements over a period of at least six hours as close to the end of the loading process as practical. This testing duration should ensure that each component is screened for leaks multiple times. Out of concern for worker safety, testing will generally not take place during overnight hours (i.e., 11:00 PM – 5:00 AM).

This study is concerned with the measurement of emissions during routine operations. The direct measurement of any "upset" emissions associated with non-routine operations is outside the scope of this measurements study. The following subsections describe the measurements approach in greater detail.

3.1 Leak Detection Approach

Leaks will be detected using a FLIR GF320 camera or equivalent (e.g., EyeCGas™ camera). These types of infrared cameras can detect very low VOC leak rates (e.g., six grams per hour at a distance of twenty feet under ideal weather conditions). They have the ability to survey a large number of components in a relatively short time period and are particularly well suited for quickly identifying large leaks. More information on the FLIR camera is provided below and in Sections 4 - Sampling and Measurement Equipment and Section 6 - Quality Assurance and Quality Control Procedures.

In addition to the FLIR GF320, EPA Method 21 screening will be conducted to identify leaks. This approach involves handheld monitoring devices checking for leaks following the general guidance of EPA Method 21.

The potential fugitive emission points listed in Table 2-1 are located on the deck of the tanker and are suitable for testing using either of these leak detection methods. Any leaking component will be assigned a unique ID. All testing personnel will use that ID when documenting measurement results. Each potential emission source listed in Table 2-1 will be inspected for leaks multiple times during testing.

3.1.1 FLIR Camera Survey

Personnel will perform remote infrared camera work to identify potential VOC emission points and qualitatively assess each point's relative emissions potential. Once the camera is in the optimal position relative to the potential leak point and all camera operating parameters are optimized, at least 20 seconds will be spent inspecting each potential leak point. If any leaks are detected then video of the leak will be recorded. Any videos of leaking components will be provided with the final report. Once all of the components in Table 2-1 have been surveyed, the camera survey process for all components will start again. When conducting subsequent rounds of surveying, components with previously detected leaks may be evaluated more frequently than non-leaking components.

3.1.2 EPA Method 21 Screening

EPA Method 21 – Determination of Volatile Organic Compound Leaks – is the standard procedure for the determination of VOC leaks from process equipment[6]. This method typically applies to valves, flanges and other connections, pumps and compressors, pressure relief devices, process drains, open-ended valves, pump and compressor seal system degassing vents, accumulator vessel vents, agitator seals, and access door seals.

Application of Method 21 is also referred to as screening. Two members of the field team will conduct screening throughout the testing period following the general guidance of EPA Method 21. Each leak point listed in Table 2-1 should be screened at least twice over the course of loading. When performing source screening, the portable analyzer probe opening will be placed at the leak interface to obtain a "screening value." The probe will be held perpendicular, not tangential, to this interface. The probe will then be moved along the interface periphery while observing the instrument readout. If an increased meter reading is observed, the probe will be

moved slowly along the interface where concentrations register until the maximum meter reading is obtained. The probe inlet will be left at this maximum reading location for approximately two times the instrument response time. The maximum reading will be recorded as the screening value on a prepared data collection form.

The instrument measurement may exceed the scale of the instrument. This is referred to as a pegged readout and the measurement result will be noted as "pegged." Care will be taken to avoid fouling the probe with grease, dust, or liquids. A short piece of Teflon® tubing will be used as a probe tip extender. This extender will be snipped off as the tip fouls. Instrumentation that may be used as a part of this approach is discussed in Section 4.

For the purposes of this study, any screening concentration greater than 500 ppmc will be considered noteworthy and immediate action will be taken. Given the relatively low operating pressures in the cargo tanks, and based on concentration and leak emission rate data collected in previous similar studies, this screening concentration is very conservative. If a screening concentration greater than 500 ppmc is detected then a leak rate measurement will be generally be collected as soon as possible using the approach outlined in Section 3.2.

For each potential leak point with a screening concentration above 500 ppmc, the following data will be recorded:

- Component Location
- Component Description/ID
- Date and time
- Screening concentration (ppm)

Once all of the components in Table 2-1 have been screened, the screening process for all components will start again. When conducting subsequent rounds of screening, components with previous higher screening values may be evaluated more frequently than components with lower screening values.

3.2 Leak Emission Measurement Approach

Leak rate measurement efforts will focus on those components deemed most likely to be leaking based on the information acquired from the leak detection efforts described in Section 3.1. Any leak point identified by the camera survey, and any leak point with an EPA Method 21 concentration above 500 ppmc, will have its leak emission rate determined using the emission rate measurement method described in this section. In cases where multiple leaking components are simultaneously active, priority should be given to measuring whatever leaking component is believed to be more significant. Any component with a detected leak should have its leak rate quantified multiple times throughout the loading process to account for any temporal variation.

Leak emission rates will be measured using a Bacharach Hi Flow Sampler. A detailed description of the Bacharach Hi Flow Sampler is provided in Section 4.3. Quality assurance and quality control procedures are addressed in Section 6.3. This section provides a description of how this sampler is expected to be utilized in this study.

Before measuring emissions from a particular leak point using the Hi Flow Sampler, the appropriate capture device for the leak/emission source must be selected. Choices include a set of conventional capture tools (crevice tool, a bag, flange tool, etc.) and a set of "non-conventional" capture tools.

After sampling has started, the emission measurement reading should be monitored until it becomes steady. Note that this measurement is a "snapshot" of the leak rate at a particular moment in time. In this context, the word "steady" means a reading that's consistent over a period of approximately ten seconds. At this time, the "save" button should be pushed to save data. At least four readings for each leak source, at 10-second intervals, are to be taken. If readings are varying with time, more readings will be collected to better characterize any short-term temporal variability. An entire Hi Flow Sampler test run should last between two and five minutes.

If the camera is allowed on the deck of the vessel during testing, the leak monitoring process outlined above should be filmed by camera at least once in the field to help demonstrate that all VOC emissions from the leak in question are being captured by the Hi Flow Sampler. The purpose of filming the Hi Flow measurement is to demonstrate technique and the ability of the sampler to capture the entire leak. Performing this observational check once or twice during the entire test event should be sufficient for this demonstration.

4.0 Sampling and Measurement Equipment

An assortment of sampling and measurement equipment may be used to accomplish this study's objectives. Marine vessel safety rules state that all equipment used on the deck of the vessel during loading should be certified as intrinsically safe. All equipment described in this section is certified as intrinsically safe with the exception of the FLIR GF320 camera.

The following subsections summarize the function of the primary sampling and measurement equipment to be used in this study. Quality assurance and quality control procedures for these equipment are addressed in Section 6.0.

4.1 FLIR GF320 Camera

Infrared gas imaging will be conducted using a FLIR GF320 camera or equivalent (e.g., EyeCGas™ camera). The FLIR GF320 has a spectra range of 1- 5.4 μm. The detector is operated at near liquid nitrogen temperatures using an integral Stirling cooler which provides the system with an NEDT less than 25 milliKelvins, providing excellent sensitivity.

