Air Pollution Control Title V Permit to Operate Statement of Basis for Permit No. V-SU-00039-2009.04 Minor Modification

# BP America Production Company Miera Compressor Station Southern Ute Indian Reservation La Plata County, CO

#### **Description of Permit Amendment**

On March 2, 2011, EPA received a request to include the ASTM Method D6348-03 Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy as a performance test method option for measuring formaldehyde (CH<sub>2</sub>O) emissions in the permit.

The following modification has been made to this permit:

Section III.C. – Testing Requirements

Revised conditions III.C.1-4 to:

- 1. Remove the requirements for specifically indentified test methods for CO, NO<sub>x</sub>, and CH<sub>2</sub>O;
- 2. Allow the use of alternative test methods that have been approved by EPA;

and

3. Correct the language to require the approved performance test method be applied to all performance tests, not just the initial performance test.

EPA is making this revision as a minor modification in accordance with 40 CFR 71.7(d). The permit will be reissued as permit number V-SU-00039-2009.04.

For specific applicability information regarding the part 71 permit for this facility, please see the Statement of Basis for permit number V-SU-0039.09.00.

# Air Pollution Control Title V Permit to Operate Statement of Basis for Permit No. V-SU-0039-09.00 Final 1<sup>st</sup> Part 71 Renewal September 2009



Air Program Manager

Phone: 970-563-4705

Southern Ute Indian Tribe

# BP America Production Company Miera Compressor Facility Southern Ute Indian Reservation La Plata County, Colorado

# 1. Facility Information

#### a. Location

The Miera Compressor Facility (Miera) is owned and operated by BP America Production Company (BP) and is located within the exterior boundaries of the Southern Ute Indian Reservation, in the southwestern part of the State of Colorado. The exact location is S ¼ of Section 8, Township 34N, Range 8W, La Plata County, Colorado. The mailing address is:

BP America Production Company 380 Airport Road Durango, Colorado 81303

#### b. Contacts

**Facility Contact:** 

Julie A. Best Environmental Coordinator

BP America Production Co.

380 Airport Road

Durango, Colorado 81303 Phone: 970-375-7540

Fax: 970-375-7586

**Company Contact:** 

Rebecca Tanory Air Specialist

BP America Production Co. 501 Westlake park Blvd. Houston, TX 77079

Phone: 281-366-3946 Fax: 281-366-7945 Kourtney K. Hadrick

Florida Operations Manager BP America Production Co.

380 Airport Road

Durango, Colorado 81303 Phone: 970-247-6901

Fax: 970-247-6910

# Alternate Responsible Official:

David P. McKenna

Operations Center Manager BP America Production Co.

380 Airport Road

Durango, Colorado 81303 Phone: 970-247-6810

Fax: 970-247-6825

#### **Tribal Contact:**

**Responsible Official:** James Temte

## c. Description of Operations

The Miera facility, owned and operated by BP, is a natural gas compression facility located in the southwestern corner of Colorado within the exterior boundaries of the Southern Ute Indian Reservation.

The Miera facility provides field compression for natural gas wells in the area. Fruitland natural gas (coal bed methane) wells feed into a gathering pipeline system at the inlet of the facility. The natural gas produced is approximately 99% methane. This gas mixture is also water vapor saturated. The natural gas coming into the compressor station is at approximately 60 psi and 65 °F. These wells do not produce any condensate or natural gas liquids.

The natural gas entering the compressor station first passes through an inlet separator vessel to remove any free liquid water in the gas stream by gravity. The gas stream then passes to a distribution header, which distributes the gas to one of four compressors. On the inlet to each compressor there exists a filter vessel, which serves to filter out any solids such as coal dust in the gas. Each compressor package consists of a skid-mounted combination of engine and compressor. Under the current configuration, there are four reciprocating Caterpillar lean burn engines installed at the Miera facility. These engines are fueled by natural gas.

The compressors raise the gas pressure from 60 psi to 350 psi. After compression the gas passes through an outlet coalescer vessel, which serves to remove any entrained droplets of lubricating oil carried over from the compressors. The gas then passes to the glycol dehydrators to remove water vapor in the gas. The gas is then metered and routed into a medium pressure line.

#### **Pigging & Pipeline Clean-Out:**

The Miera facility has pigging operations associated with this compressor station. The pigging system includes one pig launcher and four pig receivers. The pigging operation is not a closed loop system; therefore, venting emissions are associated with the pigging operations. Emissions from the pigging and pipeline clean-out were estimated to be insignificant.

# d. List of all units and emission-generating activities

BP provided the information contained in Tables 1 and 2. Table 1 lists emission units and emission generating activities, including air pollution control devices. Emission units identified as "insignificant" are listed separately in Table 2.

Table 1 - Emission Units BP America Production Company Miera Compressor Facility

Emission Unit Id.	Description	Control Equipment
	Caterpillar 3606 TALE, natural gas fired, lean burn compressor engines, 1,850 horsepower	Waukesha-Pearce oxidation catalyst (672-OXMR)
C-100	Serial No. 3XF00261 Installed: 4/23/2008 <sup>a</sup>	Installed: 3/31/2004
C-200	Serial No. 4ZS00637 Installed: 2/22/2007 <sup>b</sup>	Installed: 3/31/2004
C-300	Serial No. 3XF00327 Installed: 5/14/2008 <sup>c</sup>	Installed: 3/31/2004
	Caterpillar 3606 TALE, natural gas fired, lean burn compressor engine, 1,850 horsepower	
C-400	Serial No. 4ZS00303 Installed: 10/1/2003 <sup>d</sup>	None
	30 MMscf/d Glycol Dehydration Still Vent; 22 gpm lean glycol recirculation rate; 1.5 MMBtu/h Natural gas fired burners	
Dehy-1	Serial No. None Installed: Prior to 2004	None
Dehy-2	Serial No. None Installed: Prior to 2004	None

a. The installation date of the original engine at this site was May 2002. The current unit has a manufacturer date of May 24, 2000. This unit has not been modified or reconstructed since June 12, 2006.

Part 71 allows sources to separately list in the permit application units or activities that qualify as "insignificant" based on potential emissions below 2 tpy for all regulated pollutants that are not listed as hazardous air pollutants (HAPs) under section 112(b) of the Clean Air Act (CAA) and below 1,000 lbs per year or the de minimus level established under section 112(g), whichever is lower, for HAP emissions. However, the application may not omit information needed to determine the applicability of, or to impose, any applicable requirement, or to calculate the fee. Units that qualify as "insignificant" for the purposes of the part 71 application are in no way exempt from applicable requirements or any requirements of the part 71 permit.

b. The installation date of the original engine at this site was May 2002. The current engine has a manufacturer date of June 21, 2006. This unit has not been modified or reconstructed since June 12, 2006.

c. The installation date of the original engine at this site was February 14, 2003. The installation date listed above is the installation date for the current unit, which previously operated at the Miera facility as C-100. The manufacturer date for C-300 is July 4, 2001. This unit has not been modified or reconstructed since June 12, 2006.

d. Based on the installation date, the date of manufacture of this unit is prior to June 12, 2006. This unit has not been modified or reconstructed since June 12, 2006.

BP stated in its part 71 permit renewal application that the emission units in Table 2, below, are IEUs. The application provided emission calculations for the tanks and sumps using TANKS 4.09d, for the glycol dehydrators using GRI-GlyCalc Version 4.0, and for the heaters and burners using AP-42 emission factors. The application provided emission estimates for produced water tanks, compressor blowdowns, and fugitive emissions. This data supports the source's claim that these units qualify as IEUs.

