

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

October 12, 2010

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager

THROUGH: Kendal Stegmann, Senior Environmental Manager, Compliance and Enforcement

THROUGH: Phil Martin, P.E., Engineering Section

THROUGH: Peer Review

FROM: John Howell, P.E., Existing Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2003-104-C (M-4) PSD**
Plains Marketing, LP
Cushing Terminal Crude Oil Storage Facility
Section 23, T17N, R5E, Lincoln County, Oklahoma
Latitude: 35.942° and Longitude: - 96.739°
Directions: From Cushing (Intersection of Highway 33 and Linwood Street), south 3.5 miles, east into facility.

SECTION 1. INTRODUCTION

Plains Marketing, LP has requested a PSD construction permit for the Cushing Terminal Crude Oil Storage Facility.

Recent Permitting History:

Minor source Permit No 97-547-O, issued September 28, 2000, is the most recent operating permit for this facility. Six construction modification permits have been issued for the facility since then:

- Permit No. 97-547-C (M-2), June 4, 2001, added four 250,000-bbl tanks. This construction is complete.
- Permit No. 97-547-C (M-3), January 11, 2002, added an additional four 250,000-bbl tanks. This construction is also complete.
- Permit No. 97-547-C (M-4), June 6, 2002, added seven 150,000-bbl tanks. As of May, 2008, this construction has not yet commenced, and this permit has expired. [However, the additional tankage authorized has been re-authorized in later permits that are still in force.]
- Permit No. 2003-104-C, September 15, 2003, authorized an additional twelve (12) 250,000-bbl tanks, reduced the throughput limits somewhat for the existing tanks, and established throughput limits for the new tanks. Permitted VOC emission levels [195 TPY] in this permit exceed the Title V and PSD major source thresholds. The facility therefore became subject to

Part 70 permitting requirements. PSD review was not required in this permit, as neither the existing facility permitted emissions nor the permitted increase in emissions individually exceeded the PSD major source threshold. Eight of these twelve tanks have been constructed.

- Permit No. 2003-104-C (M-1), January 13, 2005, was an administrative amendment to 2003-104-C to alter tank designation numbers.
- Permit No. 2003-104-C (M-2), issued October 10, 2005, re-authorized the additional tanks previously authorized by 2003-104-C and 97-547-C (M-4). [As noted above, eight of the authorized 250,000-bbl tanks, and none of the 150,000-bbl tanks, have been constructed at this time.] The following additional changes were approved:
 - i) Eliminated individual tank throughput and emission limits, and replaced them with a facility-wide cap [195 TPY] on VOC emission rates, to facilitate operational flexibility in the utilization of the various floating-roof storage tanks. The VOC cap was set equal to the sum of the previously permitted individual tank emission limits.
 - ii) Clarify under NSPS Subpart Kb the allowable circumstances for floating roof tank landings.
- Applicability Determination No. 2003-104-AD (M-3) was issued on July 5, 2006. It was determined that Plains Marketing could alter the configuration of previously authorized tankage, [Permit No. 2003-104-C (M-2)] by substituting between three and seven new 570,000-bbl tanks, instead of the 150,000-bbl and 250,000-bbl tanks listed, without modifying the construction permit. Six 570,000-bbl tanks have been built at this time.
- Permit Application No. 2003-104-C (M-5) was received November 17, 2008, requesting construction of six new 570,000-bbl crude oil storage tanks. This application was determined to be a Tier I modification. Four of these tanks have been completed. An update received in August 2009 requested authority to build four additional new 270,000-bbl tanks in place of the remaining two 570,000-bbl tanks. To accommodate the additional tanks, the applicant requested that the facility-wide cap be increased by 37.26 TPY, to 232.26 TPY.
- Permit Application No. 2003-104-C (M-6) was received March 30, 2010 requesting construction of two new 300,000-bbl crude oil storage tanks. This application was determined to be a Tier I modification. To accommodate the additional tanks, the applicant requested that the facility-wide cap be increased by 14.86 TPY, to 246.92 TPY.

The following additional changes will be incorporated in this permit action:

- The applicant has determined that the VOC emission cap of 195 TPY [based on a 12-month rolling total] was based on emission estimates that did not adequately accommodate emissions associated with roof landings of floating roof tanks. A revised emission cap of 385.26 TPY for the existing and new construction authorized by Permit No, 2003-104-C (M-2) is requested. The increase of 195.26 TPY is subject to full PSD review, which is incorporated in this permit. This new emission cap includes minor corrections in estimates of breathing and working VOC emissions from the tanks.
- The additional construction and emission increases requested in pending minor modifications Application Nos. 2003-104-C (M-5) and 2003-104-C (M-6) [described above] are incorporated in this permit along with in a new facility-wide cap of 437.35 TPY. These increases are associated with projects separate from the project covered in Part 70 Permit No.

2003-104-C (M-2), and are therefore not subject to PSD review. The pending applications will be withdrawn upon issuance of this permit.

- As noted above, the applicant has completed construction of ten previously authorized 570,000-bbl storage tanks, which will be included in this permit.
- A recent update to this application requests authorization of construction of an additional 13 new 570,000-bbl crude oil storage tanks, and 27 new 270,000-bbl crude oil storage tanks [in addition to the new tanks requested in Applications No. 2003-104-C (M-5) and 2003-104-C (M-6), discussed above]. The added emissions from these new tanks will be accommodated within the 437.35 TPY facility-wide emission cap.
- Two 400-bbl fixed roof tanks have been permanently removed from service and will be deleted.
- The Crude H₂S Monitoring Plan incorporated in previous permits will be deleted. AQD has determined that it is unnecessary and unduly burdensome.

The facility is a listed PSD-major source, a crude oil storage facility exceeding 300,000-bbl storage capacity with current permitted emissions in excess of 100 TPY. The requested increase in permitted emission levels exceeds the PSD-major source Level of Significance of 40 TPY for VOC, requiring full PSD review.

SECTION II. PROCESS DESCRIPTION

This facility is designed and operated for the primary purpose of storing and loading organic liquids into and out of storage tanks. Crude oil enters and leaves the station through multiple pipelines with an estimated maximum throughput capacity of 504 MM-bbl per year, based on facility pumping capacity.

The modified facility will be comprised of:

- fourteen existing 100,000-bbl external floating roof tanks [EFR] (EUG 1),
- four existing 150,000-bbl EFR tanks (EUG 2),
- twenty existing 250,000-bbl EFR tanks (EUG 3),
- ten existing and thirteen proposed new 570,000-bbl EFR tanks (EUG 5),
- 31 proposed new 270,000-bbl EFR tanks (EUG 7),
- two proposed new 300,000-bbl EFR tanks (EUG 6), and
- associated piping, metering, and electric pumps.

Six of the 46 new tanks have been previously requested in pending Tier I permit applications. The remaining 40 are new requests in this application.

SECTION III. EQUIPMENT

Emission Units (EUs) have been grouped into Emission Unit Groups in the following outline.

Facility-wide post-modification fugitive emission sources are estimated in Table 1.

Table 1. EUG 8- Post Modification Fugitive Emission Sources

EU ID#	Source	# Items
F-1	Pump Seals	231
F-2	Valves 2” or larger	1,242
F-3	Flanges 2” or larger	2,960
F-4	Open ended valves	125
F-5	Threaded, tubing, Dresser, VIC, and Roll-a-grip connections 2” or larger	734
F-6	Other (Packing seals, drip pans, sumps)	321

Tables 2 and 3 on the following pages list the characteristics and estimated throughput of the currently existing storage and proposed new tanks.