The spectral range is further limited with the use of a notch filter specifically designed for the detection of hydrocarbon infrared absorptions in the 3 micron region. The narrow band pass range of the filter is less than the infrared spectral absorption of gas phase hexane. The filter notch is positioned such that alkane gases have a significant response within the band pass range.

The use of a narrow band pass filter provides spectral discrimination that allows the detection of compounds that have a vibration mode in the infrared region of the filter. Not all hydrocarbons have infrared absorptions within the filter range. Using propane as the reference spectrum with a relative response of 100, methane's response is approximately 10% of the same concentration of propane and hexane is 1.5 times the response of propane at the same concentration. The filter is set to the infrared region of the spectrum that corresponds to the infrared absorption of alkanes, primarily.

Figure 4-1. The FLIR GF320 Camera

4.2 Thermo TVA-1000

Handheld screening for VOCs will be conducted using a Thermo TVA-1000 or a similar handheld VOC monitor (e.g., MiniRAE 3000). The Thermo TVA-1000 is a portable, battery-powered, intrinsically safe, hydrocarbon analyzer with a measurement range from 0.5 to 50,000 ppm.

Figure 4-2. The Thermo TVA-1000

4.3 Bacharach Hi Flow Sampler

The Hi Flow Sampler is a portable, intrinsically safe, battery-powered instrument designed to determine leak rates around various components. This is accomplished by sampling at a large flow rate (between 5 and 10.5 ft^3/min) to completely capture all vapors leaking from a component. By measuring the flow rate of the sampling stream and the hydrocarbon concentration within that stream, the total hydrocarbon leak rate can be calculated.

Figure 4-3. Bacharach Hi Flow Sampler

5.0 Other Measurement Data

KMLT, or its designee, will collect the following data:

- the vapor pressure of the product loaded (psia),
- the average temperature of product loaded (^{o}R),
- ship particulars (e.g., ship age, dimensions, etc.),
- product loading rates over time,
- copies of the last vapor-tightness certification, and
- cargo tank pressures during testing.

6.0 Quality Assurance and Quality Control Procedures

All instruments and equipment to be used in the field will be tested prior to deployment to verify proper working condition. During this testing, all analyzers will be calibrated to verify proper instrument response. In the event of instrument or equipment failure in the field, backup equipment should be available. Any analyzer or piece of equipment suspected of having performance issues will be promptly removed from service and replaced with an equivalent backup unit as soon as possible

For all written field documentation, indelible ink will be used, and any hand corrections will be made by a single line through the incorrect entry with the author's initials immediately following the correction. All work performed during the data collection, review, and validation process must be traceable to the author, and all data products must be able to be reversed to their original result at all times.

Each of these following sections addresses various QA/QC procedures that will help confirm the reliability and representativeness of measurement data collected during this study. Over time, equipment brands, technology and models may change. The equipment discussed in Sections 6.1-6.3 summarized the equipment used at the time this protocol was developed. The Operating Company shall use the same, equivalent or improved technology when executing this ship testing protocol.

6.1 FLIR GF320 Camera

Before testing begins, the camera's operation will be verified on site by releasing a known emission rate of hydrocarbon vapors (e.g., methane) and measuring the distance from which the release can be reliably detected. This check will be performed at two emission rates: a low emission rate (e.g., 6 grams/hour) and a higher emission rate (e.g., 60 grams/hour). The distance from which each emission rate can be detected will be recorded and relevant weather conditions will be noted. These checks will be imaged and recorded on a hard drive to be used in the final report.

The performance of the camera can be affected by changes in the weather. Below are some weather conditions known to adversely affect camera performance.

- Overcast/Early Morning Hours – The camera requires infrared radiation contrast in order for the technician to distinguish emissions from the background. If infrared contrast is lower during these conditions, the performance of the camera can be adversely impacted.
- Strong winds – Strong winds can impede the operator's ability to see a small leak from a distance as these winds dissipate emissions quicker. However, it is anticipated that most components will be surveyed within 10 feet of the camera technician.
- Rainy conditions/high humidity/fog – The camera is waterproof so its internal electronics are unaffected by moisture. However, rain and high humidity have the potential to affect the thermal properties of the components being surveyed in this study.

Should adverse weather be encountered during testing, the camera operator will make a professional judgment on whether conditions are significantly affecting the camera's ability to detect leaks.

6.2 Thermo TVA-1000

The TVA will be calibrated in general accordance with EPA Method 21. The TVA will be calibrated in the field before testing takes place. Drift checks will be performed to assess analyzer accuracy. All TVA analyzers used in this study will undergo a drift check before and after any component is bagged and analyzed. Drift checks will also be performed if a flameout of the analyzer occurs. These checks will be performed by analyzing one of the calibration gases (e.g., 500 ppmc) used to calibrate the portable monitoring instrument. If the drift check measurement is within 10% of the actual concentration the instrument is considered to have passed the drift check and no adjustment need be made to the instrument. If the drift check reading is off by more than 10% should be recalibrated. If the analyzer fails to respond to a drift check (i.e., a false negative reading), then the instrument must be recalibrated and any measurements since the last calibration or passed drift test should be repeated. All drift check data will be documented.

Periodic ambient air monitoring checks will be performed and results documented. If ambient concentrations readings suggest that analyzer baseline readings are unstable or drifting the analyzer should be re-zeroed and a drift check should be conducted.

6.3 Bacharach Hi Flow Sampler

The Hi Flow Sampler will be calibrated and checked before testing following the methodology in the operation manual. Instrument response should be within 10% of the expected value using 2.5% methane calibration gas. This is applicable to both the leak (gas) channel and the background channel. If calibration is necessary, the analyzer will be recalibrated per the Hi Flow Sampler manual and the results will be documented. The calibration will be checked at six-hour intervals during the test event. If the instrument has drifted less than 10%, the instrument calibration is acceptable, and testing will continue. If the instrument has drifted more than 10%, previous data will be flagged, and the instrument will be recalibrated. In this case, the next calibration check will be performed at a three-hour interval.

On at least one, but no less than 10% of all measurements, the flow rate of the sampler should be lowered and three additional readings should be collected at this lower flow. This is a test of capture efficiency, in that the flow rate drops and the concentration should rise, with the product remaining constant. These lower flow rate readings should agree with the original readings within 10%. This test should only be used on those sources that exhibit little emissions variability during testing at the original flow rate.

7.0 Data Reduction and Reporting

Data review, validation, and verification procedures are presented in this section. Data developed from this project are intended for use by KMLT. To meet the user requirements, the data resulting from this project must be of known and defensible quality. The quality control procedures to be implemented during this project are intended to help achieve this objective.

Data will be declared invalid whenever documented evidence exists demonstrating that an instrument was not collecting data under representative conditions or was malfunctioning. For instance, were an emission upset to occur during non-routine loading operations (non-representative conditions), any affected data collected around that time would be invalidated.

The activities involved in validation of the data in general include the following:

- reviewing the field documentation, calibration data; and
- examining the analyzer data for measurement values that seem incongruous with normal measurement ranges.