Table 2 - Insignificant Emission Units BP America Production Company Miera Compressor Facility

Number of units	Description				
2	TEG dehydration unit regenerator burners (1.5 MMBtu/hr, each)				
2	TEG storage tanks (1,360 gallons, each)				
3	Produced water tanks (300 bbls, each)				
4	Tank heaters (0.25 MMBtu/hr, each)				
1	Antifreeze storage tank (500 gallons)				
1	Used oil sump (95 bbls)				
4	New lube oil storage tanks (500 gallons, each)				
4	Used lube oil storage tanks (500 gallons, each)				
1	Fresh water tank (400 bbls)				
NA	Pigging operations (max of 2 MMscf/yr)				
NA	Compressor blow down (max of 108 MMscf/yr)				
NA	Process fugitives				

#### e. Construction, Permitting, and Compliance History

The Miera facility was originally constructed in May of 2002, with three compressor engines, dehydrators, tanks, and other ancillary equipment. This new facility was minor for PSD and title V and did not trigger any requirement for permitting. In addition, the facility was minor for hazardous air pollutants (HAPs), and therefore, did not trigger the National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities (MACT HH). The National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE MACT) had not yet been promulgated. The RICE MACT was promulgated on June 15, 2004.

In February of 2003, BP replaced an existing 1,030 hp compressor engine with a 1,740 hp compressor engine. While the PTE of the facility increased, the modification did not trigger PSD permitting requirements and the facility maintained its status as a minor PSD and MACT source. However, the increased PTE caused the facility to become subject to title V permitting and a

title V permit application became due no later than twelve months after becoming major for title V for carbon monoxide (CO) emissions. EPA received the application for a title V permit on February 13, 2004.

In October of 2003, BP added a fourth compressor engine to the facility and adjusted the formaldehyde emission factors for the other three engines based on improved manufacturer emission factors. The addition of the new engine did not trigger PSD. However, the facility became major for HAP emissions. The major HAP status did not affect the facility's applicability to MACT HH, due to the unique method for determining PTE in this particular regulation. However, it did affect the facility's potential applicability to the pending RICE MACT. BP submitted an initial notification of operating a major HAP source subject to this pending rule on October 7, 2003, as required by 40 CFR 63.

In order to avoid the RICE MACT, BP submitted on February 13, 2004, a modification to the original title V permit application requesting that EPA establish federally enforceable limits in their initial permit to recognize catalytic oxidizer controls to be installed on three of the engines prior to the final RICE MACT compliance date.

The final permit for the Miera facility was issued on May 3, 2004. A facility-wide formaldehyde cap was established as federally enforceable before the final RICE MACT compliance date of August 16, 2004. In addition, emission limits were established for CO and formaldehyde to make a requirement of oxidation catalyst controls on engines MR2, MR3, and MR4 federally enforceable. By receiving the federally enforceable limits before the final RICE MACT compliance date, BP avoided EPA's Once-In-Always-In MACT policy.

BP was not in violation of the RICE MACT standard at the time of the request and received the federally enforceable limits (upon issuance of the part 71 permit on May 3, 2004) before the final compliance date of August 16, 2004. Therefore, BP was able to avoid the RICE MACT standard before they were subject. At no time was BP in violation of either the RICE MACT or the PSD regulations before receiving these federally enforceable limits.

On October 5, 2006, EPA received a letter from BP requesting a permit modification to account for a correction to the site rated horsepower (hp) of the four Caterpillar G3606 compressor engines necessitating a downward adjustment to the enforceable lb/hr CO limit. As a result of the hp correction, BP obtained new enforceable carbon monoxide limitations of 0.83 pounds per hour from the engine units equipped with an oxidation catalyst. The facility-wide formaldehyde (CH<sub>2</sub>O) emission cap of 8.9 tons per year (tpy) was not modified.

Upon review of engine IDs and controls during this permit modification, it was discovered that there were discrepancies between the permit and the October 2006 modification request. EPA contacted BP asking for clarification of which engines were controlled with oxidation catalysts

and which were not. Following the conversation BP submitted a "Request to update emission unit ID nos. and the description of source emission points," which EPA received May 12, 2008. EPA corrected the engine IDs and controls in the permit based on BP's request and issued the modified permit on July 3, 2008. See details of emission unit ID update below:

**Emission Unit ID Update for BP's Miera Compressor Facility** 

V-SU-0039-04.00	V-SU-0039-04.03	Description	Add-on Control
<b>Emission Unit ID</b>	<b>Emission Unit ID</b>		Equipment
No.	No.		
MR 1	C-200	Caterpillar 3606 TALE lean bu	urn Waukesha-Pearce
		compressor engine; 1,850 hp	oxidation catalyst
MR 2	C-100	Caterpillar 3606 TALE lean bu	urn Waukesha-Pearce
		compressor engine; 1,850 hp	oxidation catalyst
MR 3	C-300	Caterpillar 3606 TALE lean bu	urn Waukesha-Pearce
		compressor engine; 1,850 hp	oxidation catalyst
MR 4	C-400	Caterpillar 3606 TALE lean bu	urn None
		compressor engine; 1,850 hp	

This first renewal of the Miera facility's part 71 permit proposes to maintain the permit requirements established in the latest version of the initial permit, # V-SU-0039-04.03. The following table outlines the construction and permitting history of the facility along with a history and description of the regulations that potentially apply to this facility.

# Table 3- BP Miera Compressor Facility Construction and Permitting History

(In Context of Some CAA Regulations That May Apply)

# August 7, 1980 Prevention of Significant Deterioration Pre-Construction Permitting Program Promulgated (the 8/7/80 rules form the basis of the current regulations)

Applicability:

PSD is a preconstruction review requirement that applies to proposed projects that are sufficiently large (in terms of emissions) to be a "major" stationary source or "major" modification. Source size is defined in terms of "potential to emit," which is its capability at maximum design capacity to emit a pollutant, except as constrained by federally and practically enforceable conditions. A new source or a modification to an existing minor source is major if the proposed project has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specified major source thresholds [100 tpy for the 28 listed industrial source categories and 250 tpy for all other sources].

PSD also applies to modifications at existing major sources that cause a significant "net emissions increase" at that source. A modification is a physical change or change in the method of operation. Significance levels for each pollutant are defined in the PSD regulations at 40 CFR 52.21.

Compliance: No new source or modification of a source subject to PSD review may be constructed without a permit.

# February 19, 1999 - Part 71 (Title V) Operating Permit Program Promulgated (the 2/19/99 rules form the basis of the current regulations)

Applicability:

Any major source (criteria pollutants > 100 tpy, or any single HAP > 10 tpy, or aggregated HAPS > 25 tpy);

Any source, including an area source, subject to a standard, limitations, or other requirements under 111 or 112 of the CAA promulgated on or before July 21, 1992. Non-major sources subject to 111 or 112 regulation promulgated after July 21, 1992 are subject unless the rule specifies otherwise;

Any Acid Rain source;

Any Solid Waste Incineration Unit;

Application Due Date: Within 12 months after commencing operation.

## Table 3- BP Miera Compressor Facility Construction and Permitting History, continued...

# June 17, 1999 - MACT HH for Major HH HAP Oil and Gas Production Sources Promulgated (HAP > 10/25 tpy)

# HAP PTE determined by emissions from dehydrators and storage vessels with a potential for flash emissions only, unless the facility is oil and gas plant.

Affected Sources:

Glycol dehydration units

Storage vessels with the potential for flash emissions

Group of ancillary equipment (pumps valves, flanges, etc...)

