Air Pollution Control
Title V Permit to Operate
Statement of Basis for Permit No. V-SU-00050-2009.01
Reopen for Cause
February 2011

BP America Production Company Iron Horse Compressor Station Southern Ute Indian Reservation La Plata County, Colorado

# 1. Facility Information

### a. Location

The Iron Horse Compressor Station ("Iron Horse"), owned and operated by BP America Production Company ("BP"), 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 NW \(^1/4\) Section 7, T33N, R7W, in La Plata County, Colorado, at 37° 07' 18" North latitude and \(^107^{\circ} 39' 32"\) West longitude. The mailing address is:

BP America Production Company 380A North Airport Road Durango, CO 81303

### b. Contacts

## **Facility Contact:**

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### **Company Contact:**

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Brenda Jarrell Air Quality Program Manager Southern Ute Indian Tribe Phone: 970-563-4705

## 2. Description of Reopen for Cause

On March 3, 2010 (75 FR 9648), EPA published revisions to the National Emission Standards for Hazardous Air Pollutants, also known as the maximum achievable control technologies (MACT) for Reciprocating Internal Combustion Engines (RICE MACT). While the primary purpose of the final rule was to include the regulation of emissions of hazardous air pollutants (HAPs) from certain existing compression ignition RICE, the rule also included changes to the startup, shutdown, and malfunction (SSM) provisions for all RICE as a result of a December 18, 2008 D.C. Circuit Court of Appeals order.

According to 40 CFR 71.7(f)(1)(i), issued operating permits shall be reopened for cause if an additional applicable requirement under the Clean Air Act (CAA) becomes applicable to a major part 71 source with a remaining permit term of 3 or more years. 40 CFR 71.7(f)(3) requires the permitting authority to provide a notice of intent to reopen for cause to the part 71 source at least 30 days in advance of the date the permit is to be reopened. EPA notified BP America Production Company of its intent to reopen the operating permit for Iron Horse Compressor Station in a letter dated May 11, 2010.

Following EPA's notification letter of intent to reopen the permit for cause to address the March 3, 2010 revisions to RICE MACT, additional changes to the rule were promulgated on August 20, 2010. While the main focus of the August 20, 2010 rule revisions was to include additional affected units, there were also changes made to the allowed performance test methods that affect the language in the permit. Rather than specifically referencing the test methods appropriate for the emission units in the permit, we have revised the language to provide greater flexibility by referencing the table of requirements for performance test in the regulation. This does not change any of the applicable requirements of the RICE MACT. The August 20, 2010 rule revisions also included Continuous Parameter Monitoring Systems (CPMS) specifications. The permit has been revised to incorporate the new CPMS requirements for the affected emission units.

### a. RICE MACT promulgation history and applicability

<u>40 CFR Part 63, Subpart ZZZZ (RICE MACT)</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 spark ignition internal combustion engines (SI ICE) and stationary compression ignition internal combustion engines (CI ICE).

For the purposes of this standard, construction or reconstruction is as defined in §63.2.

Rule History

### June 15, 2004: SI and CI ICE > 500 bhp at Major HAP Source

This rule was originally promulgated in June 15, 2004 (69FR 33474). The original rule regulated all new and reconstructed lean burn and rich burn stationary SI ICE and CI ICE greater than 500 bhp located at major HAP sources. Only one category of existing ICE was subject to the rule at that time: Existing 4SRB SI ICE with a horse power rating equal to or greater than 500 bhp.

For this version of the rule,

Existing means: Construction or reconstruction commenced on or before 12/19/2002. New means: Construction or reconstruction commenced after 12/19/2002.

# January 18, 2008: New SI & CI ICE at Area HAP Sources & New SI & CI ICE with Horse Power Rating ≤ 500 bhp at Major HAP Sources

The first round of amendments to RICE MACT was promulgated on January 18, 2008 (73FR 3568). Requirements were established for new SI and CI ICE of any horse power rating located at area sources of HAPs and new SI and CI ICE with a horse power rating less than or equal to 500 bhp at major sources of HAPs.

For this version of the rule:

Existing means: Construction or reconstruction commenced before 6/12/2006. New means: Construction or reconstruction commenced on or after 6/12/2006.

# March 3, 2010: Existing CI ICE at Area & Major HAP Sources

The second round of amendments to RICE MACT was promulgated on March 3, 2010. New requirements were established for existing CI ICE of any horse power rating located at area sources of HAPs, existing CI RICE with a horse power rating less than or equal to 500 bhp at major sources of HAPs, and existing non-emergency CI ICE with a horse power rating greater than 500 bhp at major sources of HAPs.

For this version of the rule

Existing CI at Area Source any bhp = Construction or reconstruction commenced before 6/12/2006.

Existing CI at Major Source, bhp  $\leq$  500 = Construction or reconstruction commenced before 6/12/2006.