A report summarizing all results will be produced, and any deviations from this test plan will be discussed. Any limitations in data usability will be discussed in the project report. Any data invalidated during the data validation process will be discussed in the project report, and any invalidated, raw data will be included with the report. A summary of each measurement study, similar to the summary provided in Table 1-1 in Section 1, will be maintained by KMLT.

An observed emission factor (expressed in units of lb VOC/MBbl liquid loaded) and total VOC emission rate (expressed in units of lb) shall be included in the report. The report will contain a sample calculations and any supporting documents necessary to demonstrate the method of computation of the observed emission factor and total VOC emission rate. Calculation methods shall be the same as those employed in the report entitled “Measurement of VOC Loading Losses During Marine Vessel Loading of the Apollon: Final Report,” submitted to TCEQ in October 2013.

8.0 References

[1] Hayler, William B.; Keever, John M. (2003). American Merchant Seaman's Manual.

[2] CFR Title 40: Part 63 – Subpart Y - National Emission Standards for Marine Tank Vessel Loading Operations (http://www.epa.gov/ttn/atw/marine/marinepg.html)

[3] Texas Administrative Code (TAC) Chapter 115 - (http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=115)

[4] International Maritime Organization (IMO) Protocol of 1997 - MARPOL Annex VI (https://homeport.uscg.mil/cgi-bin/st/portal/uscg_docs/MyCG/Editorial/20090401/1997_Annex%20VI.pdf?id=66472239ead0f555a343e0a98e507a4a2731ab59&user_id=2a47d4dbfd24ce2da39438e736cab2d6)

[5] International Maritime Organization (IMO) Technical Information on Systems and Operation to Assist Development Of VOC Management Plans (http://www.imo.org/blast/blastDataHelper.asp?data_id=26527&filename=680.pdf)

[6] EPA Method 21 – Determination of Volatile Organic Compound Leaks (http://www.epa.gov/ttnemc01/promgate/m-21.pdf)

Emission Sources - Maximum Allowable Emission Rates

Permit Number 101199 and N158

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

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
F-101	Naphtha Splitter Reboiler Train I	CO	9.13	—
		CO (6)	14.78	—
		NO_x	2.47	—
		NO_x (6)	5.00	—
		VOC	1.33	—
		SO_2	1.48	—
		PM	1.11	—
		PM_{10}	1.11	—
		$PM_{2.5}$	1.11	—
		Ammonia	1.83	—
F-201	Naphtha Splitter Reboiler Train II	CO	9.13	—
		CO (6)	14.78	—
		NO_x	2.47	—
		NO_x (6)	5.00	—
		VOC	1.33	—
		SO_2	1.48	—
		PM	1.11	—
		PM_{10}	1.11	—
		$PM_{2.5}$	1.11	—
		Ammonia	1.83	—

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
F-101 F-201	Heater Annual Emission Cap	CO	—	72.84
		NO_x	—	11.83
		VOC	—	10.63
		SO_2	—	11.83
		PM	—	8.87
		PM_{10}	—	8.87
		$PM_{2.5}$	—	8.87
		Ammonia	—	14.57
FL-101	Flare No. 101	CO	0.63	2.75
		NO_x	0.16	0.69
		VOC	0.03	0.12
		SO_2	0.00	0.00
200-1	Tank No. 200-1	VOC	2.27	4.59
200-2	Tank No. 200-2	VOC	2.27	4.59
200-3	Tank No. 200-3	VOC	2.27	4.59
100-20	Tank No. 100-20	VOC	0.80	0.20
150-10	Tank No. 150-10	VOC	0.78	0.68
120-24	Tank No. 120-24	VOC	1.24	2.67
100-21	Tank No. 100-21	VOC	0.88	0.20
100-11	Tank No. 100-11	VOC	0.88	0.20
100-14	Tank No. 100-14	VOC	1.22	1.79
5-0	Tank No. 5-0	VOC	1.30	0.90
120-22	Tank No. 120-22	VOC	0.91	0.59
100-12	Tank No. 100-12	VOC	0.88	0.20

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
120-25	Tank No. 120-25	VOC	1.24	2.67
100-13	Tank No. 100-13	VOC	1.22	0.32
120-23	Tank No. 120-23	VOC	0.91	0.59
100-15	Tank No. 100-15	VOC	1.22	1.79
FUG	Process Fugitive Components (5)	VOC	1.74	7.60
MAR-LOADFUG	Marine Loading Fugitives Emissions Cap	VOC	141.96	6.70
MAR-VCU	Marine Loading VCU Emission Caps	CO	6.91	3.40
		NO_x	5.18	2.55
		VOC	8.59	3.39
		SO_2	0.05	0.03
		PM	0.64	0.32
		PM_{10}	0.64	0.32
		$PM_{2.5}$	0.64	0.32
EGEN-1	Emergency Generator	CO	12.90	3.22
		NO_x	6.23	1.56
		VOC	2.02	0.50
		SO_2	5.79	1.45
		PM	0.37	0.09
		PM_{10}	0.37	0.09
		$PM_{2.5}$	0.37	0.09

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
MSS	MSS Activities	VOC	382.50	3.25
		NO_x	37.20	0.46
		CO	131.39	1.35
		SO_2	2.42	0.01
		PM	2.23	0.08
		PM_{10}	2.23	0.08
		$PM_{2.5}$	2.23	0.08
All	All authorized by permit	Benzene	—	0.30

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Process component fugitive emissions and marine loading fugitive emissions from leak checked vessels are estimates and are enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Rates apply to planned startup periods as specified in Special Condition 34.

Date: October 8, 2014

EXHIBIT E

Statement of Basis, Permit No. O3764

Statement of Basis of the Federal Operating Permit

Kinder Morgan Crude & Condensate LLC

Site Name: Galena Park Terminal
Area Name: Crude Condensate Splitter
Physical location: 407 Clinton Dr.
Nearest City: Galena Park
County: Harris

Permit Number: O3764
Project Type: Initial Issuance

Standard Industrial Classification (SIC) Code: 4226
SIC Name: Special Warehousing and Storage

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). An application for initial permit issuance has been submitted in accordance with 30 TAC § 122.201. This document may include the following information:

A description of the facility/area process description;
A basis for applying permit shields;
A list of the federal regulatory applicability determinations;
A table listing the determination of applicable requirements;
A list of the New Source Review Requirements;
The rationale for periodic monitoring methods selected;
The rationale for compliance assurance methods selected;
A compliance status; and
A list of available unit attribute forms.

Prepared on: September 1, 2015
Revised on: May 10, 2017

Operating Permit
Basis of Determination

Permit Area Process Description

Kinder Morgan Crude & Condensate LLC's (KMCC) GP Condensate Splitter is a new 100,000 bbl/day condensate splitter in Galena Park Texas. The condensate splitter consists of two trains which each process 50,000 bbl/day of hydrocarbon condensate material to obtain products suitable for commercial use. The process utilizes conventional distillation technology.