Compressors intended to operate in volatile hazardous air pollutant service, located at natural gas processing plants

#### Final Compliance Dates

Construction or reconstruction commenced before February 6, 1998 – June 17, 2002

Construction or reconstruction commenced after February 6, 1998 – Upon start-up or June 17, 2002, whichever date is later Area → Major

Construction or reconstruction of the affected unit commenced before February 6, 1998, causing source to become major – 3 years after becoming major

Construction or reconstruction of the affected unit commenced after February 6, 1998, causing source to become major – Upon start-up

May 2002 – Initial Construction					
		Poten	tial to Em	it (TPY)	
	NOx	CO	VOC	CH <sub>2</sub> O	HAPs
Unit B-74106, 1030 hp Caterpillar 3516 TALE (no controls – AP-42 EF for CH <sub>2</sub> O)	19.9	10.9	9.9	1.7	1.7
MR1, 1740 hp Caterpillar 3606 TALE (no controls – AP-42 EF for CH <sub>2</sub> O)	11.8	42.0	16.8	2.9	2.9
MR2, 1740 hp Caterpillar 3606 TALE (no controls – AP-42 EF for CH <sub>2</sub> O)	11.8	42.0	16.8	2.9	2.9
Insignificant Emission Units TEG Dehydration Reboilers (2), TEG Dehydration Still Columns (2) TEG Tanks (2), Produced Water Tanks (4), 0.25 MMBtu/hr Tank Heaters (2) Antifreeze Tank, Oily Water Sump, New Lube Oil Tank, Used Lube Oil	5.6	1.5	0.9	0.0	0.2
Tank Compressor Blow Down, Fugitive Emissions					< 0.5
Facility PTE for 2002 New Source	49.1	96.4	44.4	7.5	7.7

PSD Status of Facility: Minor
HAP Status of Facility: Minor
Title V Status of Facility: Not Subject

February 2003 – Addition of Third Compressor Engine; Removal of Unit B engine					
	NOx	CO	VOC	CH <sub>2</sub> O	HAPs
MR3, 1740 hp Caterpillar 3606 TALE (no controls – AP-42 EF for CH <sub>2</sub> O); New					
engine constructed before August 16, 2004	11.8	42.0	16.8	2.9	2.9
Unit B-74106, 1030 hp Caterpillar 3516 TALE (no controls – AP-42 EF for CH <sub>2</sub> O)					
	-19.9	-10.9	-9.9	-1.7	-1.7
Modification PTE Total (Minor Modification)	11.8	42.0	16.8	2.9	2.9
Facility PTE after February 2003 Modification	41.0	127.5	51.3	8.7	8.9
DOD COOK OF THE ME					

PSD Status of Facility: Minor
HAP Status of Facility per Subpart HH: Minor
Title V Status of Facility: Subject

Table 3- BP Miera Compressor Facility Construction and Permitting History, continued...

October 2003 – Addition of Fourth Compressor Engine; Made adjustments to Formaldehyde emission factors from AP-42 to new manufacturer's factors; New engine results in a major HAP source.

12 to new manufacturer 5 factors, frew engine results in a major first source.					
	NOx	CO	VOC	CH <sub>2</sub> O	HAPs
MR1, 1,740 hp Caterpillar 3606 TALE (no controls – Manuf. EF) – existing lean					
burn	+0.0	+0.0	+0.0	+2.1	+2.1
MR2, 1,740 hp Caterpillar 3606 TALE (no controls – Manuf. EF) – existing lean					
burn	+0.0	+0.0	+0.0	+2.1	+2.1
MR3, 1,740 hp Caterpillar 3606 TALE (no controls – Manuf. EF); New engine					
constructed before August 16, 2004	+0.0	+0.0	+0.0	+2.1	+2.1
MR4, 1,740 hp Caterpillar 3606 TALE (no controls – Manuf. EF); New engine					
constructed before August 16, 2004	+11.8	+42.0	+16.8	+5.0	+5.0
Modification PTE Total (Minor Modification)	+11.8	+42.0	+16.8	+11.3	+11.3
Facility PTE after October 2003 Modification	52.8	169.5	68.1	20.0	20.2

**PSD Status of Facility: Minor** 

HAP Status of Facility per Subpart HH: Minor

HAP Status of Facility: Major (RICE MACT applies to C-300 & C-400. Final compliance date is August 16, 2004)

Company submits notification of major HAP source on October 7, 2003 Title V Status of Facility: Subject; application received February 13, 2004

May 2004 – Company requests and receives federally enforceable restrictions in part 71 permit to recognize controls on MR2, MR3, and MR4 for controlling CO and CH<sub>2</sub>O. Company wanted to establish enforceable restrictions on HAPs before the final RICE MACT final compliance date, thereby avoiding the standard.

	NOx	CO	VOC	CH <sub>2</sub> O (allowable)	HAPs
MR2, 1,740 hp Caterpillar 3606 TALE (controls – Manuf. EF)	-0.0	-31.5	-0.0	-3.7	-3.7
MR3, 1,740 hp Caterpillar 3606 TALE (controls – Manuf. EF)	-0.0	-31.5	-0.0	-3.7	-3.7
MR4, 1,740 hp Caterpillar 3606 TALE (controls – Manuf. EF)	-0.0	-31.5	-0.0	-3.7	-3.7
Modification PTE Total	-0.0	-94.5	-0.0	-11.1	-11.1
Facility PTE after Enforceable Restrictions Permitted	52.8	75.0	68.1	(8.9)	9.1

PSD Status of Facility: Minor HAP Status of Facility: Synthetic Minor

HAP Status of Facility per Subpart HH: Minor Title V Status: Subject, permitted May 3, 2004

#### June 15, 2004 - NESHAP for Reciprocating Internal Combustion Engines (RICE) Promulgated

Affected Sources:

Existing RICE constructed or reconstructed on or before 12/19/2002

New RICE constructed or reconstructed after 12/19/2002

Final Compliance Dates

Existing lean burn RICE – Exempt

Existing rich burn RICE – June 15, 2007

New or reconstructed rich or lean burn RICE constructed on or before August 16, 2004

New or reconstructed rich or lean burn RICE constructed after August 16, 2004 – upon startup

## Table 3- BP Miera Compressor Facility Construction and Permitting History, continued....

# January 3, 2007 - MACT HH for Area Sources of Oil & Gas Production Facilities Promulgated (HAP < 10/25 tpy)

#### Affected Sources:

Triethylene Glycol (TEG) dehydration units

#### Final Compliance Dates

Construction or reconstruction of the affected unit located in an Urban-1 county commenced before February 6, 1998:

Located w/i UA Plus Offset and UC boundary – January 4, 2010

Not Located w/i UA Plus Offset and UC boundary - January 5, 2009

Construction or reconstruction of the affected unit located in an Urban-1 county commenced on or after February 6, 1998 – Upon startup or January 3, 2007, whichever date is later.

Construction or reconstruction of the affected unit not located in an Urban-1 county commenced before July 8, 2005:

Located w/i UA Plus Offset and UC boundary - January 4, 2010

Not Located w/i UA Plus Offset and UC boundary - January 5, 2009

#### January 18, 2008 Modified MACT ZZZZ Promulgated

Area Sources (HAP < 25 tpy & for any size engine)

Major Sources (HAP > 25 tpy & for engines  $\leq$  500 hp)

#### Affected Sources:

New or reconstructed RICE of any hp at area sources of HAP emissions, constructed or reconstructed on or after 6/12/06

New or reconstructed RICE  $\leq$  500 hp at major sources of HAP emissions, constructed or reconstructed on or after 6/12/06

#### Final Compliance Dates

Major HAP source

Start up a new or reconstructed RICE ≤ 500 hp before January 18, 2008 – January 18, 2008

Start up a new or reconstructed RICE ≤ 500 hp after January 18, 2008 – upon startup

Area HAP source

Start up any new or reconstructed RICE of any hp before January 18, 2008 – January 18, 2008

Start up any new or reconstructed RICE of any hp after January 18, 2008 – upon startup

#### January 18, 2008 NSPS JJJJ for Spark Ignition Engines Promulgated

#### Affected Sources:

Stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction, modification or reconstruction after June 12, 2006, where the SI ICE are manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator (See 40 CFR 60.4230(a)).

Compliance Date - Upon startup

Table 3- BP Miera Compressor Facility Construction and Permitting History, continued...