Table 2. Existing Storage Tanks and Estimated Annual Throughput

EUG ID#	EU ID#	Contents	Roof Type	Capacity (bbl./)	Throughput (bbl./tank/yr)	Construction/Installation Date
1	100	Crude Oil	EFR	100,000	2.9 x 10 ⁶	1993
	200	Crude Oil	EFR	100,000		1993
	300	Crude Oil	EFR	100,000		1993
	400	Crude Oil	EFR	100,000		1993
	500	Crude Oil	EFR	100,000		1993
	600	Crude Oil	EFR	100,000		1993
	700	Crude Oil	EFR	100,000		1993
	800	Crude Oil	EFR	100,000		1993
	900	Crude Oil	EFR	100,000		1993
	1000	Crude Oil	EFR	100,000		1993
	1100	Crude Oil	EFR	100,000		1993
	1200	Crude Oil	EFR	100,000		1993
	1300	Crude Oil	EFR	100,000		1993
	1400	Crude Oil	EFR	100,000		1993
2	1500	Crude Oil	EFR	150,000	4.35 x 10 ⁶	1993
	1600	Crude Oil	EFR	150,000		1993
	1700	Crude Oil	EFR	150,000		1993
	1800	Crude Oil	EFR	150,000		1993
3	1900	Crude Oil	EFR	250,000	7.26 x 10 ⁶	1997
	2000	Crude Oil	EFR	250,000		1997
	2100	Crude Oil	EFR	250,000		1997
	2200	Crude Oil	EFR	250,000		1997
	2300	Crude Oil	EFR	250,000		2002
	2400	Crude Oil	EFR	250,000		2002
	2500	Crude Oil	EFR	250,000		2002
	2600	Crude Oil	EFR	250,000		2002
	2700	Crude Oil	EFR	250,000		2003
	2800	Crude Oil	EFR	250,000		2003
	2900	Crude Oil	EFR	250,000		2003
	3000	Crude Oil	EFR	250,000		2005
	3100	Crude Oil	EFR	250,000		2003
	3200	Crude Oil	EFR	250,000		2003
	3300	Crude Oil	EFR	250,000		2003
	3400	Crude Oil	EFR	250,000		2005
3500	Crude Oil	EFR	250,000	2003		
3600	Crude Oil	EFR	250,000	2003		
3700	Crude Oil	EFR	250,000	2005		
3800	Crude Oil	EFR	250,000	2005		

Table 2 (continued). Existing Storage Tanks and Estimated Annual Throughput

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Throughput (bbl./tank/yr)	Construction/Installation Date
5	3900	Crude Oil	EFR	570,000	7.26 x 10 ⁶	2006
	4000	Crude Oil	EFR	570,000		2006
	4100	Crude Oil	EFR	570,000		2006
	4200	Crude Oil	EFR	570,000		2006
	4300	Crude Oil	EFR	570,000		2006
	4400	Crude Oil	EFR	570,000		2006
5	5000	Crude Oil	EFR	570,000	11.0 x 10 ⁶	2009
	5100	Crude Oil	EFR	570,000		2009
	5200	Crude Oil	EFR	570,000		2009
	5300	Crude Oil	EFR	570,000		2009

Table 3. Proposed New Storage Tanks and Estimated Annual Throughput

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Throughput (bbl./tank/yr)	Construction/Installation Date
7	4500	Crude Oil	EFR	270,000	13.14 x10 ⁶	Proposed New
	4600	Crude Oil	EFR	270,000		Proposed New
	4700	Crude Oil	EFR	270,000		Proposed New
	4800	Crude Oil	EFR	270,000		Proposed New
6	7000	Crude Oil	EFR	300,000	62.8 x10 ⁶	Proposed New
	7100	Crude Oil	EFR	300,000		Proposed New
7	8000	Crude Oil	EFR	270,000	6.48 x10 ⁶	Proposed New
	8100	Crude Oil	EFR	270,000		Proposed New
	8200	Crude Oil	EFR	270,000		Proposed New
	8300	Crude Oil	EFR	270,000		Proposed New
	8400	Crude Oil	EFR	270,000		Proposed New
	8500	Crude Oil	EFR	270,000		Proposed New
	8600	Crude Oil	EFR	270,000		Proposed New
	8700	Crude Oil	EFR	270,000		Proposed New
	8800	Crude Oil	EFR	270,000		Proposed New
	8900	Crude Oil	EFR	270,000		Proposed New
	9000	Crude Oil	EFR	270,000		Proposed New
	9100	Crude Oil	EFR	270,000		Proposed New
	9200	Crude Oil	EFR	270,000		Proposed New
	9300	Crude Oil	EFR	270,000		Proposed New
	9400	Crude Oil	EFR	270,000		Proposed New
	9500	Crude Oil	EFR	270,000		Proposed New
	9600	Crude Oil	EFR	270,000		Proposed New
	9700	Crude Oil	EFR	270,000		Proposed New
	9800	Crude Oil	EFR	270,000		Proposed New
	9900	Crude Oil	EFR	270,000		Proposed New
	10000	Crude Oil	EFR	270,000	Proposed New	
	10100	Crude Oil	EFR	270,000	Proposed New	
	10200	Crude Oil	EFR	270,000	Proposed New	
	10300	Crude Oil	EFR	270,000	Proposed New	
	10400	Crude Oil	EFR	270,000	Proposed New	
	10500	Crude Oil	EFR	270,000	Proposed New	
	10600	Crude Oil	EFR	270,000	Proposed New	

Table 3. [Continued] Proposed New Storage Tanks and Estimated Annual Throughput

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Throughput (bbl./tank/yr)	Construction/Installation Date
5	10700	Crude Oil	EFR	570,000	13.68 x 10 ⁶	Proposed New
	10800	Crude Oil	EFR	570,000		Proposed New
	10900	Crude Oil	EFR	570,000		Proposed New
	11000	Crude Oil	EFR	570,000		Proposed New
	11100	Crude Oil	EFR	570,000		Proposed New
	11200	Crude Oil	EFR	570,000		Proposed New
	11300	Crude Oil	EFR	570,000		Proposed New
	11400	Crude Oil	EFR	570,000		Proposed New
	11500	Crude Oil	EFR	570,000		Proposed New
	11600	Crude Oil	EFR	570,000		Proposed New
	11700	Crude Oil	EFR	570,000		Proposed New
	11800	Crude Oil	EFR	570,000		Proposed New
11900	Crude Oil	EFR	570,000	Proposed New		

SECTION IV. EMISSIONS

The only emissions of consequence at this facility are VOCs and HAPs contained therein. **The specific conditions of the permit will allow operational flexibility such that throughputs and emissions are not limited tank-by-tank.** A facility-wide total VOC emission limit of 437.35 TPY [based on a twelve-month rolling total] is established.

The requested emission cap was originally based upon:

- An estimate of breathing and working losses from the tanks based on the maximum facility throughput of 504 MM-bbl per year, prorated among the existing and proposed tanks as listed in Permit No. 2003-104-C {M-2}, issued in 2005, as estimated by USEPA TANKS 4.09d, and
- Four roof landing events per year per tank, as determined using the API guidance document, “Evaporative Losses from Storage Tank Floating Roof Landings,” and the following assumptions:
 - A terminal-wide crude oil throughput of 324 MM-bbl/year.
 - A representative crude oil Reid vapor pressure [RVP] of 5.0 psia.
 - A representative quantity of one day between emptying and refilling a tank.
 - Four roof landings per tank per year.
- An estimate of VOC emissions from fugitive sources.

This permit action was originally requested to address PSD issues arising from the applicant’s determination that an increase [195.26 TPY] in the current facility-wide emissions cap [195 TPY]

was necessary in order to accommodate emissions from roof landing events from tanks previously authorized in Permit No. 2003-104-C (M-2) PSD.

Two minor modification permits have been requested since this PSD permit application was submitted. The emission increases requested in those application has been added to the increase requested in the PSD application. However, because these minor modifications are separate projects not associated with the construction authorized by Permit No. 203-104-C (M-2), these additional emission increases are not subject to PSD review.

Although the applicant has submitted a recent update requesting authorization in this permit to construct additional tanks, the applicant has not requested any further increase in the emission cap beyond the 195.26 TPY increase originally requested. The applicant has determined that the previously requested emission increase will be adequate to cover the new tanks.

All of the crude coming through the Cushing Terminal is weathered or "dead." Nothing comes into the Cushing Terminal directly from any production well or site. It has therefore been determined that it is appropriate to use TCEQ emission factors for Crude Oil Pipeline Facilities / Oil and Gas Heavy Oil factors to estimate fugitive emissions. Table 4 below details fugitive emission estimates.

Table 4. Post Modification Fugitive Emissions

EU ID# - POINT ID #	Source	# Items	VOC Emissions*
			TPY
F-1	Pump Seals	231	1.1130
F-2	Valves 2" or larger	1,242	0.1033
F-3	Flanges 2" or larger	2,960	0.0111
F-4	Open ended valves	125	0.1694
F-5	Threaded, tubing, Dresser, VIC, and Roll-a-grip connections 2" or larger	734	0.0547
F-6	Other (Packing seals, drip pans, sumps)	321	0.0985
Total			1.550

* Includes methane and ethane. **Estimate only, not an emission limit.

HAZARDOUS AIR POLLUTANTS

HAP emission estimates for this facility were estimated using the TANKS 4.09d program and are listed in Table 5 below. These estimates are based upon

- TANKS 4.09d software
- 100,000-bbl EFR tank with 2,900,000-bbl throughput. This size tank has the highest emissions per unit of throughput at this facility.
- Crude 5.0 RVP

The results are scaled up to the 504,000,000-bbl estimated maximum annual throughput of the facility.