The hydrocarbon condensate is fed from storage tanks to the stabilizer column where the lightest fraction of the condensate is distilled from the overhead. Any uncondensed off-gas that may be produced (up to 1% of the total fuel usage) is used for fuel gas in the heaters. Water present in the feed is distilled in the stabilizer. The overhead liquid product from the stabilizer column is stored in pressurized storage for transfer to the truck loading rack. The feed to this stabilizer column is preheated with waste heat recovered from hot product streams to reduce the amount of fired gas heat input required for distillation. The remaining reboiler heat required to achieve the desired separations is provided by a circulating hot oil circuit. The circulating hot oil is heated in a gas fueled direct fired heater. The bottom stream from the stabilizer column is pressured through a preheat exchanger that is heated by circulating hot oil in to the main fractionation column.

This main fractionation column splits the bottoms from the stabilizer column into four commercially acceptable streams. Three of these streams are taken off as side draws and fed to the top of individual stripping columns. Lighter material is stripped from the product draw in each of these side columns. The stripped side draw vapors are returned to the main fractionation column from the overhead of each stripper column and the stripped side draw products are used to preheat the feed to the process before final cooling and transfer to storage.

In addition to the side draw products, a bottom product and overhead product are produced from the main fractionation column. These products represent the heaviest fraction and the lightest fractions of the stabilized condensate. Lighter material is removed from the bottom product using natural gas for stripping. Both a liquid distillate product and a non-condensable gas stream saturated with heavier components is produced from the overhead vapor along with column reflux. The off-gas will be compressed and cooled to make it suitable for use as fuel gas and recover as much light naphtha as practical.

In addition to the main process equipment there are certain support processes that are required. An elevated flare is used in emergency overpressure situations to dispose of excess process vapors. This flare utilizes a continuous pilot to ensure that unexpected release events result in safe disposal. The pilot is fueled with natural gas. A standby natural gas fired emergency power generator is also provided to maintain critical electrical services during a power outage and minimize emergency flare loads. A new tank truck rack for the Y-Grade product loading is used for product transfer. Offsite docs are also utilized to transfer products.

FOPs at Site

The "application area" consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site, then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: O988

Major Source Pollutants

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	VOC, NOX, HAPS, CO, GHG

Reading State of Texas's Federal Operating Permit

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as "applicable requirements") that apply at a particular site or permit area (in the event a site has multiple FOPs). **The FOP does not authorize new emissions or new construction activities.** The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
    - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
    - Additional Monitoring Requirements
    - New Source Review Authorization Requirements
    - Compliance Requirements
    - Protection of Stratosphere Ozone
    - Permit Location
    - Permit Shield (30 TAC § 122.148)
- Attachments
    - Applicable Requirements Summary
        - Unit Summary
        - Applicable Requirements Summary
    - Additional Monitoring Requirements
    - Permit Shield
    - New Source Review Authorization References
    - Compliance Plan
    - Alternative Requirements
- Appendix A
    - Acronym list
- Appendix B
    - Copies of major NSR authorizations

General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit. The fifth paragraph provides details on submission of reports required by the permit.

Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a

requirement that applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on a OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the “index number,” detailed citations specifying monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table are based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

Additional Monitoring Requirement. The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicant requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

Permit Shield. A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

New Source Review Authorization References. All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

Compliance Plan. A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

Alternative Requirements. This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A

Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

Appendix B
Copies of major NSR authorizations applicable to the units covered by this permit have been included in this Appendix, to ensure that all interested persons can access those authorizations.

Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions
The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit's Applicable Requirement Summary. This is consistent with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3 for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

Federal Regulatory Applicability Determinations
The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

Regulatory Program	Applicability (Yes/No)
Prevention of Significant Deterioration (PSD)	No
Nonattainment New Source Review (NNSR)	Yes
Minor NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Yes
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	No
CAIR (Clean Air Interstate Rule)	No

Basis for Applying Permit Shields
An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

Insignificant Activities
In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from dry cleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.

8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.
10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

Determination of Applicable Requirements

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc.. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at www.tceq.texas.gov/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column "Changes and Exceptions to RRT." If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word "None" will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled "Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected."

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled "Basis for Applying Permit Shields" specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.

Determination of Applicable Requirements

Unit ID	Regulation	Index Number	Basis of Determination*
EGEN-1	30 TAC Chapter 117, Subchapter B	R7303-01	Type of Service = Used exclusively in emergency situations [claiming the emergency service exemption under 30 TAC §§ 117.103(a)(6)(D), 117.203(a)(6)(D), 117.303(a)(6)(D) or 117.403(a)(7)(D)] Fuel Fired = Natural gas
EGEN-1	40 CFR Part 60, Subpart JJJJ	60JJJJ-01	Construction/Reconstruction/Modification Date = The stationary spark ignition (SI) internal combustion engine (ICE) commenced construction, reconstruction or modification after June 12, 2006. Manufactured Date = Date of manufacture is on or after July 1, 2010. Test Cell = The SI ICE is not being tested at an engine test cell/stand. Certified = Purchased a non-certified SI ICE. National Security = The SI ICE is not eligible for exemption due to national security. Temp Replacement = The SI ICE is not acting as a temporary replacement. Horsepower = Maximum engine power greater than or equal to 500 HP. Fuel = SI ICE that uses natural gas. Service = SI ICE is an emergency engine. Optional Compliance = Choosing to keep records as indicated in §60.4243(h)(1), (h)(2), or (h)(3). Commencing = SI ICE that is commencing new construction.
EGEN-1	40 CFR Part 63, Subpart ZZZZ	63ZZZZ-01	HAP Source = Any stationary source or group of stationary sources of hazardous air pollutants meeting the definition of a major source as described in 40 CFR § 63.2. Brake HP = Stationary RICE with a brake hp greater than 500. Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006. Service Type = Emergency use where the RICE does not operate or is not contractually obligated to be available for more than 15 hours per calendar year as specified in 40 CFR §63.6640(f)(2)(ii)-(iii) or does not operate as specified in 40 CFR §63.6640(f)(4)(ii).
100-11	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-11	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
100-11	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel.

Unit ID	Regulation	Index Number	Basis of Determination*
			Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-12	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-12	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
100-12	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-13	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-13	30 TAC Chapter 115, Storage of VOCs	R5112-02	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-13	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
100-13	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I.

Unit ID	Regulation	Index Number	Basis of Determination*
			True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
100-13	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-14	30 TAC Chapter 115, Storage of VOCs	R5112-02	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-14	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
100-15	30 TAC Chapter 115, Storage of VOCs	R5112-03	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = Crude oil and/or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-15	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I.

Unit ID	Regulation	Index Number	Basis of Determination*
			True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
100-20	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-20	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
100-20	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
100-21	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
100-21	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
100-21	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.