_	July 2008 Permit modification: Correction to emission unit ID nos. Upgrade of the site rated hp for each engine to 1,850 hp and a lowering of the CO lb/hr emission limits for C-100, C-200, and C-300.								
Unit	Description	NOx (tpy)	CO (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	CH <sub>2</sub> O (tpy) (allowable)	HAPs (tpy)		
C-100	1850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	-0.7	-6.87	+0	+0.878	-0.7	-0.7		
C-200	1850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	-0.7	-6.87	+0	+0.878	-0.7	-0.7		
C-300	1850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	-0.7	-6.87	+0	+0.878	-0.7	-0.7		
C-400	1850 hp Caterpillar 3606 TALE (uncontrolled)	-0.7	+1.21	+0	+0.878	+2.1	+2.1		
	Modification PTE Total	-2.8	-19.40	+0	+3.512	+0	+0		
	2008 PTE Totals	50.0	55.6	0.12	71.61	(8.9)	9.1		

Minor source for PSD, minor source for title V, and synthetic minor HAP source with federally enforceable limits on CO and  $CH_2O$  emissions.

2009 Su	mmary of Potential Emissions (on a unit b	y unit basis)					
Unit	Description	NOx (tpy)	CO (tpy) (allowable)	SO <sub>2</sub> (tpy)	VOC (tpy)	CH <sub>2</sub> O (tpy) (allowable)	HAPs (tpy)
C-100	1,850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	12.5	(3.66)	0.03	17.678	0.5848	0.5848
C-200	1,850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	12.5	(3.66)	0.03	17.678	0.5848	0.5848
C-300	1,850 hp Caterpillar 3606 TALE (enforceable CO & CH <sub>2</sub> O control)	12.5	(3.66)	0.03	17.678	0.5848	0.5848
C-400	1,850 hp Caterpillar 3606 TALE (uncontrolled)	12.5	44.66	0.03	17.678	7.1455	7.1455
Dehy-1	30 MMscf/d Dehydration Still Vent	0.0	0.0	0.0	1.67	0.0	0.6909
Dehy-2	30 MMscf/d Dehydration Still Vent	0.0	0.0	0.0	1.62	0.0	0.6650
IEUs		2.19	1.84	0.004	2.16	0.002	0.002
	2009 PTE Totals	52.2	57.5	0.13	76.2	8.90 (8.9)	10.3

Minor source for PSD, minor source for title V, and synthetic minor HAP source with federally enforceable limits on CO and CH<sub>2</sub>O emissions.

#### 2. Establishment of Synthetic Minor Limits

#### a. Applicable PTE Guidance

Pursuant to 40 CFR 52.21, "potential to emit" is defined as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design <u>if</u> the limitation, or the effect it would have on emissions, is federally enforceable.

National EPA guidance on PTE states that air pollution control equipment (in this case, the oxidation catalysts for the engines) can be credited as restricting PTE only if federally enforceable requirements are in place requiring the use of such air pollution control equipment. The primary applicable guidance is a memo titled, "Guidance on Limiting Potential to Emit in New Source Permitting," dated June 13, 1989, to EPA Regional Offices, from the Office of Enforcement and Compliance Monitoring (OECA), and the Office of Air Quality Planning & Standards (OAQPS). A later memo to the EPA Regional Offices, dated January 25, 1995, titled "Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and §112 Rules and General Permits," also provides guidance on this topic.

In consultation with Office of General Counsel at EPA Headquarters, as well as with EPA Regions 9 and 10, the EPA Region 8 office determined that authority exists under the CAA and 40 CFR 71 to create a restriction on potential to emit through issuance of a part 71 permit.

The specific citations of authority are:

**CAA Section 304(f)(4):** Provides that the term "emission limitation, standard of performance or emission standard" includes any other standard, limitation, or schedule established under any permit issued pursuant to title V ..., any permit term or condition, and any requirement to obtain a permit as a condition of operations.

<u>40 CFR 71.6(b)</u>: Provides that all terms and conditions in a part 71 permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act.

40 CFR 71.7(e)(1)(i)(A)(4)(i): Provides that a permit modification that seeks to establish a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of title I of the CAA (which includes PSD), and for which there is no underlying applicable requirement, does not qualify as a minor permit modification. Under 40 CFR 71.7(e)(3)(i), it is therefore a significant permit modification, which, according to 40 CFR 71.7(e)(3)(ii), must meet all the requirements that would apply to initial permit issuance or permit renewal.

The use of the part 71 permit as a means to create these limits, however, is limited to those instances where an operating source is already required to obtain a part 71 permit by virtue of its PTE or due to other triggers as outlined in §71.3; or where the operating source already holds a part 71 permit. EPA Region 8 does not have the authority to issue part 71 permits to minor sources, unless it is a minor operating source that is required to obtain a permit pursuant to §71.3.

The part 71 program is not a preconstruction permitting program to be used in place of NSR permitting. The part 71 permit is an operating permit and an application is due within twelve months of starting up a title V facility. However, modifications can be made to a facility operating under a title V permit through a significant modification provided all other provisions of the CAA are being met.

EPA Region 8 does not knowingly issue synthetic minor limits to sources who wish to avoid applicable requirements that have already been triggered (such as NSR or the Once-In-Always-In MACT standards). EPA Region 8 also will not knowingly issue synthetic minor limits to sources who wish to avoid applicable requirements for which there are non-compliance concerns.

Using part 71 as the vehicle for these limits is a temporary, gap-filling measure for those sources operating in Indian country that do not have the ability to obtain these synthetic minor limits through other programs, such as exists in state jurisdictions. Upon promulgation of a Minor NSR rule for sources operating in Indian country, the use of the part 71 permit as the vehicle for these limits will no longer be practiced.

#### b. Components of the PTE Restrictions

Formaldehyde and CO Emissions Cap and Restrictions on Engine Emissions: The permit for the Miera facility contains a facility-wide formaldehyde emissions cap of 8.9 tpy for any consecutive twelve (12) month period. Carbon monoxide emissions from the engine units C-100, C-200, and C300, equipped with an oxidation catalyst, shall not exceed 0.83 lbs/hr each.

**Work Practice Requirements:** BP is required to use oxidation catalysts on engines C-100, C-200, and C-300, as well as abide by work practice and operational requirements to ensure that the CH<sub>2</sub>O and CO emissions are being met.

Monitoring—Carbon Monoxide: BP shall measure CO emission from units C-100, C-200, and C-300 at least quarterly to demonstrate compliance with the 0.83 lbs/hr emission limit. Quarterly testing can be achieved using a portable analyzer and a monitoring protocol approved by EPA. BP shall submit the analyzer specifications and monitoring protocol to EPA for approval within forty—five (45) calendar days of the effective date of this permit. For any engine unit, if compliance with the CO emission limits is demonstrated for six (6) consecutive quarters, then the required monitoring frequency shall change from quarterly to semi-annually. If noncompliance with the CO emission limit is demonstrated during the semi-annual monitoring, then the required monitoring frequency shall revert back to quarterly.

Monitoring– Formaldehyde Cap: Monitoring is currently accomplished by reference method performance testing for formaldehyde emission on an annual basis for controlled and uncontrolled engines. Compliance with the facility-wide 8.9 tpy emission limit is predicated on effective oxidation catalyst controls. Thus, BP is required to monitor inlet temperature to the catalyst for each controlled engine. The engine exhaust temperature at the inlet to the oxidation catalyst shall be maintained at all times at no less than 450 °F and no more than 1,350 °F. BP is also required to monitor the pressure drop across the catalyst to within two inches of water from the baseline pressure drop reading to ensure that the catalyst is neither plugged nor blown out. Finally, BP is required to follow the oxidation catalyst controls system manufacturer's recommended maintenance schedule and procedures to ensure optimum catalyst performance.

The PTE for the Miera facility, enforceable emission controls taken into consideration, are as follows:

Nitrogen oxides (NOx) - 52.2 tpy Carbon monoxide (CO) - 57.5 tpy Volatile organic compounds (VOC) - 76.2 tpy Small particulates  $(PM_{10}) - 2.3$  tpy Lead -0 tpy Sulfur dioxide  $(SO_2) - 0.13$  tpy Hazardous Air Pollutants (HAP) - 10.3 tpy Largest single HAP (formaldehyde,  $CH_2O) - 8.9$  tpy

#### 3. Tribe Information

## a. <u>Indian Country</u>

The Miera facility is located within the exterior boundaries of the Southern Ute Indian Reservation and is thus within Indian country as defined at 18 U.S.C. §1151. The Southern Ute Indian Tribe does not have a federally-approved CAA title V operating permits program nor does EPA's approval of the State of Colorado's title V program extend to Indian country. Thus, EPA is the appropriate governmental entity to issue the title V permit.