Table 5. Hazardous Air Pollutants

HAP	C A S Number	Emissions
		TPY
n-Hexane	110-45-3	4.91
Benzene	71-43-2	4.71
Iso-octane [2,2,4-trimethyl pentane]	540-84-1	0.44
Toluene	108-88-3	2.83
Ethyl benzene	100-41-4	0.60
Xylene	1330-20-7	1.96
Cumene [Isopropyl benzene]	92-82-8	0.11
Total		15.57

PSD Applicability

The applicant has requested that this permit increase the permitted emissions of VOC by 190.26 TPY, which exceeds the PSD Significant Emission Rate [SER] of 40 TPY, thus triggering PSD review for this PSD-major source.

The applicant has elected not to conduct a PSD netting analysis, inasmuch as there are no significant emission reductions, creditable or otherwise, that could be considered for any contemporaneous period.

The facility is therefore subject to full PSD review for a significant emission increase of VOC.

SECTION V. PSD Review for VOC

A full PSD review consists of the following steps:

1. Determination of Best Available Control Technology (BACT).
2. Analysis of Air Quality Impacts. This analysis includes:
 - Description of dispersion model and procedures
 - Determination of air quality impact significance
 - Determination of pre-construction monitoring requirements
 - Compliance with National Ambient Air Quality Standards (NAAQS)
 - Compliance with available PSD increments
3. Evaluation of Source-related Impacts on Growth, Soils, Vegetation, and Visibility.
4. Evaluation of Class I Area Impacts.

[The BACT analysis below was presented by the applicant in October 2008, and was based upon the existing and planned tanks at that time:

*Fourteen 100,000-bbl
Four 150,000-bbl
Twenty 250,000-bbl
Six 570,000-bbl*

The applicant's current plan for equipment at this site is described in Section III of this permit.

AQD has determined that the analysis presented is representative and appropriate for the current planned facility configuration, and that a revised BACT analysis is not necessary.]

BACT Analysis

Major sources subject to PSD permitting requirements are required to conduct a BACT analysis as set forth in 40 CFR 52.21. Specifically, the analysis is required for the Cushing Terminal's VOC emissions because PSD SER is projected to be exceeded. The BACT analysis is used to ensure that the control technology to be applied for a major source or modification is the best that is available as determined by the Director on a case-by-case basis taking into account energy, environment, and economic impacts and other costs of alternate control systems. The storage tanks at the Cushing Terminal are subject to NSPS Subpart Kb standards. The proposed BACT is therefore required to be at least as stringent as, or more stringent than, the NSPS standards.

The following methodology for performing a top-down BACT analysis has been developed from the US EPA's 1990 Draft New Source Review Workshop Manual - BACT Guidance. The analysis utilizes five key steps to identify the most suited BACT option for the project.

Step 1. Identify Available Control Technologies

Identification of possible BACT options were derived from EPA and state BACT clearinghouses, recent permit decisions from similar projects, and recent industry developments or applications of BACT alternatives in similar operations. The following activities were identified as BACT options to control VOC emissions from crude oil storage tanks. The control options chosen for the BACT analysis includes the most stringent available control technology to reduce VOC emissions from storage tank operations.

Five different control options have been selected for BACT top-down analysis for control of emissions from landing losses, and from breathing and working losses (i.e., “normal” operations) and are summarized in the following table:

Table 6. Summary of all BACT Options

Option Description	Control Landing Loss Emissions	Control Working and Breathing Loss Emissions
1. Mobile Degassing and Vapor Collection	Yes	--
2. Over Top Fixed Vapor Collection System (EFR)	Yes	--
3. Coned Roof Add-on with Thermal Oxidizer	Yes	Yes
4. Cone Roof Add-on without Thermal Oxidizer	--	Yes
5. Domed External Floating Roof Design	--	Yes

BACT Options for Breathing and Working Losses

The tanks at the Cushing Terminal are constructed with external floating roofs. These roofs are designed to rest on the liquid petroleum product inside each tank and rise and fall with the level of the liquid product inside each tank to minimize volatile emissions. During the course of operations at the terminal, each EFR tank will continue to have breathing and working losses related to passive venting of volatile emissions from the tank. Modifications to these tanks will control the breathing and working losses (or venting) of volatile emissions from each tank. The BACT options identified as most applicable for these losses include:

Cone Roof Add-on With Thermal Oxidizer – This option would involve installing a fixed cone roof over the top of each tank at the terminal, thereby creating internal floating roof tanks from the previous EFR tank. The coned exterior roofs would be supported by columns that penetrate through the floating roof inside each tank. The fixed coned roof design acts to block the wind flow across the top of each tank and be part of a system to collect emissions coming out the top of the floating roof of each tank. A dedicated vapor collection system would be installed to route emissions from each tank to a thermal oxidizer. This BACT option can be effective in controlling emissions from working and breathing losses as well as from roof landing events.

Cone Roof Add-on Only Design – This option involves installing a fixed coned roof as in the previous option except without installation of a thermal oxidizer and associated collection piping. The fixed roof add-on would create an internal floating tank and the primary function of the fixed external roof in this alternative would be to block the wind and decrease working and breathing emissions from each tank.

Domed External Floating Roof – This option involves constructing a self-supporting geodesic dome over the existing external floating roof on each tank at the terminal. Similar to the internal floating roof design, geodesic domes are utilized to minimize the wind over the top of the external floating roof. The domed tanks are generally vented with circulation vents at the top of each roof.

Emissions from each domed EFR tank would not be piped to a control device. Since the geodesic domes would be self-supporting, the installation of column supports penetrating through the floating roof would not be necessary and gaps in the floating roof would be minimized. This design is still referred to as an external floating roof because it utilizes the existing heavier-duty, double-sealed fully intact EFR, though for emission estimation purposes it is treated as an IFR with no support columns.

BACT Options for Landing Loss Emissions

Tanks at the Cushing Terminal are constructed with external floating roofs. These roofs are designed to rest on the liquid petroleum product inside each tank and rise and fall with the level of the material in the tanks to minimize volatile emissions. As the floating roof lands on its legs and no longer rests on the surface of the liquid, volatile vapors are created and emissions may be vented from the tanks during these roof landing events.

Cone Roof Add-on with Thermal Oxidizer – This option is the same BACT option as discussed for breathing and working losses. A fixed vapor collection and control system can be used for tank operations continuously such as during standing, filling, unfilling, and during landing events.

Mobile Degassing Units – Mobile degassing units are an alternative to running a fixed line to each and every tank to collect emissions as the tank lands. The units are portable and can be moved from tank to tank, and would only be used during landing events. As the tanks lands, the vapors generated underneath the floating roof would be evacuated out of the vapor space in the tank and collected by mobile degassing units. The degassing units are usually attached to a hatch or other opening and pull vapors out during the course of the landing event. Generally, minimal modifications are required to be made to the tank to operate mobile degassing units. The gases collected by the units can be treated by carbon adsorber or mobile thermal oxidizers, depending on the type of unit that is chosen. The operation and implementation of this option is contracted out to a vendor who specializes in renting and providing crews for these units.

Over Top Fixed Vapor Collection and Control System – This option involves installing a fixed (or permanent) vapor collection line going over the top of the side wall of each EFR tank at the terminal. The line would go through the existing external floating roof to collect emissions from the vapor space formed underneath the floating roof as it lands. The use of this option would only be good during landing events when a vapor space is created during landing events. During other times, the tank would be filled with liquid and the line would be submerged underneath the floating roof. Vapors that are collected would be piped to a common control device at the site. A thermal oxidizer would be the chosen control device to control volatile emissions from tanks at the site. The implementation and operation of this effort would be led by site personnel. In addition to the operation and maintenance of the vapor collection device that runs over the top of each tank, operators at the site would also be responsible for the maintenance and operation of the thermal oxidizer.

Step 2 Eliminate Technically Infeasible Options

At this step, an evaluation of the technical feasibility of each control alternative is made. Each alternative that is determined to be technically infeasible will be excluded from further BACT evaluation and eliminated as a potential option.

All BACT control options identified as part of Step 1 are technically feasible for control of VOC emissions from the storage tanks and warrant additional analysis. These options are further considered in the following steps of the top-down BACT analysis.

Step 3 Rank Remaining Control Options by Control Effectiveness

The emissions from the remaining BACT options were evaluated relative to the baseline option. The following table summarizes the BACT options for working and breathing losses. These emission estimates are based on the TANKS 4.0.9d emissions modeling evaluation for general site operations.