Unit ID	Regulation	Index Number	Basis of Determination*
120-22	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
120-22	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
120-22	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
120-23	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
120-23	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia
120-23	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
120-24	30 TAC Chapter 115, Storage of VOCs	R5112-02	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = VOC other than crude oil or condensate

Unit ID	Regulation	Index Number	Basis of Determination*
			Storage Capacity = Capacity is greater than 40,000 gallons
120-24	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
120-25	30 TAC Chapter 115, Storage of VOCs	R5112-02	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
120-25	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
150-10	30 TAC Chapter 115, Storage of VOCs	R5112-01	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is less than 1.0 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
150-10	40 CFR Part 60, Subpart Kb	60Kb-00	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is less than 0.5 psia

Unit ID	Regulation	Index Number	Basis of Determination*
150-10	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
200-1	30 TAC Chapter 115, Storage of VOCs	R5112-03	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = Crude oil and/or condensate Storage Capacity = Capacity is greater than 40,000 gallons
200-1	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
200-2	30 TAC Chapter 115, Storage of VOCs	R5112-03	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = Crude oil and/or condensate Storage Capacity = Capacity is greater than 40,000 gallons
200-2	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof

Unit ID	Regulation	Index Number	Basis of Determination*
200-3	30 TAC Chapter 115, Storage of VOCs	R5112-03	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = Crude oil and/or condensate Storage Capacity = Capacity is greater than 40,000 gallons
200-3	40 CFR Part 63, Subpart CC	63CC-01	Existing Source = The storage vessel is at a new source. Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. True Vapor Pressure = Maximum true vapor pressure of the total organic HAPs in the liquid is less than 11.11 psi (76.6 kPa) Emission Control Type = Fixed roof and an internal floating roof Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 1 storage vessel (as defined in 40 CFR § 63.641) Seal Type = Two seals mounted one above the other so that each forms a continuous closure that completely cover the space between the wall of the storage vessel and the edge of the internal floating roof
5-0	30 TAC Chapter 115, Storage of VOCs	R5112-02	Today's Date = Today's date is March 1, 2013 or later. Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria. Tank Description = Tank using an internal floating roof (IFR) True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia Product Stored = VOC other than crude oil or condensate Storage Capacity = Capacity is greater than 40,000 gallons
5-0	40 CFR Part 60, Subpart Kb	60Kb-01	Product Stored = Petroleum liquid (other than petroleum or condensate) Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters) Maximum True Vapor Pressure = True vapor pressure is greater than or equal to 0.75 psia but less than 11.1 psia Storage Vessel Description = Fixed roof with an internal floating roof using two seals mounted one above the other to form a continuous closure
5-0	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel. Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
TK-101	40 CFR Part 63, Subpart CC	63CC-02	Specified in 40 CFR § 63.640(g)(1)-(6) = The storage vessel is not part of a process specified in 40 CFR § 63.640(g)(1) - (6). Subject to 40 CFR Part 63 Subparts F, G, H or I = The storage vessel is not subject to 40 CFR Part 63, Subparts F, G, H, or I. Existing Kb Source = The storage vessel is not part of an existing source or is not subject to the provisions of 40 CFR Part 60, Subpart Kb. Group 1 Storage Vessel = The storage vessel is a Group 2 vessel.

Unit ID	Regulation	Index Number	Basis of Determination*
			Applicability = The storage vessel is required to comply with 40 CFR Part 63, Subpart CC and is part of a process unit.
F-101	30 TAC Chapter 117, Subchapter B	R7310-01	Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent. Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). Unit Type = Process heater CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr. CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1). NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NOx Reduction = Post combustion control technique with ammonia injection Fuel Type #1 = Natural gas NH3 Monitoring = Mass balance NOx Monitoring System = Continuous emissions monitoring system NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)
F-101	30 TAC Chapter 117, Subchapter B	R7310-02	Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent. Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). Unit Type = Process heater CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr. CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1). NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NOx Reduction = Post combustion control technique with ammonia injection Fuel Type #1 = Natural gas NH3 Monitoring = Mass balance Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases NOx Monitoring System = Continuous emissions monitoring system NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)
F-101	40 CFR Part 63, Subpart DDDDD	63DDDDD-01	CONSTRUCTION/RECONSTRUCTION DATE = Construction or reconstruction began after June 4, 2010. HEAT INPUT CAPACITY = RATED HEAT INPUT CAPACITY OF 100 MMBTU/HR OR GREATER
F-201	30 TAC Chapter 117, Subchapter B	R7310-01	Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent. Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). Unit Type = Process heater CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr.

Unit ID	Regulation	Index Number	Basis of Determination*
			CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1). NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NOx Reduction = Post combustion control technique with ammonia injection Fuel Type #1 = Natural gas NH3 Monitoring = Mass balance NOx Monitoring System = Continuous emissions monitoring system NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)
F-201	30 TAC Chapter 117, Subchapter B	R7310-02	Diluent CEMS = The process heater operates with a carbon dioxide CEMS to monitor diluent. Fuel Flow Monitoring = Fuel flow is monitored with a totalizing fuel flow meter per 30 TAC §§ 117.140(a), 117.340(a) or 117.440(a). Unit Type = Process heater CO Emission Limitation = Title 30 TAC § 117.310(c)(1) 400 ppmv option Maximum Rated Capacity = Maximum rated capacity is at least 200 MMBtu/hr. CO Monitoring System = Continuous emission monitoring system complying with 30 TAC § 117.8100(a)(1). NOx Emission Limit Basis = Emission limit in lb/hr (or ppm by volume at 15% oxygen, dry basis) on a block one-hour average NH3 Emission Limitation = Title 30 TAC § 117.310(c)(2) NOx Reduction = Post combustion control technique with ammonia injection Fuel Type #1 = Natural gas NH3 Monitoring = Mass balance Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases NOx Monitoring System = Continuous emissions monitoring system NOx Emission Limitation = Title 30 TAC §§ 117.310(d)(3) and 117.310(a)(8)
F-201	40 CFR Part 63, Subpart DDDDD	63DDDDD-01	CONSTRUCTION/RECONSTRUCTION DATE = Construction or reconstruction began after June 4, 2010. HEAT INPUT CAPACITY = RATED HEAT INPUT CAPACITY OF 100 MMBTU/HR OR GREATER
F-101	40 CFR Part 60, Subpart Db	60Db-01	60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption does not apply. Construction/Modification Date = Constructed or reconstructed after February 28, 2005. D-Series Fuel Type #1 = Natural gas. Heat Input Capacity = Heat input capacity is greater than 100 MMBtu/hr (29 MW) but less than or equal to 250 MMBtu/hr (73 MW). PM Monitoring Type = No particulate monitoring. Opacity Monitoring Type = No particulate (opacity) monitoring. Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da. Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281. NOx Monitoring Type = Continuous emission monitoring system. Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical. SO2 Monitoring Type = Continuous emission monitoring system.