Existing Non-Emergency CI at Major Source, bhp > 500 = Construction or reconstruction commenced on or before 12/19/2002.

# August 20, 2010: Existing SI ICE at Area Sources & Existing SI ICE ≤ 500 bhp at Major HAP Sources

The third round of amendments to RICE MACT was promulgated on August 20, 2010. New requirements were established for existing SI ICE of any horse power rating at area sources of HAPs and existing SI ICE with a horse power rating less than or equal to 500 bhp at major sources of HAPs.

For this version of the rule:

Existing SI ICE at Area Source, any bhp = Construction or reconstruction commenced before 6/12/2006.

Existing SI ICE at Major Source, bhp  $\leq$  500 bhp = Construction or reconstruction commenced before 6/12/2006

While engines identified above are subject to the final rule and its amendments (August 20, 2010, March 3, 2010, January 18, 2008, June 15, 2004), there are distinct requirements for each engine depending on their design, use, horsepower rating, fuel, and major or area HAP emission status.

Summary of Applicability to Engines at Major HAP Sources

Table 1 - Applicability to Engines at Major HAP Sources BP America Iron Horse Compressor Station

Major HAP Sources								
<b>Engine Type</b>	Horse Power	New or	Trigger Date					
	Rating	Existing?						
SI ICE – All <sup>1</sup>	≥ 500 hp	New	On or After 12/19/2002					
SI ICE – 4SRB	> 500 hp	Existing	Before 12/19/2002					
SI ICE – All <sup>1</sup>	≤ 500 hp	New	On or After 6/12/2006					
SI ICE - All <sup>1</sup>	$\leq$ 500 hp	Existing	Before 6/12/2006					
CI ICE - All <sup>2</sup>	≥ 500 hp	New	On or After 12/19/2002					
CI ICE – Non Emergency	> 500 hp	Existing	Before 12/19/2002					
CI ICE – All <sup>2</sup>	≤ 500 hp	New	On or After 6/12/2006					
CI ICE – All <sup>2</sup>	≤ 500 hp	Existing	Before 6/12/2006					

- 1. All includes emergency ICE, limited use ICE, ICE that burn landfill gas, 4SLB, 2SLB, and 4SRB.
- 2. All includes emergency ICE and limited use ICE

Summary of Applicability to Engines at Area HAP Sources

Table 2 - Applicability to Engines at Area HAP Sources BP America Iron Horse Compressor Station

Area HAP Sources								
<b>Engine Type</b>	Trigger Date							
	Rating	Existing?						
SI ICE - All <sup>1</sup>	All hp	New	On or After 6/12/2006					
SI ICE - All <sup>1</sup>	All hp	Existing	Before 6/12/2006					
CI ICE - All <sup>2</sup>	All hp	New	On or After 6/12/2006					
CI ICE - All <sup>2</sup>	All hp	Existing	Before 6/12/2006					

- 1. All includes emergency ICE, limited use ICE, ICE that burn land fill or digester gas, 4SLB, 2SLB, and 4SRB.
- 2. All includes emergency ICE and limited use ICE

Applicability of 40 CFR 63, Subpart ZZZZ to the Iron Horse Compressor Station

BP America provided the following information:

Table 3 - NESHAP Subpart ZZZZ Applicability Determination BP America Iron Horse Compressor Station

Unit	Serial Number	Unit Description	Fuel	ВНР	Commenced Construction Reconstruction or Modification Date	Subpart ZZZZ Requirements
IH1	BEN00345	Caterpillar G3608 / 4SLB	NG	2,520	9/13/2006 (Post 12/19/2002)	Subject (New)
IH2	BEN00346	Caterpillar G3608 / 4SLB	NG	2,520	10/4/2005 (Post 12/19/2002)	Subject (New)

According to the information provided in BP's part 71 initial application, BP was unable to obtain federally enforceable formaldehyde emission limits prior to the construction of the two 2,520 hp Caterpillar G3608 four stroke lean burn compressor engines. Without these federally enforceable formaldehyde emission limits, the Iron Horse Compressor Station would be a major source of HAPs since the total potential to emit of formaldehyde would be greater than 10 tpy. Therefore, emission units IH1 and IH2 became subject to the major source requirements of the RICE MACT upon startup, which was April 11, 2008.

# b. RICE MACT revisions applicable to Iron Horse

The revisions to the RICE MACT published in the federal register on March 3, 2010 included emission regulations for stationary CI ICE that are located at area and major sources of HAP emissions. Additionally, the rule included revised standards for the SSM procedures that were previously regulated under the RICE MACT. The engines located at Iron Horse are all SI ICE and were previously subject to the RICE MACT. Therefore, the revised standards for SSM procedures apply to those engines at Iron Horse.