Table 7. Emissions For BACT Options (Working and Breathing Losses) per Tank

Tank Group (Diameter)	BACT Option			
	Baseline Option (As-Built), TPY	Cone Roof with Vapor Collection, TPY	Cone Roof Add-on (No- Vapor Collection), TPY	Dome Roof Add-on, TPY
EUG 1 (120 ft)	2.84	0.02	1.03	0.60
EUG 2 (150 ft)	3.07	0.03	1.29	0.72
EUG 3 (200 ft)	3.44	0.04	2.03	0.91
EUG 5 (271 ft)	4.5	0.08	3.85	1.72

The emissions summary for BACT options for landing losses is summarized in the following table:

Table 8. Emissions For BACT Options (Landing Losses) per landing ^(a)

Tank Group (Diameter)	BACT Option			
	Baseline Option (As-Built), TPY	Cone Roof with Vapor Collection, TPY	Mobile Degassing with Vapor Collection, TPY	Over Top Fixed Vapor Collection, TPY
EUG 1 (120 ft)	0.43	0.01	0.02	0.01
EUG 2 (150 ft)	0.65	0.01	0.03	0.01
EUG 3 (200 ft)	1.34	0.03	0.07	0.03
EUG 5 (271 ft)	1.99	0.04	0.1 t	0.04

^(a) Emissions estimates developed from these options are based from industry and manufacturer data.

Table 9 displays estimated reductions from baseline emissions from each BACT option from each type of tank at the terminal. The BACT options for working/ breathing and for landing losses are listed in order of control effectiveness. The most stringent or most effective has been listed first for each scenario.

Table 9. BACT Options Listed by Control Efficiencies

Options for Working and Breathing Losses	Effectiveness Above Baseline
1. Cone Roof Add-on with Vapor Collection	98.8 % ^(a)
2. Geodesic Dome Roof Add-on	73 % ^(b)
3. Cone Roof Add-On Without Vapor Collection	44 % ^(b)
Options for Landing Losses	Effectiveness Above Baseline
1. Cone Roof Add-on with Vapor Collection	99 % ^(c)
2. Over Top Fixed Vapor Collection	99 % ^(c)
3. Mobile Degassing and Vapor Collection	95 % ^(d)

^(a) Based on TANKS 4.0.9d estimates with thermal oxidizer control efficiency

^(b) Based on TANKS 4.0.9d estimates

^(c) Based on control efficiency for thermal oxidizer

^(d) Based on industry and manufacturer available data

In addition to control effectiveness and emissions considerations, each BACT option must also be evaluated for economic impacts, environmental, and energy impacts. These considerations are further discussed in Step 4.

Step 4: Evaluate and Eliminate Control Technologies Based on Energy, Environmental, and Economic Impacts

This step focuses on the consideration of economic, environmental, and energy impacts brought about by each BACT option. This step will lead to the consideration of the final level of control.

The economic consideration for each remaining BACT option is based on a cost analysis evaluating, in part, total capital costs, direct and indirect costs, and total derived annualized cost. The annualized cost with cost per ton of emissions reduced is listed in the following tables. The average cost effectiveness for each option is determined from the annualized cost for implementation of each option divided by the annual emissions reduction gained from each option. The incremental cost effectiveness is an evaluation of the costs and the emissions reduction for each control option as compared to the next most stringent option. This value is also listed in the summary tables.

For the economic analysis, a realistic market-based interest rate of 6% was used for all the BACT options. In addition, for purposes of the capital recovery factor, economic life for equipment utilized in the BACT options were based on an average of 15 years. EPA cost supporting documents and the BACT guidance document establish that the economic life of a control system varies between 10 and 20 years. Annual operational costs were estimated to be \$100,000. These

values and cost determinations are detailed in the attached cost worksheets and supporting documents.

Working and Breathing Losses BACT Impacts

The available BACT options to control emissions related to working and breathing losses yield considerable emissions reduction relative to the baseline emissions as represented in the permit application. The reduction in emissions from these options range from 64.6 tons reduced to over 146 tons reduced annually. For the lowest economic impact, the lowest available cost per ton reduced is approximately \$35,754. This value represents a significant economic impact. Due to the extremely high and unreasonable economic impact for each of these BACT options, they are inappropriate BACT alternatives beyond the baseline NSPS Kb standards for new tanks. Therefore, BACT for working and breathing losses is proposed to be the use of an EFR tank with primary and secondary seals, as required by NSPS Subpart Kb.

The following table in this section identifies each BACT control option for working and breathing losses numerically with the first option listed as being the most stringent or most effective to control emissions.

**Table 10. BACT Economic, Environmental and Energy Impact Summary:
Working and Breathing Losses**

	BACT Option			Baseline
	1st	2nd	3rd	
Estimated Emissions (tpy)	1.68	39.8	83.28	147.9
Emissions Reduced (tpy)	146.22	108.1	64.62	0.0
Total Annualized Costs (Est.)	\$ 5,802,400	\$ 3,865,000	\$ 4,495,700	
Cost Effectiveness (Price/ ton reduced)	\$ 39,682.63	\$ 35,754.08	\$ 69,571.51	
Incremental Cost Effectiveness	\$ 50,823	\$ -14,505	\$ 69,571.51	
Environmental Impacts	Unpermitted emissions (NOx, CO), Noise	None	None	
Energy Impacts	Fuel Consumption	None	None	

- Option 1 = Cone Roof Add-on with Vapor Collection
- Option 2 = Geodesic Dome Roof Add-on
- Option 3 = Cone Roof Add-On without Vapor Collection

Additional consideration of the environmental and energy impacts for BACT options for working and breathing losses was made, specifically for the use of the thermal oxidizer in Option 1. Options 2 and 3 have no considerable environmental or energy impacts. For Option 1, the use of fuel would be required to operate a thermal oxidizer, thus creating an energy impact or

consideration. The use of a thermal oxidizer creates an environmental impact due to the emissions, heat, and noise output. These impacts are not further considered because due to the previously detailed unreasonably high economic impacts, these options were not selected over the baseline option.

Landing Losses BACT Impacts

The following table in this section identifies each BACT control option for landing losses numerically with the first option listed as being the most stringent or most effective to control

**Table 11. BACT Economic, Environmental and Energy Impact Summary
Landing Losses**

	BACT Option			Baseline
	1st	2nd	3rd	
Estimated Emissions (tpy)	4.08	4.08	9.6	189.3
Emissions Reduced (tpy)	185.22	185.22	179.7	0.0
Total Annualized Costs (Est.)	\$5,802,393.55	\$2,507,228.24	\$1,579,009.76	
Cost Effectiveness (Price/ton reduced)	\$ 31,327.04	\$ 13,536.49	\$ 8,786.92*	
Incremental Cost Effectiveness	\$ Infinite	\$ 168,155	\$ 8,786.92	
Environmental Impacts	Unpermitted emissions (NOx, CO), Noise	Unpermitted emissions (NOx, CO), Noise	Unpermitted emissions (NOx, CO), Noise	
Energy Impacts	Fuel Consumption	Fuel Consumption	Fuel Consumption	

Option 1 = Cone Roof Add-on with Vapor Collection

Option 2 = Over Top Fixed Vapor Collection

Option 3 = Mobile Degassing and Vapor Collection

* Costs may be underestimated due to generalized details provided by various vendors. Additional costs associated with additional equipment rentals such as a power generator and additional mobilizations were not considered.

Environmental and energy impacts related to BACT options for landing losses are primarily related to operating the vapor control equipment. The BACT options 1 and 2 (for Landing Losses) are the top alternatives because they yield the highest (similar) emissions reductions. BACT options 1 and 2 would utilize a thermal oxidizer. The use of a thermal oxidizer would require fuel usage such as natural gas and would result in additional emissions that were not previously addressed or authorized on the current ODEQ permit for the site. The new pollutants would include nitrogen oxides and carbon monoxide.

The cost effectiveness for options 1 and 2 range from \$13,536 per ton reduced to \$ 31,327 per ton reduced. Option 1 is not considered economically reasonable because the average cost

effectiveness is very high at over \$30,000 per ton. In addition, it has no change over option 2 in terms of emissions reduction which creates an infinite incremental cost. Option 2 is not considered to be economically reasonable because its average cost effectiveness is also high at over \$13,000 per ton, with an incremental cost over option 3 of almost \$170,000 per ton.

BACT Option 3, or the mobile degassing unit, to control landing losses emissions is similar to the two previous options because it also utilizes a vapor collection and control system. However, this last option is different because it is mobile and not a consistent control for each and every tank. The degassing unit would need to be mobilized for each landing event. Environmental impacts associated with this option may include additional pollutants (NOX, PM, and CO) from a mobile thermal oxidizer and a power generator.

The energy demands for this option would require consideration of fuel usage for generators, the thermal oxidizer, and mobilization of equipment and crew. These energy demands are not common with the other BACT options presented in this analysis and are a considerable impact.