#### b. The Reservation

The Southern Ute Indian Reservation is located in Southwestern Colorado adjacent to the New Mexico boundary. Ignacio is the headquarters of the Southern Ute Indian Tribe, and Durango is the closest major city, just 5 miles outside of the north boundary of the Reservation. Current information indicates that the population of the Tribe is about 1,450 people with approximately 410 tribal members living off the Reservation. In addition to Tribal members, there are over 30,000 non-Indians living within the exterior boundaries of the Southern Ute Reservation.

#### c. Tribal Government

The Southern Ute Indian Tribe is governed by the <u>Constitution of the Southern Ute Indian Tribe of the Southern Ute Indian Reservation, Colorado</u> adopted on November 4, 1936 and subsequently amended and approved on October 1, 1975. The Southern Ute Indian Tribe is a federally recognized Tribe pursuant to Section 16 of the Indian Reorganization Act of June 18, 1934 (48 Stat.984), as amended by the Act of June 15, 1935 (49 Stat. 378). The governing body of the Southern Ute Indian Tribe is a seven member Tribal Council, with its members elected from the general membership of the Tribe through a yearly election process. Terms of the Tribal Council are three (3) years and are staggered so in any given year two (2) members are up for reelection. The Tribal Council officers consist of a Chairman, Vice-Chairman, and Treasurer.

#### d. Local Air Quality

The Tribe maintains an air monitoring network consisting of two stations equipped to measure ambient concentrations of oxides of nitrogen (NO, NO<sub>2</sub>, and NO<sub>x</sub>), ozone (O<sub>3</sub>), and carbon monoxide (CO), and to collect meteorological data. The Tribe has collected NO<sub>2</sub> and O<sub>3</sub> data at the Ignacio, Colorado station (also known as the Ute 1 station, with AQS identification number 08-067-7001) and the Bondad, Colorado station (also known as Ute 3, with AOS identification number 08-067-7003) since June 1, 1982, and April 1, 1997, respectively. The CO channel at the Ignacio station has been reporting to AQS since January 1, 2000, and both stations began reporting NO and NO<sub>x</sub> data to AQS on the same day. Also in 2000, both stations initiated meteorological monitors measuring wind speed, wind direction, vertical wind speed, outdoor temperature, relative humidity, solar radiation, and rain/snowmelt precipitation. Reporting of vertical wind speed data from both stations terminated on July 1, 2007. Particulate data (PM<sub>10</sub>) was collected from December 1, 1981 to September 30, 2006 at the Ignacio station and from April 1, 1997 to September 30, 2006 at the Bondad station. The Tribe reports hourly data to AQS for the criteria pollutants being monitored (NO2, O3, and CO), allowing AQS users to retrieve data that can be compared to any of the National Ambient Air Quality Standards for these pollutants.

## 4. Applicable Requirements

The following discussions address applicable requirements, and requirements that may appear to be applicable but are not. All applicable and non-applicable requirements addressed here are included in the CFR at title 40.

#### **Prevention of Significant Deterioration (PSD)**

PSD is a preconstruction review requirement of the CAA that applies to proposed projects that are sufficiently large (in terms of emissions) to be a "major" stationary source or "major" modification of an existing stationary source. The PSD regulations are found at 40 CFR 52.21. Source size is defined in terms of "potential to emit," which is its capability at maximum design capacity to emit a pollutant, except as constrained by existing federally and practically enforceable conditions applicable to the source. A new stationary source or a modification to an existing minor stationary source is major if the proposed project has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specified major source thresholds, which are 100 tpy for 28 listed industrial source categories and 250 tpy for all other sources. PSD also applies to modifications at existing major sources that cause a "significant net emissions increase" at that source. Significance levels for each pollutant are defined in the PSD regulations at 40 CFR 52.21. A modification is a physical change or change in the method of operation.

The Miera facility does not belong to any of the 28 source categories. Therefore, the potential to emit threshold for determining PSD applicability for this source is 250 tpy. The potential to emit of regulated pollutants at this facility, notwithstanding the emission limits on CO, are currently below the major source threshold of 250 tpy. Hence, the Miera facility is a true minor PSD source.

#### **New Source Performance Standards (NSPS)**

<u>40 CFR Part 60, Subpart A</u>: General Provisions. This subpart applies to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication of any standard in part 60. The general provisions under subpart A apply to sources that are subject to the specific subparts of part 60.

As explained below, the Miera facility is not subject to any specific subparts of part 60; therefore, the General Provisions of part 60 do not apply.

<u>40CFR Part 60</u>, <u>Subpart Dc</u>: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. This rule applies to steam generating units with a maximum design heat capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

All heaters at the Miera facility have a maximum design heat input capacity less than 10 MMBtu/hr; therefore, subpart Dc does not apply.

<u>40 CFR Part 60, Subpart K</u>: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. 40 CFR part 60, Subpart K does not apply to storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

All tanks storing volatile organic liquids at the Miera facility are less than 40,000; therefore, subpart K does not apply.

40 CFR Part 60, Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to June 23, 1984. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. Subpart Ka does not apply to petroleum storage vessels with a capacity of less than 420,000 gallons used for petroleum or condensate stored, processed, or treated prior to custody transfer.

All tanks storing volatile organic liquids at the Miera facility are less than 40,000, therefore, subpart Ka does not apply.

<u>40 CFR Part 60, Subpart Kb</u>: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This rule applies to storage vessels with a capacity greater than or equal to 75 cubic meters (471 bbl).

All tanks storing volatile organic liquids at the Miera facility are less than 471 bbl; therefore, subpart Kb does not apply.

<u>40 CFR Part 60, Subpart GG</u>: Standards of Performance for Stationary Gas Turbines. This rule applies to stationary gas turbines, with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), that commenced construction, modification, or reconstruction after October 3, 1977.

There are no stationary gas turbines located at the Miera facility; therefore, subpart GG does not apply.

40 CFR Part 60, Subpart KKK: Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This rule applies to compressors and other equipment at onshore natural gas processing facilities. As defined in this subpart, a natural gas processing plant is any processing site engaged in the extraction of natural gas liquids (NGLs) from field gas, fractionation of mixed NGLs to natural gas products, or both. NGLs are defined as the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

The Miera facility does not extract natural gas liquids from field gas, nor does it fractionate mixed NGLs to natural gas products, and thus does not met the definition of a natural gas processing plant under this subpart. Therefore, subpart KKK does not apply.

40 CFR Part 60, Subpart LLL: Standards of Performance for Onshore Natural Gas Processing; SO<sub>2</sub> Emissions. This rule applies to sweetening units and sulfur recovery units at onshore natural gas processing facilities. As defined in this subpart, sweetening units are process devices that separate hydrogen sulfide (H<sub>2</sub>S) and carbon dioxide (CO<sub>2</sub>) from a sour natural gas stream. Sulfur recovery units are defined as process devices that recover sulfur from the acid gas (consisting of H<sub>2</sub>S and CO<sub>2</sub>) removed by a sweetening unit.

The Miera facility has no sweetening or sulfur recovery units. Therefore, subpart LLL does not apply.

40 CFR part 60, subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. This subpart establishes emission standards and compliance requirements for the control of emissions from stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction, modification or reconstruction after June 12, 2006, where the SI ICE are manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator (See 40 CFR 60.4230(a)).