EPA has promulgated additional operational standards during startup as part of the revised rule. These standards specify that the permittee must limit the engine startup time to no more than 30 minutes and must minimize the engine's time spent at idle during startup. For conditions where it may take more than 30 minutes to start up the engine (i.e. cold starts or where the ambient temperature is very cold), the permittee may petition the Administrator pursuant to 40 CFR 63.6(g) for alternative work practices. These standards apply during normal operations, as well as during malfunctions, and are reflected in Section II of the permit. In addition, emission limitations apply at all times, except during periods of startup, and sources are no longer required to implement and maintain a SSM plan under the revised rule.

The following modifications have been made to this permit:

- Section II. Requirements for Engines
  - 1. Corrected the text to reflect recent revisions to the applicable regulatory requirements.

For specific applicability information to other requirements not mentioned in this Statement of Basis, please see the Statement of Basis for part 71 permit number V-SU-0050-09.00.

### c. Conclusion

Based on the information provided in BP's applications for the Iron Horse Compressor Station, EPA has determined that the facility is subject to the March 3, 2010 and August 20, 2010 revisions promulgated at 40 CFR part 63, subpart ZZZZ as discussed in Section 2., above. As discussed in Section 5 below, only portions of the permit that have been revised are subject to public review and comment during the public comment period.

### 3. 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.

#### 4. 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.

# 5. Public Participation

### a. Public notice

As described in 40 CFR 71.11(a)(5), all part 71 draft operating permits shall be publicly noticed and made available for public comment. The public notice of permit actions and public comment period is described in 40 CFR 71.11(d). 40 CFR 71.7(f)(2) further states that "proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists."

There was a 30-day public comment period for actions pertaining to a draft permit. The public comment period only affected those parts of the permit for which cause to reopen exists according to 40 CFR 71.7(f)(2). Public notice was given for this 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 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 CAA permits issued in Indian country, please send your name and address to the contact listed below:

Part 71 Coordinator
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> as detailed in the cover letter of this permit package, 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 98 Everett Street, Suite C Durango, Colorado 81303

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 Section II of 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. No comments were received.

Anyone, including the applicant, who believed any condition in Section II 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 be included in full and may not be incorporated by reference, unless the material was already submitted as part of the administrative record in the same proceeding or consists of state or federal statutes and regulations, EPA documents of general applicability, or other generally available reference material.

### 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 above, by stating the nature of the issues to be raised at the public hearing. Based on the number of hearing requests received, EPA will hold a public hearing whenever it finds there is a significant degree of public interest in a draft operating permit. EPA will provide public notice of the public hearing. If a public hearing is held, any person may submit oral or written statements and data concerning the draft permit.

## d. Appeal of permits

Within 30 days after the issuance of a final permit decision, any person who filed comments on Section II of the draft permit or participated in the public hearing may petition to the Environmental Appeals Board to review any condition in this section 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 which 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. Petition to reopen a permit for cause

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 which 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
La Plata County, Assessor's Office
Town of Ignacio, Mayor
National Park Service, Air, Denver, CO
U.S. Department of Agriculture, Forest Service, Rocky Mountain Region
San Juan Citizen Alliance
Carl Weston
WildEarth Guardians

Air Pollution Control
Title V Permit to Operate
Statement of Basis for Title V Permit, No. V-SU-0050-09.00
October 2009

BP America Production Company Iron Horse Compressor Station Southern Ute Reservation La Plata County, Colorado

# 1. Facility Information

## a. Location

The Iron Horse Compressor Station, owned and operated by BP America Production Company ("BP"), 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 NW ¼ Section 7, T33N, R7W, in La Plata County, Colorado, at 37° 07' 18" North latitude and -107° 39' 32" West longitude. The mailing address is:

BP America Production Company San Juan North Asset 380A North Airport Road Durango, CO 81303

### b. Contacts

### **Responsible Official:**

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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

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## **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

## **Tribal Contact:**

James Temte Air Program Manager Southern Ute Indian Tribe Phone: 970-563-4705

## **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

# c. <u>Description of Operations</u>

The Iron Horse Compressor Station is a natural gas production field facility prior to the point of custody transfer. Fruitland coal bed methane wells feed into a gathering pipeline system leading to the inlet of this facility. The natural gas produced from these wells contains approximately 97% methane and 3% carbon dioxide and is water vapor saturated. The gas does not contain any condensate or natural gas liquids.

Upon entering the compressor station, the gas first passes through an inlet separator vessel to remove any free liquids in the gas stream by gravity. The gas then passes to a filter vessel, which serves to filter out any solids such as coal dust in the gas. The gas is then compressed, dehydrated by a triethylene glycol (TEG) dehydration process and finally passes through an outlet scrubber vessel which removes any TEG carryover before being metered and sent to a medium pressure pipeline.