This BACT option represents an approximate value of \$ 8,787 per ton of VOC reduced. Additional costs associated with generator equipment and power supply rental and fuel demands were not applied and may add to the final costs. Also, the uncertainty of a longterm agreement with a vendor and the uncertainty of future mobilization costs can significantly affect the effectiveness of this option. Therefore, the use of BACT option 3 to control landing losses does not represent an option that would be appropriate given consideration of overall economic, environmental, and energy impacts.

Step 5 Select BACT and Document the Selection as BACT

The most appropriate level of BACT for working and breathing losses and landing losses for the storage tanks at the Cushing Terminal is the use of EFR tanks with primary and secondary seals with no additional controls, as proposed in the permit application. This level of BACT was chosen based on all considerations for technical feasibility, economic, environmental, and energy impact.

The chosen level of BACT is consistent with findings from the EPA's RACT/BACT/LAER Clearinghouse for similar conditions and operations. The clearinghouse listed several facilities (e.g. RBLC nos. NM-0050 and RUS-0137) with crude oil storage tanks. Acceptable BACT for PSD for these tanks were external floating roofs equipped with double seals, such as a metallic shoe primary seal with a rim-mounted secondary seal, or liquid-mounted secondary seals.

For roof landing events, the most appropriate level of BACT will be no additional controls beyond the use of an EFR with primary and secondary seals. The chosen level of BACT for roof landing events is based on all available considerations for technical feasibility, economic, environmental, and energy impacts in accordance with the BACT guidance from the EPA Draft NSR Workshop Manual. The EPA's BACT Clearinghouse did not detail any BACT examples for tank roof landings

Air Quality Impacts

For any pollutant exceeding its PSD significant emission level as part of a new construction, a PSD air quality impact analysis is required to demonstrate compliance with any applicable ambient air quality standards established for that pollutant. EPA regulates VOC as precursors to tropospheric ozone formation. Ozone is unique because the EPA has not established a PSD modeling significance level (an ambient concentration expressed in either $\mu\text{g}/\text{m}^3$ or ppmv) for ozone. However, EPA has established an ambient monitoring *de minimis* level, which is different from other criteria pollutants, because it is based on a mass emission rate (100 TPY) instead of an ambient concentration (in units of $\mu\text{g}/\text{m}^3$ or ppmv).

Comparison of Impacts to Monitoring Exemption Levels

Pollutant	Monitoring Exemption Levels	Ambient Impacts
VOC	100 TPY of VOC	385 TPY VOC

Since VOC emissions are greater than the 100 TPY monitoring significance level, ozone pre-construction monitoring is required. The Mannford Monitoring Site (No. 40-037-0144) located 38.0 km ENE of the facility will provide conservative monitoring data in lieu of pre-construction monitoring.

2008 Monitoring Data Summary	Monitor 401090033		
	Concentration (ppm)		
Ranking	2007	2008	2009
First High	0.080	0.075	0.083
Second High	0.072	0.074	0.081
Third High	0.072	0.070	0.075
Fourth High	0.071	0.069	0.074

As modeled, the potential increase in emissions of VOC is 325 TPY. OAC 252:100-8-35 requires an air quality impact evaluation for each regulated pollutant for which a major modification would result in a significant net emissions increase. No *de minimis* air quality level is provided for ozone. However, any net increase of 100 tons per year or more of volatile organic compounds subject to PSD is required to perform an ambient impact analysis. Methods for evaluating single source impacts on ozone concentrations are not consistent, due to the lack of availability of data at a refined level, readily available tools and EPA guidance. DEQ has evaluated the impact of the proposed construction Plains Cushing Terminal using an existing air quality database generated for a SIP evaluation and the CAMx photochemical modeling system.

Oklahoma entered into Early Action Compact (EAC) agreements with EPA for the Tulsa and Oklahoma City metropolitan areas. Photochemical modeling evaluations were prepared in support of the agreements. These evaluations were conducted in accordance with EPA guidance and underwent an extensive public comment process and EPA review. The modeling was based on a two week episode beginning in Mid-August of 1999 and extending through the first week of September 1999. This episode was chosen both by virtue of being a prolonged period of high

ozone concentrations and a reflection of the most common meteorological conditions that spawn high concentrations for Tulsa and Oklahoma City.

Modeling for the Plains Cushing Terminal was conducted using the EAC 2007 control case. Emissions to be modeled were calculated by adding the future potential increases identified in the application to the 2007 grown emissions. Existing 2003 emissions from facility were subtracted from the total site potential in order to reflect the grown 2007 inventories used in the EAC data base. The emissions were further speciated for the carbon bond for chemistry used in the EAC modeling.

Maximum impacts from the proposed increases are insignificant and occur in the vicinity of the facility in Payne County. A maximum 8-hour increase of 0.023 ppb [0.000023 ppm] was predicted for the site. This extremely low impact, when added to background level, does not cause an exceedance of the NAAQS.

Additional Impact Analyses

The PSD regulations require that additional impact analyses be conducted to consider the project's potential effects on soils and vegetation, secondary growth and visibility impairment.

Soils and Vegetation Impacts

PSD regulations require that additional impact analyses be conducted to consider the project's effects on soils and vegetation. Elevated ground-level ozone concentrations can damage terminal life and reduce crop production. Ozone interferes with the ability of terminals to produce and store food, making them more susceptible to disease, insects and harsh weather. The increased potential VOC emissions resulting from the proposed terminal are predicted to cause a maximum 8-hour increase of 0.023 ppb ozone, a level that will have an insignificant impact on soils and vegetation.

Secondary Growth

A growth analysis is intended to evaluate the amount of new growth that is likely to occur in support of the project and to estimate secondary emissions resulting from that associated growth. Associated growth includes residential and commercial/ industrial expansion resulting from the new terminal. Residential growth depends on the number of new employees and the availability of housing in the area, while associated commercial and industrial growth consists of new sources providing services to the new employees and the terminal. For the proposed installation of additional tanks, PAALP does not anticipate an increase in required permanent manpower or third-party services. Thus, since secondary growth analyses generally do not consider temporary sources such as construction, the proposed project will have negligible secondary growth impact

Visibility Impairment Analysis

Based on the location of the terminal and the contents of tanks on-site, it is expected that the terminal will have no visibility impacts on the nearby area.

Class I Impact Analysis

Class I Areas are defined by the U.S. EPA's New Source Review Manual as those areas of the nation that are of special natural, scenic, recreational, or historic interest to the public. The closest Class I Area to the plains Cushing facility is the Wichita Mountain Wildlife Refuge, which is located approximately 218 kilometers (km) southwest of the facility. This Class I Area is managed by the U.S. Forest Service (FS).

Class I Area analyses examine two separate items: (1) Class I Increments and (2) Air Quality Related Values (AQRVs). Class I Increment modeling is explicitly required by U.S. EPA under the PSD program and is reviewed for approval by the state permitting agency. Class I Areas have a separate set of PSD Increments for PM₁₀, SO₂, and NO_x that are more stringent than the typically considered Class II Increments. The method recommended by the Federal Land Managers (FLMs) for Class I Area impact analysis has been utilized. As an alternative to the standard Class I analysis, the FLMs consider a source located greater than 50 km from a Class I area to have negligible impacts with respect to Class I air quality related values (AQRV) if its total SO₂, NO_x, PM₁₀, and H₂SO₄ annual emissions (in tons per year), divided by the distance (in km) from the Class I area (Q/D) is 10 or less. Based on the Federal Land Managers' Air Quality Related Values Workgroup (FLAG), *Phase I Report—Revised*, DRAFT, June 27, 2008, the FLMs would not request any further Class I AQRV impact analyses from such sources. Therefore, the FLM recommended formula $Q/D < 10$ was used in conducting the Class I impact

analysis. Because there are no expected emissions of SO₂, NO_x, PM₁₀, or H₂SO₄ from the facility, Q = 0.

Q/D<10 Analysis

Class I Area	Quantity (TPY)	Distance (km)	Q/D	Q/D<10?
Caney Creek	0.0	289	0.0	Yes
Upper Buffalo	0.0	297	0.0	Yes
Wichita Mountains	0.0	218	0.0	Yes

The proposed project is not expected to significantly impact any AQRVs in the Wichita Mountain Wildlife Refuge because the ratio of Q/D is less than 10. Therefore, further analysis is not required.

Hydrogen Sulfide

The initial Part 70 permit for this facility contained an analysis of ambient impacts of H₂S. Extremely conservative Screen3 modeling was used to demonstrate that it would not be possible for the facility [as configured in that permit] to exceed the Subchapter 31 limit of 0.2 ppm (24-hr average), assuming all crude stored contained at least 750 ppm H₂S.

On February 21, 2009, samples were taken of each type of sour crude stored at the Plains Cushing facility on that date. All samples were analyzed and determined to contain less than 1.0 ppm H₂S and mercaptans. The applicant has indicated that “sour” crudes rarely exceed 10-20 ppm H₂S.