BP provided the following information:

Table 4 – NSPS Subpart JJJJ Applicability Determination BP Miera Compressor Facility

Emission Unit Id.	Description	Control Equipment
	Caterpillar 3606 TALE, natural gas fired, lean burn compressor engine, 1,850 horsepower	Waukesha-Pearce oxidation catalyst (672-OXMR)
C-100 C-200 C-300	Serial No. 3XF00261 Installed: 4/23/2008 <sup>a</sup> Serial No. 4ZS00637 Installed: 2/22/2007 <sup>b</sup> Serial No. 3XF00327 Installed: 5/14/2008 <sup>c</sup> Caterpillar 3606 TALE, natural gas fired, lean burn	Installed: 3/31/2004 Installed: 3/31/2004 Installed: 3/31/2004
C-400	compressor engine, 1,850 horsepower  Serial No. 4ZS00303 Installed: 10/1/2003 <sup>d</sup>	None

- a. The installation date of the original engine at this site was May 2002. The current unit has a date of manufacturer of May 24, 2000. This unit has not been modified or reconstructed since June 12, 2006.
- b. The installation date of the original engine at this site was May 2002. The current engine has a manufacturer date of June 21, 2006. This unit has not been modified or reconstructed since June 12, 2006.
- c. The installation date of the original engine at this site was February 14, 2003. The installation date listed above is the installation date for the current unit, which previously operated at the Miera facility as C-100. The date of manufacturer for C-300 is July 4, 2001. This unit has not been modified or reconstructed since June 12, 2006.
- d. Based on the installation date, the date of manufacture of this unit is prior to June 12, 2006. This unit has not been modified or reconstructed since June 12, 2006.

All four Caterpillar engines were manufactured prior to July 1, 2007 (trigger date for lean burn engine with a maximum engine power greater than or equal to 1,350 hp). None of the engines have been modified or reconstructed since June 12, 2006. Therefore, subpart JJJJ does not apply.

#### **National Emissions Standards for Hazardous Air Pollutants (NESHAP)**

<u>40 CFR Part 63, Subpart A</u>: General Provisions. This subpart contains national emissions standards for HAPs that regulate specific categories of sources that emit one or more HAP regulated pollutants under the CAA. The general provisions under subpart A apply to sources that are subject the specific subparts of part 63.

The Miera facility is subject to the area source standards of 40 CFR 63, subpart HH (MACT HH) and 40 CFR 63, subpart ZZZZ (MACT ZZZZ). See the discussions of applicability below. However, MACT HH and MACT ZZZZ exempt area sources from the requirements of the general provisions of part 63.

Therefore, while the Miera facility is subject the area source requirements of MACT HH and MACT ZZZZ, BP is only subject to requirements for applicability determinations found at §63.10(b)(3).

40 CFR part 63, subpart HH: National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. This subpart applies to the owners and operators of affected units located at natural gas production facilities that are major or area sources of HAPs, and that process, upgrade, or store natural gas prior to the point of custody transfer, or that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. The affected units are glycol dehydration units, storage vessels with the potential for flash emissions, and the group of ancillary equipment, and compressors intended to operate in volatile hazardous air pollutant service, which are located at natural gas processing plants.

#### Throughput Exemption

Those sources whose maximum natural gas throughput, as appropriately calculated in §63.760(a)(1)(i) through (a)(1)(iii), is less than 18,400 standard cubic meters per day are exempt from the major source requirements of this subpart.

#### Source Aggregation

Major source, as used in this subpart, has the same meaning as in §63.2, except that:

- 1) Emissions from any oil and gas production well with its associated equipment and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units.
- 2) Emissions from processes, operations, or equipment that are not part of the same facility shall not be aggregated.
- 3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage tanks with flash emission potential shall be aggregated for a major source determination.

#### **Facility**

For the purpose of a major source determination, facility means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in subpart HH. Examples of facilities in the oil and natural gas production category include, but are not limited to: well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

#### Production Field Facility

Production field facilities are those located prior to the point of custody transfer. The definition of custody transfer (40 CFR 63.761) means the point of transfer after the processing/treating in the producing operation, except for the case of a natural gas processing plant, in which case the point of custody transfer is the inlet to the plant.

Natural Gas Processing Plant

A natural gas processing plant is defined in 40 CFR 63.761 as any processing site engaged in the extraction of NGLs from field gas, or the fractionation of mixed NGLs to natural gas products, or a combination of both. A treating plant or gas plant that does not engage in these activities is considered to be a production field facility.

#### Major Source Determination for Production Field Facilities

The definition of major source in this subpart (at 40 CFR 63.761) states, in part, that only emissions from the dehydration units and storage vessels with a potential for flash emissions at production field facilities shall be aggregated when comparing to the major source thresholds. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated.

#### Area Source Applicability

40 CFR part 63, subpart HH applies also to area sources of HAPs. An area source is a HAP source whose total HAP emissions are less than 10 tpy of any single HAP or less than 25 tpy for all HAPs in aggregate. This subpart requires different emission reduction requirements for glycol dehydration units found at oil and gas production facilities based on their geographical location.

Units located in densely populated areas (determined by the Bureau of Census) and known as urbanized areas with an added 2-mile offset and urban clusters of 10,000 people or more, are required to have emission controls. Units located outside these areas will be required to have the glycol recirculation pump rate optimized or operators can document that PTE of benzene is less than 1 tpy.

#### Applicability of subpart HH to the Miera facility:

The Miera facility does not engage in the extraction of NGLs and therefore is not considered a natural gas processing plant. Hence, the point of custody transfer, as defined in this subpart HH, occurs downstream of the station and the facility would therefore be considered a production field facility. For production field facilities, only emissions from the dehydration units and storage vessels with a potential for flash emissions are to be aggregated to determine major source status. The Miera facility is not a major source under this rule.

The facility is potentially subject to the area source requirements of subpart HH, because the facility is an minor source of HAP (per the subpart), upgrades natural gas, and is a production field facility. The TEG dehydration units are affected sources under the subpart.

With respect to the area source requirements of this subpart, the facility is located outside both an urban area and an urban cluster. There are no tanks that have the potential for flash emissions at the facility. Furthermore, uncontrolled benzene emissions from the TEG glycol dehydrators at the facility have been determined to be less than 1 tpy using GRI-GLYCalc Version 4.0, as presented in the supporting documentation in the application. As a result, the dehydration units at the facility are exempt from the §63.764(d) general requirements for area sources

# per §63.764(e)(1)(ii). However, the following general recordkeeping requirement will continue to apply to this facility:

o §63.774(d)(1) – retain the GRI-GLYCalc determinations used to demonstrate that actual average benzene emissions are below 1 tpy.

40 CFR Part 63, Subpart HHH: National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. This rule applies to natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user, and that are a major source of HAP emissions. Natural gas transmission means the pipelines used for long distance transport and storage vessel is a tank or other vessel designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon, liquids, produced water or other liquid and is constructed of wood, concrete, steel or plastic structural support.

The Miera facility is a natural gas production facility, and not a natural gas transmission or storage facility. Therefore, subpart HHH does not apply.

<u>40 CFR Part 63, Subpart ZZZZ</u>: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This rule establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE.

This rule applies to owners or operators of new and reconstructed stationary RICE of any horsepower rating which are located at a <u>major or area</u> source of HAP emissions. While all stationary RICE located at major or area sources are subject to the final rule (promulgated January 18, 2008, amending the final rule promulgated June 15, 2004), there are distinct requirements for regulated stationary RICE depending on their design, use, horsepower rating, fuel, and major or area HAP emission status.

#### *Major Source Applicability*

The standard now applies to engines with a horsepower rating of less than or equal to 500 brake horsepower (bhp) in addition to those engines with a horsepower rating greater than 500 bhp. The standard continues to have specific requirements for new or reconstructed RICE and existing spark ignition 4 stroke rich burn (4SRB) stationary RICE with horsepower ratings greater than 500 bhp located at a major HAP facility.

With the exception of the existing spark ignition 4SRB stationary RICE, other types of existing stationary RICE (i.e., spark ignition 2 stroke lean burn (2SLB), spark ignition 4 stroke lean burn (4SLB), compression ignition (CI), stationary RICE that combust landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, emergency, and limited use units) located at a major source of HAP emissions are not subject to any specific requirement under the final amended rule.