The facility's primary pollutant-emitting sources are two natural gas-fired 4-stroke lean burn (4SLB) spark ignition (SI) reciprocating internal combustion engines (RICE) used to compress the gas. Both engines (units IH1 and IH2) are subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP), also known as the Maximum Achievable Control Technologies (MACT), for stationary RICE (RICE MACT) found at 40 CFR part 63, subpart ZZZZ (see Section 3.0 Analysis of Applicable Requirements for specific details). The engines are equipped with oxidation catalyst controls to comply with the associated regulatory requirement to reduce the concentration of carbon monoxide (CO) or formaldehyde (CH<sub>2</sub>O) exhausted from the stacks.

Other pollutant-emitting sources at the facility include one TEG dehydrator and several heaters and tanks, which all qualify as insignificant emission units (IEUs). There are no pigging operations associated with this facility.

# d. List of All Units and Emission-Generating Activities

In the part 71 initial operating permit application for the Iron Horse Compressor Station, BP provided the information shown in Tables 1 and 2 below. Table 1 lists emission units and emission generating activities, including any air pollution control devices. Emission units identified as "insignificant" emitting units (IEUs) are listed separately in Table 2.

Table 1 - Emission Units BP America Production Company, Iron Horse Compressor Station

Emission Unit ID		Control Equipment	
	Caterpillar G3608 4SLB natural gas fired:	Compressor Engines, 2,520 site rated bhp,	0:11: 0:11:
IH1	Serial No. BEN00345	Installed 04/11/2008* Manufactured 09/13/2006*	Oxidation Catalyst
IH2	Serial No. BEN00346	Installed 04/11/2008* Manufactured 10/04/2005*	

<sup>\* 40</sup> CFR part 60, subpart JJJJ and RICE MACT applicability is discussed in Section 3.a. of this Statement of Basis.

Part 71 allows sources to separately list in the permit application units or activities that qualify as "insignificant" based on potential emissions below 2 tons/year for all regulated pollutants that are not listed as hazardous air pollutants (HAPs) under section 112(b) and below 1,000 lbs/year or the de minimis level established under section 112(g), whichever is lower, for HAPs. However, the application may not omit information needed to determine the applicability of, or to impose, any applicable requirement. 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.

BP stated in the part 71 permit application that the emission units in Table 2, below, are IEUs. The application provided emission calculations for the tanks using TANKS 4.0, for the glycol dehydrator using GRI-GLYCalc Version 4.0, and for the heaters using AP-42 emission factors. This supporting data justifies the source's claim that these units qualify as insignificant emission units (IEUs).

# Table 2 - Insignificant Emission Units BP America Production Company, Iron Horse Compressor Station

Description
1 - 80 MMscfd TEG Dehydration Unit (Still Column Vent)
1 – TEG Dehydration Unit (Flash Tank Vent)
1 – 9,744 gal Atmospheric Drain Tank
1 – 12,600 gal Produced Water Tank,
1 – 12,600 gal Oily Water Tank
1 – 1,500 gal Lube Oil Storage Tank
1 – 1,500 gal Used Oil Storage Tank
1 – 1,000 gal Engine Coolant Storage Tank
1 – 1,000 gal Engine Coolant Storage Tank (Maintenance)
1 – 500 gal TEG Makeup Tank
6 – 48,000Btu/hr Compressor Building Catalytic Heaters
Process Fugitive Emissions

## e. Potential to Emit

Under 40 CFR 52.21, potential to emit (PTE) 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 if 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 oxidation catalyst devices) 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 Assurance (OECA), and the Office of Air Quality Planning and 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.

The facility-wide and unit-specific PTE for the Iron Horse Compressor Station was listed by BP in Forms "GIS" and "PTE", and in the supporting documentation, of the initial part 71 operating permit application. As a result of using oxidation catalyst controls on the compressor engines, emissions of CH<sub>2</sub>O, CO, and VOCs are controlled; however, BP can only take credit for the reduction of CH<sub>2</sub>O emissions when demonstrating compliance with the RICE MACT

requirements. The RICE MACT requirements are only intended to regulate the HAP emissions. There are no emission limits or corresponding monitoring, reporting requirements, or recordkeeping requirements for CO or VOCs; therefore, reductions of CO or VOC emissions are not practically and legally enforceable with regard to calculating PTE. BP calculated and reported the PTE for CO and VOC emissions in forms "GIS" and "PTE" accounting for the controlled reductions. Since those controlled PTE estimates are not enforceable, EPA has reported the uncontrolled PTE estimates for CO and VOC emissions from the compressor engines.