Based on this information, the AQD has determined that the Crude H₂S Monitoring Plan incorporated in previous permits for this facility is unnecessary and unduly burdensome. This requirement will be deleted.

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified in the application are duplicated below.

1. Activities having potential emissions of less than 5.0 TPY.
2. Future remediation including, but not limited to, Part 1B listings.
3. Portable water/soil treatment equipment including, but not limited to, air strippers, filtration units, and chemical/biological units.
4. Emergency mainline relief vessel, which is emptied immediately after use.
5. Periodic tank cleaning.

- 6. Occasional tank and pipe painting.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
 Subchapter 1 includes definitions but there are no regulatory requirements

OAC 252:100-2 (Incorporation by Reference) {Applicable}
 This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
 Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in “attainment” of these standards.

OAC 252:100-5 (Registration, Emission Inventory, and Annual Fees) [Applicable]
 The owner or operator of any facility that is a source of air emissions shall submit a complete emissions inventory annually on forms obtained from the Air Quality Division. An emission inventory was submitted and fees paid for previous years.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility that result in emissions not authorized in the permit and that exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities refer to those individual emission units either listed in Appendix I or whose actual calendar year emissions do not exceed the following limits.

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the construction permit application, or developed from the applicable requirement.

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]
 Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the

owner or operator of the facility in response to this event. Request for affirmative defense, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM)) [Not Applicable]
There is no fuel-burning equipment on location or other significant particulate matter (PM) emission sources.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than on six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Since there are no fuel-burning or PM-producing activities, compliance is assured.

OAC 252: 100-29 (Fugitive Dust) [Applicable]
This subchapter states that no person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 5 limits ambient air impacts of hydrogen sulfide to 0.2 ppm (24-hr average). Modeling has demonstrated that limiting crude H₂S content to 750 ppm or less will ensure compliance with this standard.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of NO_x per MMBTU, three-hour average. There is no fuel-burning equipment on location.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
This facility has none of the affected sources: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 requires storage tanks constructed after December 28, 1974, with a capacity between 400 and 40,000 gallons and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped

with a permanent submerged fill pipe or with an organic vapor recovery system. Two tanks previously subject to this requirement have been removed.

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity greater than 40,000 gallons to be equipped with a floating roof or a vapor-recovery system capable of collecting 85% or more of the uncontrolled VOCs. All tanks on-site that would be subject to this requirement are equipped with external floating roofs. However, these tanks are subject to the equipment standards of NSPS Subpart Kb and are therefore exempt from this section.

Part 5 limits the VOC content of coatings. Any painting operation will involve maintenance coatings of buildings and equipment and emit less than 100 pounds per day of VOCs and is exempt.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]

This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Facility	not in source category
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Landfills	not in source category

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52

[Applicable]

PSD review for a significant emission increase of VOC applies to this project. The PSD review is presented in Section V.

NSPS, 40 CFR Part 60

[Subpart Kb Applicable]

Subpart Kb (Volatile Organic Liquids Storage Vessels) applies to volatile organic liquids storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984, and which have a capacity of 19,812 gallons (40 cubic meters) or greater. Paragraph 60.112b(a) specifies that vessels with a design capacity greater than or equal to 39,980 gallons containing a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 0.75 psia but less than 11 psia shall have one of the following vapor control devices: an external fixed roof in combination with an internal floating roof; an external floating roof; a closed vent system to a control device (flare, condenser, or absorber); or an equivalent system. All of the tanks at this facility were constructed after July 23, 1984. Subpart Kb specifies the following standards for external floating roofs. The floating roof must be floating on the liquid surface except during initial fill or when the vessel is completely emptied. The floating roof must be equipped with closure devices between the wall of the vessel and the edge of the floating roof. Each opening in the floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, and stub drains is to be equipped with a cover or lid rim space vents, column wells, ladder wells, and stub drains is to be equipped with a cover or lid which is to be closed at all times except when the device is in actual use. The cover or lid shall be bolted except when in use. Automatic bleeder vents shall be equipped with a gasket. Rim space vents shall be equipped with a gasket. The sample wells shall have a slit fabric cover which covers at least 90% of the opening. The secondary seal on an external floating roof shall be checked at least yearly for gaps. The secondary seal gap area to tank circumference ratio shall not exceed 1 square inch per foot of tank diameter nor shall any gap exceed 0.5 inches. The primary seal gap area to tank circumference ratio shall not exceed 10 square inch per foot of tank diameter nor shall any gap exceed 1.5 inches. All tanks at the facility have or will have external floating roofs and are or will be constructed in compliance with all requirements. The permit requires compliance with all applicable requirement of this subpart.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides, or vinyl chloride except for trace amounts of benzene.

Subpart J (Equipment Leaks of Benzene) concerns only process streams which contain more than 10% benzene by weight. Benzene is present only in trace amounts in any product stream at this site.

Subpart BB (Benzene Transfer Operations) affects transfer and loading operations with 70% or more by weight benzene. Benzene is present only in trace amounts in any product stream at this site.

NESHAP, 40 CFR Part 63

[Not Applicable]

Subpart EEEE - Organic Liquids Distribution (Non-Gasoline). This subpart was finalized by Federal Register notice on February 3, 2004, and affects organic liquid distribution (OLD) operations only at major sources of HAPs with an organic liquid throughput greater than 7.29 million gallons per year (173,571 barrels/yr). The main types of plant sites that either are OLD operations or contain a collocated OLD operation are:

- Liquid terminal facilities that distribute organic liquids,
- Organic chemical manufacturing facilities with a co-located OLD operation,
- Petroleum refineries with a collocated OLD operation,
- Other industrial facilities with a collocated OLD operation,
- Crude oil pipeline pumping and breakout stations.

This subpart affects the following storage tanks at existing facilities.

- Tanks with a capacity greater than or equal to 20,000 gallons but less than 40,000 gallons that store an organic liquid that contains more than 5% HAPs and that has an annual average vapor pressure greater than or equal to 1.9 but less than 11.1 psia.
- Tanks with a capacity greater than or equal to 40,000 gallons that store an organic liquid that contains more than 5% HAPs and that has an annual average vapor pressure greater than or equal to 0.75 psia.

This subpart affects the following storage tanks at new facilities.

- Tanks with a capacity greater than or equal to 10,000 gallons but less than 40,000 gallons that store an organic liquid that contains more than 5% HAPs and that has an annual average vapor pressure greater than or equal to 1.9 but less than 11.1 psia.
- Tanks with a capacity greater than or equal to 40,000 gallons that store an organic liquid that contains more than 5% HAPs and that has an annual average vapor pressure greater than or equal to 0.1 psia.

This facility is not a major source of HAPs; therefore, none of the tanks at this facility are subject to the requirements of this subpart.

Compliance Assurance Monitoring, 40 CFR Part 64

[Not Applicable]

Compliance Assurance Monitoring, as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY.

There are no individual emission units at this facility that meet all of the above criteria.

Chemical Accident Prevention Provisions, 40 CFR Part 68

[Not Applicable]

The definition of a stationary source does not apply to transportation, including storage incident to transportation, of any substance or any other extremely hazardous substance under the provisions of this part. Naturally occurring hydrocarbon mixtures, prior to entry into a natural

gas processing plant or a petroleum refining process unit, including: condensate, crude oil, field gas, and produced water, are exempt for the purpose of determining whether more than a threshold quantity of a regulated substance is present at the stationary source.

Stratospheric Ozone Protection, 40 CFR Part 82

[Applicable]

These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

This facility does not utilize any Class I & II substances.

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been classified as Tier II based on the request for a construction permit for modifications to an existing PSD-major source which will result in post-modification increase in PTE for VOC exceeding the Significant Emission Level for PSD for that pollutant. Public review and EPA of the application and permit are required.

The applicant has published a Notice of Filing for this application in Lincoln County. The notice was published on June 5, 2010, in the *Cushing Citizen*. The applicant has also published the Notice of Tier II Draft Permit on August 11, 2010. This facility is not located within 50 miles of the border of Oklahoma and any other state.

Simultaneous public and EPA review was requested and approved for this permit. The proposed permit was submitted to EPA Region 6 for a review period of 45 days. No comments on the proposed permit were received from EPA Region 6.

One comment was received from the public:

Comment: I am very concerned about the tier II draft permit in progress (30) day public notice # 2003-104-C (M-4)PSD applied for by Plains Marketing. It asks for emissions of 437 tons of regulated pollutants to be allowed per year and the location is 3 1/2 miles So. of Cushing. We already have tank farms all around us giving off who knows what and a large amount of pollutants. They are asking to more than double the amount at the terminal So.of cushing. Then I find out there is no environmental monitors in Cushing. I simply couldn't believe it. WHY HAS CUSHING BEEN IGNORED BY EPA? I don't want my grandchildren growing up in an unsafe air community. I urge you to consider the consequences of this permit and future ones. Please protect our air quality.