Unit ID	Regulation	Index Number	Basis of Determination*
			Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA. Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J. Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E. Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK. Technology Type = None. ACF Option - SO2 = Other ACF or no ACF. Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines. Unit Type = OTHER UNIT TYPE ACF Option - PM = Other ACF or no ACF. Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft^3. 60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative. ACF Option - NOx = Other ACF or no ACF. Heat Input Gas/Oil = The facility combusts natural gas or distillate oil in excess of 30% of the heat input from the combustion of all fuels. 60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.
F-101	40 CFR Part 60, Subpart Db	60Db-02	60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption does not apply. Construction/Modification Date = Constructed or reconstructed after February 28, 2005. D-Series Fuel Type #1 = Natural gas. D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas. Heat Input Capacity = Heat input capacity is greater than 100 MMBtu/hr (29 MW) but less than or equal to 250 MMBtu/hr (73 MW). PM Monitoring Type = No particulate monitoring. Opacity Monitoring Type = No particulate (opacity) monitoring. Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da. Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281. NOx Monitoring Type = Continuous emission monitoring system. Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical. SO2 Monitoring Type = Continuous emission monitoring system. Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA. Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J. Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E. Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK. Technology Type = None. ACF Option - SO2 = Other ACF or no ACF.

Unit ID	Regulation	Index Number	Basis of Determination*
			Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines. Unit Type = OTHER UNIT TYPE ACF Option - PM = Other ACF or no ACF. Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft^3. 60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative. ACF Option - NOx = Other ACF or no ACF. Heat Input Gas/Oil = The facility combusts natural gas or distillate oil in excess of 30% of the heat input from the combustion of all fuels. 60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.
F-201	40 CFR Part 60, Subpart Db	60Db-01	60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption does not apply. Construction/Modification Date = Constructed or reconstructed after February 28, 2005. D-Series Fuel Type #1 = Natural gas. Heat Input Capacity = Heat input capacity is greater than 100 MMBtu/hr (29 MW) but less than or equal to 250 MMBtu/hr (73 MW). PM Monitoring Type = No particulate monitoring. Opacity Monitoring Type = No particulate (opacity) monitoring. Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da. Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281. NOx Monitoring Type = Continuous emission monitoring system. Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical. SO2 Monitoring Type = Continuous emission monitoring system. Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA. Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J. Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E. Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK. Technology Type = None. ACF Option - SO2 = Other ACF or no ACF. Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines. Unit Type = OTHER UNIT TYPE ACF Option - PM = Other ACF or no ACF. Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft^3. 60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative. ACF Option - NOx = Other ACF or no ACF. Heat Input Gas/Oil = The facility combusts natural gas or distillate oil in excess of 30% of the heat input from the combustion of all fuels. 60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.

Unit ID	Regulation	Index Number	Basis of Determination*
F-201	40 CFR Part 60, Subpart Db	60Db-02	60.42b(k)(2) Low Sulfur Exemption = The § 60.42b(k)(2) exemption does not apply. Construction/Modification Date = Constructed or reconstructed after February 28, 2005. D-Series Fuel Type #1 = Natural gas. D-Series Fuel Type #2 = Gaseous fossil fuel other than natural gas and coal-derived synthetic fuel meeting the definition of natural gas. Heat Input Capacity = Heat input capacity is greater than 100 MMBtu/hr (29 MW) but less than or equal to 250 MMBtu/hr (73 MW). PM Monitoring Type = No particulate monitoring. Opacity Monitoring Type = No particulate (opacity) monitoring. Subpart Da = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart Da. Changes to Existing Affected Facility = No change has been made to the existing steam generating unit, which was not previously subject to 40 CFR Part 60, Subpart Db, for the sole purpose of combusting gases containing totally reduced sulfur as defined under 40 CFR § 60.281. NOx Monitoring Type = Continuous emission monitoring system. Electrical or Mechanical Output = 10% or less of the annual output is electrical or mechanical. SO2 Monitoring Type = Continuous emission monitoring system. Subpart Ea, Eb or AAAA = The affected facility does not meet applicability requirements of and is subject to 40 CFR Part 60, Subpart Ea, Eb or AAAA. Subpart J = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart J. Subpart E = The affected facility does not meet applicability requirements of 40 CFR Part 60, Subpart E. Subpart KKKK = The affected facility is not a heat recovery steam generator associated with combined cycle gas turbines and that meets applicability requirements of and is subject to 40 CFR Part 60, Subpart KKKK. Technology Type = None. ACF Option - SO2 = Other ACF or no ACF. Subpart Cb or BBBB = The affected facility is not covered by an EPA approved State or Federal section 111(d)/129 plan implementing 40 CFR Part 60, Subpart Cb or BBBB emission guidelines. Unit Type = OTHER UNIT TYPE ACF Option - PM = Other ACF or no ACF. Heat Release Rate = Natural gas oil with a heat release rate greater than 70 MBtu/hr/ft^3. 60.49Da(n) Alternative = The facility is not using the § 60.49Da(n) alternative. ACF Option - NOx = Other ACF or no ACF. Heat Input Gas/Oil = The facility combusts natural gas or distillate oil in excess of 30% of the heat input from the combustion of all fuels. 60.49Da(m) Alternative = The facility is not using the § 60.49Da(m) alternative.
FL-101	30 TAC Chapter 111, Visible Emissions	R1111-01	Acid Gases Only = Flare is not used only as an acid gas flare as defined in 30 TAC § 101.1. Emergency/Upset Conditions Only = Flare is used under conditions other than emergency or upset conditions.
FL-101	40 CFR Part 60, Subpart A	60A-01	Subject to 40 CFR § 60.18 = Flare is subject to 40 CFR § 60.18. Adhering to Heat Content Specifications = Adhering to the heat content specifications in 40 CFR § 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR § 60.18(c)(4). Flare Assist Type = Air-assisted Flare Exit Velocity = Flare exit velocity is greater than or equal to 400 ft/s (122 m/sec).