# **Dual-Module Compressor Engine Operation:**

The two Caterpillar G3608 compressor engines installed at the Iron Horse Compressor Station, units IH1 and IH2, are configured with a 90 °F engine control module (ECM). The maximum horsepower (2,520 brake horsepower (bhp)) is available using the 90 °F module at low ambient temperatures with the auxiliary water system set to 90 °F. However, the water system cannot maintain a 90 °F setting during warmer ambient conditions. In order to optimize the maximum bhp available to these compressor engines, the 90 °F ECM will be manually removed and replaced with an 129 °F ECM, and the auxiliary water system will be set to 129 °F.

BP's PTE estimates were calculated using the maximum bhp of 2,520, which corresponds to an aftercooler water inlet temperature of 90 °F. When the 129 °F ECM replaces the 90 °F ECM, the bhp will decrease. Therefore, the emission rates that are the basis of this application will not be exceeded as a result of this method of operation.

The emission unit-specific PTE and facility-wide PTE are shown in Table 3 below.

Table 3 - Potential to Emit BP America Production Company, Iron Horse Compressor Station

Emission Unit ID	Regulated Air Pollutants in tpy (controlled)										
	NO <sub>X</sub>	NO <sub>X</sub> VOC SO <sub>2</sub> PM <sub>10</sub> CO Lead HAP CH <sub>2</sub> O									
IH1	19.5	23.6	0.0	0.7	60.8	-	11.2 (5.3)	9.7 (3.9)			
IH2	19.5	23.6	0.0	0.7	60.8	-	11.2 (5.3)	9.7 (3.9)			
IEUs	0.2	1.1	0.0	0.0	0.1	-	0.1	0.0			
TOTAL	39.2	48.3	0.1	1.5	121.8	-	22.5 (10.7)	19.5 (7.8)			

NO<sub>x</sub> - Nitrogen Oxides

VOC - Volatile Organic Compounds

SO<sub>2</sub> – Sulfur Dioxides

HAP – Hazardous Air Pollutants (total)

CO – Carbon Monoxide

PM<sub>10</sub> – Particulate Matter (less than 10 microns)

CH<sub>2</sub>O – Formaldehyde (largest single HAP)

# f. Construction, Permitting, and Compliance History

The Iron Horse Compressor Station was initially constructed and started up on April 11, 2008, including installation of two Caterpillar G3608 natural gas-fired 4SLB SI RICE (units IH1 and IH2) and a TEG dehydrator (unit IH3). BP evaluated the uncontrolled emissions from these units and determined that the facility was a major source for CO and HAP emissions, and therefore, was subject to major source RICE MACT requirements and part 71 permitting. The source was, in turn, required to submit an initial part 71 title V operating permit application within 12 months of startup.

EPA inspected the facility for the first time on September 16, 2008. The EPA inspector found the facility to be in compliance with the RICE MACT requirements and all other applicable requirements.

EPA received BP's initial part 71 operating permit application on April 14, 2009, and determined the application administratively complete as of the same date.

Table 4 outlines the construction and permitting history of the facility, as well as the history and description of the regulations that potentially apply to this facility.

# Table 4 – Construction, Permitting, and Compliance History BP America Production Company, Iron Horse Compressor Station

# **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.

# Table 4 – Construction, Permitting, and Compliance History (continued...) BP America Production Company, Iron Horse Compressor Station

# 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 startup or June 17, 2002, whichever date is later

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

Construction or reconstruction of affected unit commenced after February 6, 1998, causing source to become major – Upon startup

# June 15, 2004 – NESHAP, or Maximum Achievable Control Technology (MACT), for RICE Promulgated (RICE MACT)

#### Affected Sources:

- Existing RICE ≥ 500 bhp, located at major sources of HAP emissions, constructed or reconstructed on or before 12/19/2002.
- $\bullet \qquad \text{New/Reconstructed RICE} \geq 500 \text{ bhp, located at major sources of HAP emissions, constructed or reconstructed after } 12/19/2002.$

#### Final Compliance Dates:

- Existing lean burn RICE Exempt
- Existing rich burn RICE June 15, 2007
- Start up a new or reconstructed rich or lean burn RICE constructed on or before August 16, 2004 August 16, 2004
- Start up a new or reconstructed rich or lean burn RICE constructed after August 16, 2004 upon startup

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

### Affected Sources:

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/in Urban Area (UA) Plus Offset and Urban Cluster (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 - NSPS for SI ICE and Amendments to RICE MACT Promulgated

### Affected Sources:

- As per 2004 RICE MACT promulgation for RICE >500 bhp at major sources (unchanged by the amendments)
- New/reconstructed SI ICE at area HAP sources that commenced construction, modification, or reconstruction after 6/12/2006.
- Existing RICE < 500 bhp, located at major sources of HAP emissions, constructed or reconstructed before 6/12/2006</li>
- New/Reconstructed RICE < 500 bhp, located at major sources of HAP emissions, constructed or reconstructed on or after 6/12/2006