Response: The increase in permitted emissions requested and approved in this permit has been subjected to the PSD review process, which is the most stringent level of review required for facilities located in an attainment area. All applicable requirements of the PSD review process, and all other applicable regulatory requirements, have been satisfied, including a BACT [Best Available Control Technology] determination, modeling of ambient air impacts, and public and EPA participation in the review process. There is therefore no legal foundation for ODEQ to refuse issuance of this permit.

The selection of environmental monitoring sites is of necessity a compromise between conflicting goals, which are:

Obtaining adequate coverage for the entire state, and

Selecting locations that afford the most cost effective use of limited available resources; which is to say, locations that provide information of the greatest benefit to the most heavily populated areas which are at the greatest risk of exceeding the National Ambient Air Quality Standards [NAAQS].

For the increase in VOC emissions proposed in this permit, the only pollutant for which monitoring would be relevant is ozone. Large metropolitan areas with large numbers of motor vehicles are the most critical areas in Oklahoma [as in other states] for ozone monitoring, and for this reason the ODEQ monitoring sites are biased towards the Oklahoma City and Tulsa areas. Smaller towns and cities, such as Cushing, are not at risk for exceeding ambient standards, as demonstrated by monitoring results from the Mannford site, and other monitoring sites in rural areas of Oklahoma. The Oklahoma air quality monitoring network conforms with EPA's guidelines for selection of monitoring sites.

As discussed in the Air Quality Impacts section of this memorandum [p 19], data from the Mannford Monitoring Site (No. 40-037-0144) located 38.0 km ENE of the facility has been used to provide monitoring data in lieu of preconstruction monitoring. Based on the exceedingly low impact projected for this emission increase, no additional pre- or post-construction monitoring in the immediate Cushing area is warranted.

A map of the Oklahoma air quality monitoring network is available online at:
<http://www.deq.state.ok.us/aqdnew/monitoring/monitoringnetwork.htm>

Information on all permit actions is available for review by the public on the Air Quality section of the DEQ web page at <http://www.deq.state.ok.us>.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant is the sole owner of the land involved.

FEES PAID

A permit fee of \$1,500 for a significant modification of a Part 70 source construction permit has been paid.

Two minor modification permit applications [2003-104-C (M-5) and 2003-104-C (M-6)] have been incorporated into this permit. AQD has determined that the appropriate fee for each is \$500. Fee payments totaling \$2,000 have been received for these two applications.

In sum, the total fee for this permit is \$2,500, and \$3,500 has been received. The overpayment of \$1,000 will be refunded upon final issuance of the permit.

SUMMARY

The applicant has demonstrated the ability to comply with the requirements of the applicable Air Quality rules and regulations. Ambient air quality standards are not threatened at this site.

There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the modified construction permit is recommended.

**PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS**

**Plains Marketing, L.P.
Cushing Terminal Crude Oil Storage Facility**

Permit No. 2003-104-C (M-4) PSD

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on November 26, 2006, and subsequent supplemental material. The Evaluation Memorandum dated October 12, 2010, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Permitted tanks

[OAC 252:100-8-6(a)(1)]

A.1 Existing Crude Oil Storage Tanks

EUG ID#	EU ID#	Contents	Roof Type	Capacity (bbl./)	Construction/Installation Date
1	100	Crude Oil	EFR	100,000	1993
	200	Crude Oil	EFR	100,000	1993
	300	Crude Oil	EFR	100,000	1993
	400	Crude Oil	EFR	100,000	1993
	500	Crude Oil	EFR	100,000	1993
	600	Crude Oil	EFR	100,000	1993
	700	Crude Oil	EFR	100,000	1993
	800	Crude Oil	EFR	100,000	1993
	900	Crude Oil	EFR	100,000	1993
	1000	Crude Oil	EFR	100,000	1993
	1100	Crude Oil	EFR	100,000	1993
	1200	Crude Oil	EFR	100,000	1993
	1300	Crude Oil	EFR	100,000	1993
	1400	Crude Oil	EFR	100,000	1993
2	1500	Crude Oil	EFR	150,000	1993
	1600	Crude Oil	EFR	150,000	1993
	1700	Crude Oil	EFR	150,000	1993
	1800	Crude Oil	EFR	150,000	1993
3	1900	Crude Oil	EFR	250,000	1997
	2000	Crude Oil	EFR	250,000	1997
	2100	Crude Oil	EFR	250,000	1997
	2200	Crude Oil	EFR	250,000	1997
	2300	Crude Oil	EFR	250,000	2002
	2400	Crude Oil	EFR	250,000	2002
	2500	Crude Oil	EFR	250,000	2002
	2600	Crude Oil	EFR	250,000	2002
	2700	Crude Oil	EFR	250,000	2003
	2800	Crude Oil	EFR	250,000	2003
	2900	Crude Oil	EFR	250,000	2003
	3000	Crude Oil	EFR	250,000	2005
	3100	Crude Oil	EFR	250,000	2003
	3200	Crude Oil	EFR	250,000	2003
	3300	Crude Oil	EFR	250,000	2003
	3400	Crude Oil	EFR	250,000	2005
3500	Crude Oil	EFR	250,000	2003	
3600	Crude Oil	EFR	250,000	2003	
3700	Crude Oil	EFR	250,000	2005	
3800	Crude Oil	EFR	250,000	2005	

A.1 Existing Crude Oil Storage Tanks (Continued)

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Construction/Installation Date
5	3900	Crude Oil	EFR	570,000	2006
	4000	Crude Oil	EFR	570,000	2006
	4100	Crude Oil	EFR	570,000	2006
	4200	Crude Oil	EFR	570,000	2006
	4300	Crude Oil	EFR	570,000	2006
	4400	Crude Oil	EFR	570,000	2006
5	5000	Crude Oil	EFR	570,000	2009
	5100	Crude Oil	EFR	570,000	2009
	5200	Crude Oil	EFR	570,000	2009
	5300	Crude Oil	EFR	570,000	2009

A.2 Proposed New Crude Oil Storage Tanks

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Construction/Installation Date
7	4500	Crude Oil	EFR	270,000	Proposed New
	4600	Crude Oil	EFR	270,000	Proposed New
	4700	Crude Oil	EFR	270,000	Proposed New
	4800	Crude Oil	EFR	270,000	Proposed New
6	7000	Crude Oil	EFR	300,000	Proposed New
	7100	Crude Oil	EFR	300,000	Proposed New
7	8000	Crude Oil	EFR	270,000	Proposed New
	8100	Crude Oil	EFR	270,000	Proposed New
	8200	Crude Oil	EFR	270,000	Proposed New
	8300	Crude Oil	EFR	270,000	Proposed New
	8400	Crude Oil	EFR	270,000	Proposed New
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10000	Crude Oil	EFR	270,000	Proposed New	
10100	Crude Oil	EFR	270,000	Proposed New	
10200	Crude Oil	EFR	270,000	Proposed New	
10300	Crude Oil	EFR	270,000	Proposed New	
10400	Crude Oil	EFR	270,000	Proposed New	
10500	Crude Oil	EFR	270,000,	Proposed New	
10600	Crude Oil	EFR	270,000	Proposed New	

A.2 Proposed New Crude Oil Storage Tanks [continued]

EUG ID#	EU ID#	Contents	Roof Type*	Capacity (bbl./)	Construction/Installation Date
5	10700	Crude Oil	EFR	570,000	Proposed New
	10800	Crude Oil	EFR	570,000	Proposed New
	10900	Crude Oil	EFR	570,000	Proposed New
	11000	Crude Oil	EFR	570,000	Proposed New
	11100	Crude Oil	EFR	570,000	Proposed New
	11200	Crude Oil	EFR	570,000	Proposed New
	11300	Crude Oil	EFR	570,000	Proposed New
	11400	Crude Oil	EFR	570,000	Proposed New
	11500	Crude Oil	EFR	570,000	Proposed New
	11600	Crude Oil	EFR	570,000	Proposed New
	11700	Crude Oil	EFR	570,000	Proposed New
	11800	Crude Oil	EFR	570,000	Proposed New
11900	Crude Oil	EFR	570,000	Proposed New	

B. EUG 7: Fugitive Equipment Components

Fugitive equipment items are not limited in number or VOC emissions. The associated emissions shall be included to demonstrate compliance with the facility-wide emission limits. The facility shall maintain an updated list of all fugitive emission sources.