**Existing RICE:** A stationary RICE with a site rating of greater than 500 bhp is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 bhp is existing at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced before June 12, 2006.

**New RICE:** A stationary RICE with a site rating of greater than 500 bhp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after December 19, 2002. A stationary RICE with a site rating of less than or equal to 500 bhp is new at a major source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

# Area Source Applicability

The standard now has specific requirements for new and reconstructed stationary RICE located at minor sources of HAPs, for engines with horsepower ratings less than, equal to, or greater than 500 bhp. The area source standards for new stationary RICE defer to the requirements of NSPS JJJJ for Spark Ignition Internal Combustion Engines or NSPS IIII for Compression Ignition Internal Combustion Engines for demonstrating compliance with subpart ZZZZ. Existing RICE located at an area HAP source are not subject to any specific requirements under the final rule.

**Existing RICE:** A stationary RICE is existing at an area source of HAP emissions if construction or reconstruction of the unit commenced before June 12, 2006. The area source standards do not apply to existing stationary RICE.

**New RICE:** A stationary RICE is new at an area source of HAP emissions if construction or reconstruction (as defined in §63.2) of the unit commenced on or after June 12, 2006.

**Table 5 – RICE MACT Applicability Determination BP Miera Compressor Facility** 

Emission Unit Id.	Description	Control Equipment
	Caterpillar 3606 TALE, natural gas fired, lean burn compressor engine, 1,850 horsepower	Waukesha-Pearce oxidation catalyst (672-OXMR)
C-100 C-200 C-300	Serial No. 3XF00261 Installed: 4/23/2008 <sup>a</sup> Serial No. 4ZS00637 Installed: 2/22/2007 <sup>b</sup> Serial No. 3XF00327 Installed: 5/14/2008 <sup>c</sup> Caterpillar 3606 TALE, natural gas fired, lean burn compressor engine, 1,850 horsepower	Installed: 3/31/2004 Installed: 3/31/2004 Installed: 3/31/2004
C-400	Serial No. 4ZS00303 Installed: 10/1/2003 <sup>d</sup>	None

a. The installation date of the original engine at this site was May 2002. The current unit has a date of manufacturer of May 24, 2000. This unit has not been modified or reconstructed since June 12, 2006.

The Miera facility is an area source of HAPs as defined in subpart ZZZZ.

The Miera facility is not subject to the major source requirements of this standard as it has a federally enforceable synthetic minor limit for formaldehyde which makes it minor for HAP emissions. However, the minor HAP status does not protect this facility from potential area source requirements for these engines.

Three of the four Caterpillar lean burn stationary SI ICE (C-100, C-300, and C-400) currently operating at the Miera facility commenced construction, reconstruction, or modification prior to June 12, 2006, and thus are considered existing. Therefore, this subpart does not apply to those engines. However, engine C-200 was constructed, reconstructed, or modified after June 12, 2006, and is thus subject to the area source MACT standards for RICE.

While the area source requirements of MACT ZZZZ apply to engine C-200, the rule directs the operator of the affected unit to the requirements of NSPS JJJJ. NSPS JJJJ only applies to those engines whose construction, modification, or reconstruction commenced after June 12, 2006, and where the SI ICE are manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower. For engine C-200, the manufacture trigger date is July 1, 2007, and this engine was manufactured on June 21, 2006.

b. The installation date of the original engine at this site was May 2002. The current engine has a manufacturer date of June 21, 2006. This engine is subject to the RICE MACT for area sources.

c. The installation date of the original engine at this site was February 14, 2003. The installation date listed above is the installation date for the current unit, which previously operated at the Miera facility as C-100. The manufacture date for C-300 is July 4, 2001. This unit has not been modified or reconstructed since June 12, 2006.

d. Based on the installation date, the date of manufacture of this unit is prior to June 12, 2006. This unit has not been modified or reconstructed since June 12, 2006.

Therefore, while engine C-200 is subject to MACT ZZZZ, BP is only subject to the recordkeeping requirements for applicability determinations found in §63.10(b)(3).

## **Compliance Assurance Monitoring (CAM) Rule**

<u>40 CFR Part 64</u>: Compliance Assurance Monitoring Provisions. According to 40 CFR 64.2(a), the CAM rule applies to <u>each</u> Pollutant Specific Emission Unit (PSEU) at a major source that is required to obtain a part 70 or part 71 permit if the unit satisfies all of the following criteria:

- 1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant other than an emissions limitation or standard that is exempt under §64.2(b)(1);
  - " $\S64.2(b)(1)$ : Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards:
  - (i) Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Act;
  - (ii) Stratospheric ozone protection requirements under title VI of the Act;
  - (iii) Acid Rain Program requirements pursuant to Sections 404, 405, 406, 407(a), 407(b) or 410 of the Act;
  - (iv) Emissions limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions with a source or between sources;
  - (v) An emissions cap that meets the requirements specified in  $\S70.4(b)(12)$  or  $\S71.6(a)(13)(iii)$  of this chapter;
  - (vi) Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1."
  - "§64.1: <u>Continuous compliance method</u> means a method, specified by the applicable standard or an applicable permit condition, which:
  - (1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and
  - (2) Provides data either in units of the standard or correlated directly with the compliance limit."
- 2) The unit uses a control device to achieve compliance with any such limit or standard; and
- 3) The unit has pre-control device emissions of the applicable regulated pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Since no PSEU at the Miera facility is subject to an emission standard or limitation, uses a control device to meet an emission standard or limitation, or has pre-controlled emissions greater that 100 tpy, the CAM requirements do not apply.

#### Off Permit Changes and Alternative Operating Scenarios

Engine replacement language has been included in the permit to allow for off permit replacement of an individual gas-fired engine with an engine of the same make, model, horsepower rating, configuration, and with equivalent air emission controls as the engine it replaces, provided that the provisions specific to engine replacement in the Off Permit Changes section of the permit are satisfied. The primary purpose of the Off Permit Changes provisions is to ensure the PSD and other Clean Air Act emission standards are not circumvented by off permit changes. Related language is also included in the section on Alternative Operating Scenarios.

#### **Chemical Accident Prevention Program**

Based on BP's applications, the Miera facility currently has no regulated substances above the threshold quantities in this rule and therefore is not subject to the requirement to develop and submit a risk management plan. However, BP has an ongoing responsibility to submit this plan IF a substance is listed that the source has in quantities over the threshold amount or IF the source ever increases the amount of any regulated substance above the threshold quantity.

#### **Stratospheric Ozone and Climate Protection**

<u>40 CFR Part 82, Subpart F</u>: Air Conditioning Units. There are three air conditioning units at the Miera facility that contain Class 1 or Class 2 refrigerants (chlorofluorocarbons (CFCs)). Should BP perform any maintenance, service, repair, or disposal of any equipment containing CFCs, or contract with someone to do this work, BP would be required to comply with title VI of the CAA and submit an application for a modification to this title V permit.

40 CFR Part 82, Subpart H: Halon Fire Extinguishers. There are no halon fire extinguishers at the Miera facility. However, should BP obtain any halon fire extinguishers, then it must comply with the standards of 40 CFR part 82, subpart H for halon emissions reduction, if it services, maintains, tests, repairs, or disposes of equipment that contains halons or uses such equipment during technician training. Specifically, BP would be required to comply with 40 CFR part 82 and submit an application for a modification to this title V permit.

### Conclusion

Since the Miera facility is located in Indian country, the State of Colorado's implementation plan does not apply to this source. In addition, no tribal implementation plan (TIP) has been submitted and approved for the Southern Ute Tribe, and EPA has not promulgated a federal implementation plan (FIP) for the area of jurisdiction governing the Southern Ute Indian Reservation. Therefore, the Miera facility is not subject to any implementation plan.

Based on the information provided in BP's applications for the Miera facility, EPA has determined that the facility is subject only to those applicable federal CAA programs discussed in section 3 above.