#### Final Compliance Dates:

- As above for 2004 RICE NESHAP Promulgation for >500 bhp at major sources
- Existing lean burn RICE at area HAP source or ≤ 500 bhp at major source No requirements
- Existing rich burn RICE at area HAP source or  $\leq$  500 bhp at major source No requirements
- (NSPS for SI ICE) New/Reconstructed lean burn RICE >500 bhp manufactured before January 1, 2008 No requirements
- New/Reconstructed RICE at area HAP source or ≤ 500 bhp at major HAP source started up before January 18, 2008 → January 18, 2008
- New/Reconstructed RICE at area HAP source or ≤ 500 bhp at major source started up after January 18, 2008 → upon startup

Table 4 – Construction, Permitting, and Compliance History (continued...) BP America Production Company, Iron Horse Compressor Station

_	April 11, 2008 - Initial Construction and Facility Startup; Major HAP Source, Engines Subject to RICE MACT Requirements Upon Startup								
Unit	Description	Potential to Emit							
		NOx	CH <sub>2</sub> O	Total					
		(tpy)	(tpy)	(tpy)	(tpy)	HAPs			
						(tpy)			
IH1	Caterpillar G3608 (uncontrolled)	19.5	60.8	23.6	9.7	11.2			
IH2	Caterpillar G3608 (uncontrolled)	19.5	60.8	23.6	9.7	11.2			
IEUs		0.2	0.1	1.1	0.0	0.1			
	April 2008 Facility-Wide PTE Totals	39.2	121.8	48.3	19.5	22.5			
Minor s	source for PSD. Major HAP source. Major sour	rce for title	V permittii	<b>ng</b> (part 71 r	permit applica	tion due			
	onths). MACT HH Area HAP Source – IH3 exempt								
	ber 16, 2008 – First Ever Facility Inspection								
RICE I	MACT Requirements and All Other Application	able Requi	rements		•				
	No change in facil	lity-wide PT	<b>E.</b>						
April 1	4, 2009 – Title V Initial Permit Application	Received;	Major HA	AP Source	e, Engine	s IH1			
and IH	2 Subject to RICE MACT Requirements	ŕ	, and the second		, 0				
Unit	Description		Pote	ential to E	mit				
	1		(	controlled)	)				
		NOx	CO	VOC	CH <sub>2</sub> O	Total			
		NOX	CO	V OC	01120	1 Otta1			
		(tpy)	(tpy)	(tpy)	(tpy)	HAPs			
					_				
IH1	Caterpillar G3608				_	HAPs			
IH1 IH2	Caterpillar G3608 Caterpillar G3608	(tpy)	(tpy)	(tpy)	(tpy)	HAPs (tpy)			
	•	(tpy) 19.5	(tpy) 60.8	(tpy) 23.6	(tpy) 3.9	HAPs (tpy) 5.3			

Minor PSD source. Major HAP source. Major Title V source (Permit #V-SU-0050-09.00). MACT HH Area HAP Source – IH3 exempt (act. avg. benzene <1 tpy). RICE MACT Major Source.

### 2. Tribe Information - Southern Ute Tribe

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

BP's Iron Horse Compressor Station 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 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 to this facility.

## 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 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. <u>Tribal Government</u>

The Southern Ute Indian Tribe is governed by the Constitution of the Southern Ute Indian Tribe of the Southern Ute Indian Reservation, Colorado 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 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 AOS identification number 08-067-7001) and the Bondad, Colorado station (also known as Ute 3, with AQS 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 (NO<sub>2</sub>, O<sub>3</sub>, and CO), allowing AQS users to retrieve data that can be compared to any of the National Ambient Air Quality Standards for these pollutants.

### 3. Analysis of Applicability to Federal Requirements

## a. Review of Applicable and Non-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 Code of Federal Regulations at title 40.

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

40 CFR Part 52: 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 Iron Horse Compressor Station does not belong to any of the 28 listed source categories. Therefore, the potential to emit threshold for determining PSD applicability for this newly constructed source is 250 tpy. A review of the Iron Horse Compressor Station application indicates that the potential emission increases of any pollutant regulated under the CAA (not including pollutants listed under section 112) associated with construction of the Iron Horse Compressor Station in April 2008 were below the PSD major source levels; therefore, this facility was not required to obtain a PSD permit and at this time remains a true minor source with respect to the PSD regulations.

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

40 CFR Part 60, Subpart A: 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 Iron Horse Compressor Station is not subject to any specific subparts of part 60; therefore the General Provisions of part 60 do not apply.

<u>40 CFR Part 60, 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 input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

There are no steam generating units with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr at the facility; therefore, the Iron Horse Compressor Station is not subject to subpart Dc.