C. Facility-Wide Emission Limit

Facility-wide emissions of VOC from all sources (tanks, fugitives, and any other VOC emission source) are limited to not more than 437.35 tons in any 12-month period. Facility-wide emissions of HAPs from all sources (tanks, fugitives, and any other HAP emission source) are limited to not more than 10 tons of any one HAP or 25 tons of any combination of HAPs in any 12-month period. Emissions and throughputs may be freely exchanged between tanks as long as the total emission limit for the facility is not exceeded. Compliance shall be determined monthly and be based on:

- A rolling 12-month total of VOC emissions calculated no later than 30 days after the end of each 12-month period.
 - TANKS4.0 or other emission estimation software approved by AQD.
 - Records of material stored and throughput for each tank.
 - Calculations of emissions from roof landing events.
 - Inclusion of emission estimates for fugitive VOC sources and any other identified sources of VOC emissions.
2. Each tank in EUG# 1, 2, 3, 5, 6, and 7 is subject to federal New Source Performance Standards, 40 CFR Part 60, Subpart Kb, and shall comply with all applicable requirements for external floating roof tanks which shall include, but are not limited to, the following requirements: [40 CFR Part 60, Subpart Kb]

- a. The external floating roof shall be floating on the liquid surface at all times except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
 - i) All floating roof landing events shall be recorded (date and duration).
 - ii) When a floating roof of a tank is landed, the residual liquid in the tank shall be removed as rapidly as possible using a sump pump or other suitable method.
 - iii) VOC emissions from roof landing events associated with product change outs shall be calculated and included within permitted emission limits, and reported consistent with the permit requirements.
 - iv) VOC emissions from equipment malfunction shall be reported as excess emissions.
- b. Each opening in the external floating roof except for rim space vents and automatic bleeder vents shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the floating roof is to be maintained in a closed position (i.e., no visible gaps) except when in actual use.
- c. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or landed on the roof leg supports.
- d. Rim space vents are to be set to open only at the manufacturer's recommended setting or when the external floating roof is not floating.
- e. Two seals shall be installed, a primary metallic shoe seal, or a liquid-mounted seal, and a secondary seal which completely covers the annular space between the floating roof and the tank wall.
- f. The accumulated area of gaps between the tank wall and the metallic shoe seal or the liquid-mounted seal shall not exceed 10 square inches per foot of tank diameter nor shall any gap exceed 1.5 inches. One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface.
- g. The accumulated area of gaps between the tank wall and secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 1.0 square inch per foot of tank diameter nor shall any gap exceed 0.5 inches.
- h. The permittee shall comply with the testing and procedures requirements of § 60.113b (b)
- i. The permittee shall comply with the applicable reporting and recording requirements of § 60.115 b.
- j. The permittee shall comply with the applicable monitoring of operation requirements of § 60.116 b.
- k. The primary seals shall be checked every 5 years. The secondary seal on an external floating roof shall be checked at least yearly for gaps.

3. All floating roof tanks at this facility are subject to the following standards for inspection and maintenance: [40 CFR Part 60.113b]
- a. The owner or operator shall visually inspect the floating roof, the primary seal, secondary each time the storage vessel is emptied and degassed. If the floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exists before filling or refilling the storage vessel with volatile organic liquid (VOL).
 - b. The owner or operator shall notify Air Quality in writing at least 30 days prior to filling or refilling of this storage vessel for which an inspection is required by 40 CFR 60.113b(6)(ii) to afford Air Quality an opportunity to have an observer present. If the inspection is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify Air Quality at least seven days prior to refilling the storage vessel. Notification shall be made by telephone, immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification, including the written documentation, may be made in writing and sent so that it is received by Air Quality at least seven days prior to refilling.
 - c. The owner or operator of these storage vessels shall keep records and furnish reports as required by 40 CFR 60.113b(b). Copies of these reports and records shall be kept for at least five years following the date on which they were made. The owner or operator shall meet the following requirements:
 - i) Keep a record of each inspection performed as required by 40 CFR 60.113b. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, floating roof, and fittings).
 - ii) After each inspection required by 40 CFR 60.113b that finds holes or tears in the seal or seal fabric, or defects in the internal roof, or other control equipment defects listed in 40 CFR 60.113b, a report shall be furnished to Air Quality within 30 days of the inspection. The report shall identify the storage vessel, the reason it did not meet the specifications, and each repair made.
4. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations which qualify as Trivial Activities. [OAC 252:100-8-6 (a)(3)(B)]

- For activities that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: The type of activity and the amount of emissions from that activity (annual).
 - Future remediation including, but not limited to, Part 1B listings.
 - Portable water/soil treatment equipment including, but not limited to, air strippers, filtration units, and chemical/biological units.
 - Emergency mainline relief vessel, which is emptied immediately after use.
 - Periodic tank cleaning.
 - Occasional tank and pipe painting.
5. Upon issuance of an operating permit, the permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)]
6. The owner or operator shall maintain a record of the volatile organic liquid stored, the period of storage and the maximum true vapor pressure of that VOL during the respective storage period for each tank. [40 CFR Part 60.116b(c)]
7. Available data on the storage temperature may be used to determine the maximum true vapor pressure. For crude oil or refined petroleum products, available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517. Alternative methods that have been deemed acceptable by DEQ may also be used. [40 CFR Part 60.116b(e)]
8. Alternative materials other than crude oil may be stored in the tanks provided the true vapor pressure of alternative material is less than 11.1 psia at storage conditions and there will be no exceedence of the permitted 12-month VOC facility-wide cap. HAP emission from such alternate storage, combined with HAP emissions from storage of crude oil, may not exceed major source thresholds for any 12-month period. The permittee must provide 30 days advance written notice to DEQ and EPA of such a change. The notice shall provide a brief description of the change, effective date, any change in emissions (including HAPs) between the storage of alternative material and the storage of crude oil in the tank, and list (if any) permit terms or conditions no longer applicable as a result. [OAC 252:100-8-6(f)]
9. Each tank to which these specific conditions apply shall have a permanent means of identification which distinguishes it from other equipment. [OAC 252:100-8-5(e)(3)(B)]
10. The permittee shall maintain records of operation as listed below. These records shall be retained on-site for at least five years from the date of recording, inspection, testing, or repair, and shall be made available to regulatory personnel upon request. [OAC 252:100-8-6(a)(3)(B)]

- a. Throughput for each tank in Specific Condition #1 (monthly and 12-month rolling totals calculated no later than 30 days after the end of each 12-month period.) Throughput shall be derived from flow measurement.
 - b. Type of liquid material, maximum vapor pressure, and period of storage if other than crude oil.
 - c. Inspection and maintenance records of all tank seals as required by NSPS Subpart Kb.
 - d. Records required by NSPS, Subpart Kb.
 - e. Records documenting Insignificant Activities as required by S C #4.
11. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility.
- [OAC 252:100-8-6(d)(2)]
- a. OAC 252:100-7 Permits for Minor Facilities
 - b. OAC 252:100-11 Alternative Emissions Reduction
 - c. OAC 252:100-15 Mobile Sources
 - d. OAC 252:100-39 Nonattainment Areas



PART 70 PERMIT

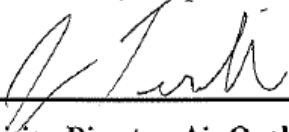
AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2003-104-C (M-4) PSD

Plains Marketing, LP,

having complied with the requirements of the law, is hereby granted permission to modify the Cushing Terminal Crude Oil Storage Facility, Sec. 23, T17N, R5E, Lincoln County, Oklahoma subject to Standard Conditions dated July 21, 2009 and Specific Conditions both attached.

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.



Division Director, Air Quality Division

10/25/10
Date

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(July 21, 2009)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report.

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions.

[OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

[OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards (“NSPS”) under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer’s instructions and in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality.

[OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM₁₀). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit.

[OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit.

[OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.

[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the

DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d).

[OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The

notification should include any changes which may alter the status of a "grandfathered source," as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(18) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
 - (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
 - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or

- (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.
- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
- (2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158;
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
- (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
- (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
- (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).

- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).
- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]

Plains Marketing, L.P.
Attn: Mr. Richard S. Anderson, P.E.
333 Clay Street, Suite 1600
Houston, TX 77002

Subject: Permit No. **2003-104-C (M-4) PSD**
Cushing Terminal Crude Oil Storage Facility
Cushing, Lincoln County, Oklahoma

Dear Mr. Anderson:

Enclosed is the permit authorizing modification of the referenced operation. Please note that this permit is issued subject to standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emissions Inventory Staff at 405-702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact our office at (405)702-4198.

Sincerely,

John Howell, P.E.
Existing Source Permits Section
AIR QUALITY DIVISION