EPA recognizes that, in some cases, sources of air pollution located in Indian country are subject to fewer requirements than similar sources located on land under the jurisdiction of a state or local air pollution control agency. To address this regulatory gap, EPA is in the process of developing national regulatory programs for preconstruction review of major sources in nonattainment areas and of minor sources in both attainment and nonattainment areas. These programs will establish, where appropriate, control requirements for sources that would be incorporated into part 71 permits. To establish additional applicable, federally-enforceable emission limits, EPA Regional Offices will, as necessary and appropriate, promulgate FIPs that will establish federal requirements for sources in specific areas. EPA will establish priorities for its direct federal implementation activities by addressing as its highest priority the most serious threats to public health and the environment in Indian country that are not otherwise being adequately addressed. Further, EPA encourages and will work closely with all tribes wishing to develop TIPs for approval under the Tribal Authority Rule. EPA intends that its federal regulations created through a FIP will apply only in those situations in which a tribe does not have an approved TIP.

# 5. EPA Authority

## a. General Authority to Issue Part 71 Permits

Title V of the CAA requires that EPA promulgate, administer, and enforce a federal operating permits program when a state does not submit an approvable program within the time frame set by title V or does not adequately administer and enforce its EPA-approved program. On July 1, 1996 (61 FR 34202), EPA adopted regulations codified at 40 CFR 71 setting forth the procedures and terms under which the Agency would administer a federal operating permits program. These regulations were updated on February 19, 1999 (64 FR 8247) to incorporate EPA's approach for issuing federal operating permits to stationary sources in Indian country. As described in 40 CFR 71.4(a), EPA will implement a part 71 program in areas where a state, local, or tribal agency has not developed an approved part 70 program. Unlike states, Indian tribes are not required to develop operating permits programs, though EPA encourages tribes to do so. See, e.g., Indian Tribes: Air Quality Planning and Management (63 FR 7253, February 12, 1998) (also known as the "Tribal Authority Rule"). Therefore, within Indian country, EPA will administer and enforce a part 71 federal operating permits program for stationary sources until a tribe receives approval to administer their own operating permits programs.

#### 6. Use of All Credible Evidence

Determinations of deviations, continuous or intermittent compliance status, or violations of the permit are not limited to the testing or monitoring methods required by the underlying regulations or this permit; other credible evidence (including any evidence admissible under the Federal Rules of Evidence) must be considered by the source and EPA in such determinations.

#### 7. Public Participation

#### a. Public Notice

There was a 30-day public comment period for actions pertaining to the draft permit. Public notice was given for the draft permit by mailing a copy of the notice to the permit applicant, the affected state, tribal and local air pollution control agencies, the city and county executives, the state and federal land managers and the local emergency planning authorities which have jurisdiction over the area where the source is located. A copy of the notice was also provided to all persons who have submitted a written request to be included on the mailing list. If you would like to be added to our mailing list to be informed of future actions on these or other Clean Air Act permits issued in Indian country, please send your name and address to:

Kathleen Paser, Part 71 Permit Contact
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street (8P-AR)
Denver, Colorado 80202-1129

Public notice was published in the <u>Durango Herald</u> on July 22, 2009, giving opportunity for public comment on the draft permit and the opportunity to request a public hearing.

## b. Opportunity for Comment

Members of the public were given the opportunity to review a copy of the draft permit prepared by EPA, the application, the statement of basis for the draft permit, and all supporting materials for the draft permit. Copies of these documents were available at:

La Plata County Clerk's Office 1060 East 2<sup>nd</sup> Avenue Durango, Colorado 81302

and

Southern Ute Indian Tribe Environmental Programs Office 116 Mouache Drive Ignacio, Colorado 81137

and

US EPA Region 8 Air Program Office 1595 Wynkoop Street (8P-AR) Denver, Colorado 80202-1129 All documents were available for review at the U.S. EPA Region 8 office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding federal holidays).

Any interested person could submit written comments on the draft part 71 operating permit during the public comment period to the Part 71 Permit Contact at the address listed above. EPA keeps a record of the commenters and of the issues raised during the public participation process. All comments have been considered and answered by EPA in making the final decision on the permit.

Anyone, including the applicant, who believed any condition of the draft permit was inappropriate could raise all reasonable ascertainable issues and submit all arguments supporting their position by the close of the public comment period. Any supporting materials submitted must have been included in full and may not have been incorporated by reference, unless the material was already submitted as part of the administrative record in the same proceeding or consisted of state or federal statutes and regulations, EPA documents of general applicability, or other generally available reference material.

Comments on the draft permit and Statement of Basis were received from the permittee during the public comment period.

# c. Opportunity to Request a Hearing

A person could submit a written request for a public hearing to the Part 71 Permit Contact, at the address listed in section 8.a above, by stating the nature of the issues to be raised at the public hearing. No request for a public hearing was received. EPA did not receive any requests for a public hearing during the public comment period.

# d. Appeal of Permits

Within 30 days after the issuance of a final permit decision, any person who filed comments on the draft permit or participated in the public hearing may petition to the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or participate in the public hearing may petition for administrative review, only if the changes from the draft to the final permit decision or other new grounds were not reasonably foreseeable during the public comment period. The 30-day period to appeal a permit begins with EPA's service of the notice of the final permit decision.

The petition to appeal a permit must include a statement of the reasons supporting the review, a demonstration that any issues were raised during the public comment period, a demonstration that it was impracticable to raise the objections within the public comment period, or that the grounds for such objections arose after such a period. When appropriate, the petition may include a showing that the condition in question is based on a finding of fact or conclusion of law which is clearly erroneous; or, an exercise of discretion, or an important policy consideration that the Environmental Appeals Board should review.

The Environmental Appeals Board will issue an order either granting or denying the petition for review, within a reasonable time following the filing of the petition. Public notice of the grant of review will establish a briefing schedule for the appeal and state that any interested person may file an amicus brief. Notice of denial of review will be sent only to the permit applicant and to the person requesting the review. To the extent review is denied, the conditions of the final permit decision become final agency action.

A motion to reconsider a final order shall be filed within 10 days after the service of the final order. Every motion must set forth the matters claimed to have been erroneously decided and the nature of the alleged errors. Motions for reconsideration shall be directed to the Administrator rather than the Environmental Appeals Board. A motion for reconsideration shall not stay the effective date of the final order unless it is specifically ordered by the Board.

#### e. <u>Petition to Reopen a Permit for Cause</u>

Any interested person may petition EPA to reopen a permit for cause, and EPA may commence a permit reopening on its own initiative. EPA will only revise, revoke and reissue, or terminate a permit for the reasons specified in 40 CFR 71.7(f) or 71.6(a)(6)(i). All requests must be in writing and must contain facts or reasons supporting the request. If EPA decides the request is not justified, it will send the requester a brief written response giving a reason for the decision. Denial of these requests is not subject to public notice, comment, or hearings. Denials can be informally appealed to the Environmental Appeals Board by a letter briefly setting forth the relevant facts

#### f. Notice to Affected States/Tribes

As described in 40 CFR 71.11(d)(3)(i), public notice was given by mailing a copy of the notice to the air pollution control agencies of affected states, tribal and local air pollution control agencies that have jurisdiction over the area in which the source is located, the chief executives of the city and county where the source is located, any comprehensive regional land use planning agency and any state or Federal land manager whose lands may be affected by emissions from the source. The following entities were notified:

- State of Colorado, Department of Public Health and Environment
- State of New Mexico, Environment Department
- Southern Ute Indian Tribe, Environmental Programs Office
- Ute Mountain Ute Tribe, Environmental Programs
- Navajo Tribe, Navajo Nation EPA
- Jicarilla Tribe, Environmental Protection Office
- La Plata County, County Clerk
- Town of Ignacio, Mayor
- National Park Service, Air, Denver, CO
- U.S. Department of Agriculture, Forest Service, Rocky Mountain Region
- Carl Weston
- San Juan Citizen Alliance
- Wild Earth Guardians (formerly Rocky Mountain Clean Air Action)