40 CFR Part 60, Subpart K: 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.

The subpart does not apply to the storage vessels at the Iron Horse Compressor Station because there are no tanks at this site with a storage capacity greater than 40,000 gallons that were constructed, reconstructed, or modified after June 11, 1973, and prior to May 19, 1978.

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.

The subpart does not apply to the storage vessels at the Iron Horse Compressor Station because there are no tanks at this site with a storage capacity greater than 40,000 gallons that were constructed, reconstructed, or modified after May 18, 1978, and prior to June 23, 1984.

40 CFR Part 60, Subpart Kb: 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 (~19,813 gallons).

All tanks storing volatile organic liquids at the Iron Horse Compressor Station are less than 75 cubic meters (19,810 gallons); therefore, subpart Kb 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 from field gas, fractionation of mixed natural gas liquids (NGLs) to natural gas products, or both. Natural gas liquids are defined as the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

The Iron Horse Compressor Station does not extract NGLs from field gas, nor does it

fractionate mixed NGLs to natural gas products, and thus, it does not meet the definition of a natural gas processing plant under this subpart. Therefore, this rule 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.

BP does not perform sweetening or sulfur recovery at the Iron Horse Compressor Station; therefore, this rule does not apply.

40 CFR Part 60, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. This rule applies, in part, to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after July 11, 2005 where the stationary CI ICE are:

- a. Manufactured after April 1, 2006 and are not fire pump engines, or
- b. Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

This subpart also applies to owners and operators of stationary CI ICE that modify or reconstruct their engine after July 11, 2005.

The Iron Horse Compressor Station does not operate any CI ICE; therefore, subpart IIII does not apply.

40 CFR Part 60, Subpart JJJJ: New Source Performance Standards (NSPS) 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 5 –NSPS Subpart JJJJ Applicability BP Iron Horse Compressor Station

Unit	Serial Number	Unit Description	Fuel	ВНР	Commenced Construction Date / Manufacture Date	Startup or Installation Date	Trigger Date – Manufactured on or after	Requirements
IH1	BEN00345	Caterpillar G3608 / 4SLB	Natural Gas	2,520	Post 6/12/2006 / 09/13/2006	04/11/2008	1/1/2008	None (exempt)
IH2	BEN00346	Caterpillar G3608 / 4SLB	Natural Gas	2,520	Prior to 6/12/2006 / 10/04/2005	04/11/2008	1/1/2008	None (exempt)

According to the information provided by BP in the April 2009 initial permit application, IH2 commenced construction prior to June 12, 2006; therefore, subpart JJJJ does not apply to that engine. While engine IH1 commenced construction after June 12, 2006, it was manufactured prior to the manufacture trigger date of January 1, 2008, for 4SLB natural gasfired SI ICE greater than 500 bhp; therefore, unit IH1 is not subject to the requirements in subpart JJJJ. Should BP decide to install replacement engines for IH1 or IH2 that are subject to subpart JJJJ, BP will not be allowed to use the off permit changes provisions of the permit, and will be required to submit a permit modification application to incorporate subpart JJJJ requirements into the permit.

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

40 CFR Part 63, Subpart A: 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 Clean Air Act. The general provisions under subpart A apply to sources that are subject to the specific subparts of part 63.

As explained below, the Iron Horse Compressor Station emits at least one HAP regulated under the CAA, and has equipment subject to standards established under part 63 (engines IH1 and IH2, which are stationary RICE regulated by 40 CFR part 63, subpart ZZZZ) (see 63.1(b)(3)). These units are subject to the requirements of subpart A as outlined in §63.6665.

The facility also has equipment in relevant source categories (i.e. TEG dehydrator IH3 and its associated flash tank (subpart HH)), which are not subject to the relevant standards. A record of an applicability determination demonstrating that these sources are not subject to the relevant part 63 standards must be kept (per §63.10(b)(3)) on site for five (5) years after the determinations or until a source changes its operations to become an affected source. EPA approved a request from BP for a waiver of the onsite recordkeeping requirement in a letter dated July 18, 2008. These applicability determinations will be kept at the Operations Center in Durango, Colorado.

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 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 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 are to 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 also applies 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 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 Iron Horse Compressor Station

The Iron Horse Compressor Station is a production field facility prior to the point of custody transfer. 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 facility has one TEG dehydrator (IH3), with an associated flash tank. The total HAP emissions from those units alone are below the major source thresholds of 10 tpy of a single HAP and 25 tpy of aggregated HAPs. Therefore, the Iron Horse Compressor Station is an area source of HAP emissions.

With respect to the area source requirements of this subpart, the facility is located outside both an urban area and an urban cluster. Furthermore, uncontrolled benzene emissions from the TEG glycol dehydrator 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, dehydration unit IH3 at the facility is exempt from the §63.764(d) general requirements for area sources. 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.

Should uncontrolled emissions of benzene from the dehydrator ever exceed 1 tpy, then the facility will become subject to the requirements for area sources.