Unit ID	Regulation	Index Number	Basis of Determination*
			Heating Value of Gas = Heating value is greater than 1000 Btu/scf (37.3 MJ/scm)
FUG	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	R5352-01	Agitators = The fugitive unit does not contain agitators. Components Utilizing Alternative Work Practice in § 115.358 = No components in the fugitive unit are using the alternative work practice under § 115.358. Compressor Seals = The fugitive unit contains compressor seals. Flanges = The fugitive unit contains flanges. Open-ended Valves = The fugitive unit contains open-ended valves. Pressure Relief Valves = The fugitive unit contains pressure relief valves. Process Drains = The fugitive unit has process drains. Pump Seals = The fugitive unit contains pump seals. Rupture Disks = The fugitive unit has pressure relief valves equipped with rupture disks. Title 30 TAC § 115.352 Applicable = Site is a petroleum refinery, synthetic organic chemical, polymer resin or methyl tert-butyl ether manufacturing process or a natural gas/gasoline processing operation as defined in 30 TAC 115.10. Valves (other than pressure relief and open-ended) = The fugitive unit contains valves other than pressure relief valves or open-ended valves or lines. Alternate Control Requirement = The TCEQ Executive Director has not approved an alternate method for demonstrating and documenting continuous compliance with an alternate control requirement or exemption criteria for flanges or no alternate has been requested. Instrumentation Systems = The fugitive unit has instrumentation systems, as defined in 40 CFR § 63.161, that meet 40 CFR § 63.169. Less Than 250 Components at Site = Fugitive unit not located at site with less than 250 fugitive components. Sampling Connection Systems = The fugitive unit has sampling connection systems, as defined in 40 CFR § 63.161, that meet 40 CFR § 63.169. Weight Percent VOC = All components contact a process fluid that contains greater than or equal to 10% VOC by weight. 50% by Volume = Compressors are not in hydrogen service or are in hydrogen service and the hydrogen content cannot be reasonably expected to always exceed 50% by volume. Complying with § 115.352(1) = Valves are complying with § 115.352(1). Complying With § 115.352(1) = Open-ended valves and lines are complying with § 115.352(1). Complying With § 115.352(1) = No agitators are complying with § 115.352(1). Complying with 30 TAC § 115.352(1) = Flanges are complying with the requirements in 30 TAC § 115.352(1). Reciprocating Compressors Or Positive Displacement Pumps = The fugitive unit does not have reciprocating compressors or positive displacement pumps used in natural gas/gasoline processing operations. Shaft Seal System = Pump seals are equipped with a shaft seal system that prevents or detects emission of VOC from the seal. TVP 0.002 PSIA or Less = The fugitive unit does not have components or systems that contact a process fluid containing VOC having a true vapor pressure less than or equal to 0.002 psia at 68 degrees Fahrenheit. Shaft Seal System = Compressors are equipped with a shaft sealing system that prevents or detects emission of VOC from the seal. TVP of Process Fluid VOC <= 0.044 psia at 68° F = No agitators contact a process fluid with a TVP less than or equal to 0.044 psia at 68° F. TVP of Process Fluid VOC <= 0.044 psia at 68° F = Pressure relief valves contact a process fluid with a TVP of less than or equal to 0.044 psia at 68° F. TVP of Process Fluid VOC <= 0.044 PSIA AT 68° F = Process drains contact a process fluid containing VOC having a true vapor pressures less than or equal to 0.044 psia at 68 degrees Fahrenheit. TVP of Process Fluid VOC <= 0.044 PSIA AT 68 ° F = Flanges contact a process fluid containing VOC having a true vapor pressures less than or equal to 0.044 psia at 68 degrees Fahrenheit.

Unit ID	Regulation	Index Number	Basis of Determination*
			Complying with 30 TAC § 115.352(1) = Pump seals are complying with the requirements in 30 TAC § 115.352(1). TVP of Process Fluid VOC <= 0.044 PSIA AT 68 ° F = Compressor seals contact a process fluid containing VOC having a true vapor pressures less than or equal to 0.044 psia at 68 degrees Fahrenheit. TVP of Process Fluid VOC > 0.044 psia at 68° F = No agitators contact a process fluid with a TVP greater than 0.044 psia at 68° F. TVP of Process Fluid VOC > 0.044 psia at 68° F = Valves contact a process fluid with a TVP greater than 0.044 psia at 68° F. TVP of Process Fluid VOC > 0.044 PSIA AT 68° F = Flanges contact a process fluid containing VOC having a TVP greater than 0.044 psia at 68 degrees Fahrenheit. Complying With § 115.352(1) = Compressor seals are complying with the requirements in 30 TAC § 115.352(1).
FUG	40 CFR Part 60, Subpart GGGa	60GGGa	Construction/Modification Date = Affected facility was constructed, reconstructed or modified after November 7, 2006. Equipment Components = Components are present.
DEGREASER	30 TAC Chapter 115, Degreasing Processes	R5412-01	Solvent Degreasing Machine Type = Cold solvent cleaning machine. Alternate Control Requirement = The TCEQ Executive Director has not approved an alternative control requirement as allowed under 30 TAC § 115.413 or not alternative has been requested. Solvent Sprayed = No solvent is sprayed. Solvent Vapor Pressure = Solvent vapor pressure is less than or equal to 0.6 psia as measured at 100 degrees Fahrenheit. Solvent Heated = The solvent is not heated to a temperature greater than 120° F. Parts Larger than Drainage = Cleaned parts for which the machine is authorized to clean are larger than the internal drainage facility of the machine. Drainage Area = Area is greater than or equal to 16 square inches. Disposal in Enclosed Containers = Waste solvent is properly disposed of in enclosed containers.
MISC-ADH	30 TAC Chapter 115, Subchapter E, Division 7	R5471-01	Exemption = The adhesive application process is located on a property with total actual VOC emissions of less than 3.0 tons per calendar year from all uncontrolled adhesives, adhesive primers and solvents.
F-101	40 CFR Part 60, Subpart Ja	60Ja-01	Facility Type = Process heater that is used for fuel gas that does NOT meet requirements in § 60.107a(a)(3). Heater Capacity = The process heater is rated equal to or greater than 100 MMBtu/hr. Construction/Modification Date = After June 24, 2008 Sulfur Emission Limit = Owner or operator is choosing SO_2 limit in terms of ppmv SO_2 emitted.
F-201	40 CFR Part 60, Subpart Ja	60Ja-01	Facility Type = Process heater that is used for fuel gas that does NOT meet requirements in § 60.107a(a)(3). Heater Capacity = The process heater is rated equal to or greater than 100 MMBtu/hr. Construction/Modification Date = After June 24, 2008 Sulfur Emission Limit = Owner or operator is choosing SO_2 limit in terms of ppmv SO_2 emitted.
FL-101	40 CFR Part 60, Subpart Ja	60Ja-02	Facility Type = Flare that is used for fuel gas combustion that does NOT meet requirements in § 60.107a(a)(3). Construction/Modification Date = After June 24, 2008 Sulfur Emission Limit = Owner or operator is choosing SO_2 limit in terms of ppmv H_2S in fuel gas.

* - The “unit attributes” or operating conditions that determine what requirements apply

NSR Versus Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

NSR Permit	Federal Operating Permit(FOP)
Issued Prior to new Construction or modification of an existing facility	For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.
Authorizes air emissions	Codifies existing applicable requirements, does not authorize new emissions
Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.	Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.
Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.	One public notice required. Opportunity for public comments. No contested case hearings.
Applies to all point source emissions in the state.	Applies to all major sources and some non-major sources identified by the EPA.
Applies to facilities: a portion of site or individual emission sources	One or multiple FOPs cover the entire site (consists of multiple facilities)
Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.	Permits include terms and conditions that specify the general operational requirements of the site; and also include codification of all applicable requirements for emission units at the site.
Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.	Opportunity for EPA review, Affected states review, and a Public petition period for every FOP.
Permits have a table listing maximum emission limits for pollutants	Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.
Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.	Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.
NSR permits are issued independent of FOP requirements.	FOP are independent of NSR permits, but contain a list of all NSR permits incorporated by reference

New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. The

Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. The following table specifies the permits by rule that apply to the site. All current permits by rule are contained in Chapter 106. Outdated 30 TAC Chapter 106 permits by rule may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html

Outdated Standard Exemption lists may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

The status of air permits and applications and a link to the Air Permits Remote Document Server is located at the following Web site:

www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

Nonattainment (NA) Permits	
NA Permit No.: N158	Issuance Date: 10/08/2014
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 101199	Issuance Date: 10/08/2014
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000

Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).