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. A compressor station that transports natural gas prior to the point of custody transfer or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage source category.

This subpart does not apply to the Iron Horse Compressor Station as the facility is a natural gas production facility and not a natural gas transmission or storage facility.

<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 HAP emissions emitted from stationary RICE.

This rule applies to owners or operators of new and reconstructed stationary RICE of any horsepower rating that are located at a <u>major or area</u> source of HAP emissions. While all new or reconstructed 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 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 for existing SI 4 stroke rich burn (4SRB) stationary RICE located at a major HAP facility.

With the exception of the existing SI 4SRB stationary RICE, other types of existing stationary RICE (i.e., SI 2 stroke lean burn (2SLB), SI 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 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 (minor) Source Applicability

The standard now has specific requirements for new and reconstructed stationary RICE located at minor sources of HAP emissions, for engines of all horsepower ratings. The area source standards for new stationary RICE reference the requirements of NSPS JJJJ for Spark Ignition Internal Combustion Engines and/or NSPS IIII for Compression Ignition Internal Combustion Engines. Existing RICE located at an area HAP source are not subject to any specific requirement 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.

BP provided the following information:

**Table 6 - NESHAP Subpart ZZZZ Applicability** 

Unit	Serial Number	Unit Description	Fuel	ВНР	Commenced Construction, Reconstruction, or Modification Date	Installation Date	Compliance Date
IH1	BEN00345	Caterpillar G3608 / 4SLB	Natural Gas	2,520	9/13/2006 (Post 12/19/2002)	04/11/2008	Upon Startup
IH2	BEN00346	Caterpillar G3608 / 4SLB	Natural Gas	2,520	10/4/2005 (Post 12/19/2002)	04/11/2008	Upon Startup

The Iron Horse Compressor Station is a major source of HAP emissions. According to the information BP provided its application, units IH1 and IH2 are new 4SLB RICE greater than 500 bhp, and are therefore, subject to the major source requirements of subpart ZZZZ.

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

40 CFR Part 64: 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 \$70.4(b)(12) or \$71.6(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
- 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.

The Iron Horse Compressor Station is not subject to CAM requirements, because no PSEUs at the facility have pre-control emissions that equal or exceed 100 tpy.

## **Chemical Accident Prevention Program**

40 CFR Part 68: Chemical Accident Prevention Provisions. Based on BP's application, the Iron Horse Compressor Station 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 total source has in quantities over the threshold amount or IF the total source ever increases the amount of any regulated substance above the threshold quantity.

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

40 CFR Part 82, Subpart F: Air Conditioning Units. Based on information provided in the application, BP does not currently operate air conditioning units containing chlorofluorocarbons (CFCs) at the Iron Horse Compressor Station. However, should BP perform any maintenance, service, repair, or disposal of any equipment containing CFCs, or contracts 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. Based on information provided by BP, there are no halon fire extinguishers at the Iron Horse Compressor Station. 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.

### **Off Permit Changes and Alternative Operating Scenarios**

In response to a request by BP, EPA has included language in the permit to allow for off permit replacement of individual compressor engines with new or overhauled engines, provided that each replacement engine is the same make, model, horsepower rating, configuration, <a href="https://example.com/has\_equivalent air emission controls and meets the same applicable requirements">he equivalent air emission controls and meets the same applicable requirements</a>, as the engine it replaces, and provided that the provisions in the off permit changes section of the permit, specific to engine replacement, are satisfied. The primary purpose of the special provisions is to ensure the PSD, NSPS, and MACT permitting requirements are not circumvented by off permit changes. Related language is also included in the section on Alternative Operating Scenarios.

## **Periodic Monitoring**

The *Appalachian Power* court decision held that 40 CFR 71.6(a)(3)(i) authorizes a sufficiency review of monitoring and testing in an existing emissions standard, and enhancement of that monitoring or testing through the permit, when the standard requires no periodic testing or instrumental or non-instrumental monitoring, specifies no frequency, or requires only a one-time test. Thus, EPA has authority in the federal operating permit regulation to specify additional testing or monitoring for a source to assure compliance, when existing applicable regulations do not require periodic monitoring or only require a one-time emissions test.

Because 40 CFR part 63, subpart ZZZZ requires continuous emissions monitoring and frequent testing of the subject engines, EPA determined that enhancement of the monitoring and testing was not necessary.

## b. Conclusion

Since the Iron Horse Compressor Station 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 Iron Horse Compressor Station is not subject to any implementation plan.

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.

# 4. 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.

### 5. 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.

## 6. 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:

Claudia Smith, 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 August 26, 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 by BP during the public comment period. No other comments were received.

# 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 6.a above, by stating the nature of the issues to be raised at the public hearing. 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. Petition to Reopen a Permit for Cause

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)