With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected

Periodic Monitoring:
The Federal Clean Air Act requires that each federal operating permit include monitoring sufficient to assure compliance with the terms and conditions of the permit. Most of the emission limits and standards applicable to emission units at Title V sources include adequate monitoring to show that the units meet the limits and standards. For those requirements that do not include monitoring, or where the monitoring is not sufficient to assure compliance, the federal operating permit must include such monitoring for the emission units affected. The following emission units are subject to periodic monitoring requirements because the emission units are subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement that does not already require monitoring, or the monitoring for the applicable requirement is not sufficient to assure compliance:

Unit/Group/Process Information	
ID No.: DEGREASER	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412-01
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Monthly	
Averaging Period: n/a	
Deviation Limit: Monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of 30 TAC 115.412(1)(A)-(F) shall be considered and reported as a deviation.	
Basis of monitoring: The monitoring option to cover cold cleaner or the open-top vapor cleaner was included in the EPA "Periodic Monitoring Technical Reference Document" (April 1999) to monitor VOC sources. In addition to covering the cleaner records of monthly inspections of equipment is an effective way to ensure that the system is operating in accordance with its design.	

Compliance Review

1. In accordance with 30 TAC Chapter 60, the compliance history was reviewed on May 26, 2015.
   Site rating: 0.00 / High Company rating: 0.00 / High
   (High < 0.10; Satisfactory ≥ 0.10 and ≤ 55; Unsatisfactory > 55)
2. Has the permit changed on the basis of the compliance history or site/company rating? .....No

Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS? .....No
2. Is a compliance plan and schedule included in the permit? .....No

Available Unit Attribute Forms

OP-UA1 - Miscellaneous and Generic Unit Attributes
OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes
OP-UA3 - Storage Tank/Vessel Attributes
OP-UA4 - Loading/Unloading Operations Attributes
OP-UA5 - Process Heater/Furnace Attributes
OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes
OP-UA7 - Flare Attributes
OP-UA8 - Coal Preparation Plant Attributes
OP-UA9 - Nonmetallic Mineral Process Plant Attributes
OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes
OP-UA11 - Stationary Turbine Attributes
OP-UA12 - Fugitive Emission Unit Attributes
OP-UA13 - Industrial Process Cooling Tower Attributes
OP-UA14 - Water Separator Attributes
OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes
OP-UA16 - Solvent Degreasing Machine Attributes
OP-UA17 - Distillation Unit Attributes
OP-UA18 - Surface Coating Operations Attributes
OP-UA19 - Wastewater Unit Attributes
OP-UA20 - Asphalt Operations Attributes
OP-UA21 - Grain Elevator Attributes
OP-UA22 - Printing Attributes
OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes
OP-UA25 - Synthetic Fiber Production Attributes
OP-UA26 - Electroplating and Anodizing Unit Attributes
OP-UA27 - Nitric Acid Manufacturing Attributes
OP-UA28 - Polymer Manufacturing Attributes
OP-UA29 - Glass Manufacturing Unit Attributes
OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes
OP-UA31 - Lead Smelting Attributes
OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes
OP-UA33 - Metallic Mineral Processing Plant Attributes
OP-UA34 - Pharmaceutical Manufacturing
OP-UA35 - Incinerator Attributes
OP-UA36 - Steel Plant Unit Attributes
OP-UA37 - Basic Oxygen Process Furnace Unit Attributes
OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes
OP-UA39 - Sterilization Source Attributes
OP-UA40 - Ferroalloy Production Facility Attributes
OP-UA41 - Dry Cleaning Facility Attributes
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes
OP-UA43 - Sulfuric Acid Production Attributes

OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes
OP-UA45 - Surface Impoundment Attributes
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes
OP-UA47 - Ship Building and Ship Repair Unit Attributes
OP-UA48 - Air Oxidation Unit Process Attributes
OP-UA49 - Vacuum-Producing System Attributes
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes
OP-UA51 - Dryer/Kiln/Oven Attributes
OP-UA52 - Closed Vent Systems and Control Devices
OP-UA53 - Beryllium Processing Attributes
OP-UA54 - Mercury Chlor-Alkali Cell Attributes
OP-UA55 - Transfer System Attributes
OP-UA56 - Vinyl Chloride Process Attributes
OP-UA57 - Cleaning/Depainting Operation Attributes
OP-UA58 - Treatment Process Attributes
OP-UA59 - Coke By-Product Recovery Plant Attributes
OP-UA60 - Chemical Manufacturing Process Unit Attributes
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes
OP-UA62 - Glycol Dehydration Unit Attributes
OP-UA63 - Vegetable Oil Production Attributes

EXHIBIT F

Certified PBR Registration No. 136126

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 5, 2016

MR KENT MILLER
OPERATIONS DIRECTOR KINDER MORGAN
KINDER MORGAN CRUDE & CONDENSATE LLC
407 CLINTON DR
GALENA PARK TX 77547-3460

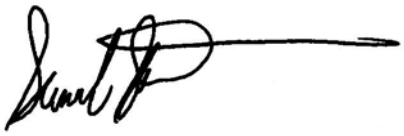
Permit by Rule Registration Number: 136126
Kinder Morgan Crude & Condensate LLC- Crude Condensate Splitter Facility- Butane Storage
Galena Park, Harris County and Truck Loading
Regulated Entity Number: RN100237452
Customer Reference Number: CN603935248
Account Number: HG-0262-H
Affected Permit: 101199, O-3764

This is in response to your certification Form PI-7 CERT regarding the Crude Condensate Splitter Facility Butane Storage and Truck Loading located at 906 Clinton Dr, Galena Park, Harris County. Kinder Morgan Crude & Condensate LLC has certified the emission increases under Title 30 Texas Administrative Code (TAC) § 106.261. For rule information see:
www.tceq.texas.gov/permitting/air/nav/numerical_index.html
As referenced in 30 TAC § 116.116(d)(2), all changes authorized under Chapter 106 to a permitted facility shall be incorporated into the NSR Permit No. 101199 when it is amended or renewed. The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

If you need further information or have questions, please contact Mr. John Gott, P.E. at (512) 239-1238 or write to the Texas Commission on Environmental Quality (TCEQ), Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

This action is taken under the authority delegated by the Executive Director of the TCEQ.

Sincerely,



Samuel Short, Manager
Rule Registrations Section
Air Permits Division

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 – Houston

Project Number: 246353

Emission Sources - Certified Increased Emission Rates

Registration Number 136126

This table lists the certified increased emission rates and all sources of air contaminants on the applicant's property covered by this registration. The emission rates shown are those derived from information submitted as part of the registration for PBR.

EPN / Emission Source	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
FUG-BLS / Fugitives-Butane Loading and Storage	0.03	0.13												
TOTAL EMISSIONS:	0.03	0.13												

MAXIMUM OPERATING SCHEDULE:	**Hours/Day**	24	**Days/Week**		**Weeks/Year**	52	**Hours/Year**	8,760