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Rothery

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 8
999 18TH STREET- SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8P-AR

JAN - 4 2006

Don WicBurg, Director
Four Corners Area
Williams Field Services Company
188 County Road 4900
Bloomfield, NM 87413

Re: Prevention of Significant Deterioration
Final Permit
William Field Services (WFS)
PLA-9 Central Delivery Point
Permit # PSD-SU-0003.02.00

Dear Mr. WicBurg:

This is regarding the Prevention of Significant Deterioration (PSD) permit for WFS's PLA-9 Central Delivery Point. The public comment period for this permit action ended on December 8, 2006. EPA received no comments on this action.

Based on our review of the permit application, the U.S. Environmental Protection Agency hereby issues a PSD permit for the PLA-9 Central Delivery Point. Enclosed you will find the final permit and Statement of Basis. Please review each permit condition carefully and note any restrictions placed on this facility.

If you have any questions concerning the enclosed final permit or Statement of Basis, you may contact Deirdre Rothery, of my staff, at (303) 312-6431.

Sincerely,

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Enclosures

cc: David Bays, Senior Environmental Specialist, Williams Field Services Company
Ethan Hinckley, Division Head, Southern Ute Indian Tribe

**United States Environmental Protection Agency
Region VIII
Air and Radiation Program
999 18th Street, Suite 300
Denver, Colorado 80202**



**Air Pollution Control
Prevention of Significant Deterioration (PSD)
Permit to Construct and Operate**

PSD-SU-0003-02.00

December 2006

**Williams Field Services Company
188 County Road 4900
Bloomfield, NM 87413**

**PLA-9 Central Delivery Point
Section 22, Township 32 North, Range 10 West**

I. Introduction

The Williams Field Services Company, PLA-9 Central Delivery Point (WFS, PLA-9 CDP) dehydrates and compresses natural gas to “pipeline quality” for transmission to different sales pipelines using Internal Combustion Engines (ICEs). The PLA-9 CDP is located in the southwest corner of Colorado in La Plata County, approximately 18 miles southwest of Durango. WFS submitted a New Source Review permit application to comply with the requirements of a Compliance Order, Docket No. CAA-08-2002-05, and to memorialize terms of the order. U.S. EPA received an application from Williams Field Services Company on September 13, 2002.

II. Findings

On the basis of the information in the administrative record, EPA has determined that, through adherence to this permit:

- A. The Applicant will meet all of the applicable requirements of the PSD regulations (40 CFR 52.21);
- B. No applicable emission standard, PSD increment, or national ambient air quality standard will be violated by the emissions from the Source; and
- C. The Applicant can comply with the conditions of this permit.

By issuing this permit, EPA does not assume any risk of loss which may occur as a result of the operation of the Source by the Applicant, if the conditions of this permit are not met by the Applicant.

III. Conditional Permit to Construct and Operate

- A. General Information

Permit number: PSD-SU-0003-02.00

AFS number: 08-067-00064

SIC Code and SIC Description: 1311 – Crude Petroleum and Natural Gas

Site Location:

PLA-9 Central Delivery Point

West ½ of Section 22

Township 32 N Range 10 W

Corporate Office Location

Williams Field Services Company

P.O. Box 21899

Tulsa, OK 74121-1899

The equipment listed in this permit shall be operated by Williams Field Services Company at the following location:

West ½ of Section 22
Township 32 N Range 10 W
UTM Zone 13,239.8 km east, 4099.0 km north

Process Description:

PLA-9 facility compresses and dehydrates coal seam natural gas received from various producers. The gas received is metered on a continuous basis as it enters the facility. The incoming gas is either routed to the dehydrator or the transmission lines depending on the quality of the gas. When incoming gas is of lesser quality than the “pipeline quality”, it is routed to a dehydrator where the gas is contacted with Triethylene Glycol (TEG) solution to remove moisture, trace amounts of hydrocarbon impurities and other natural gas condensates present in the pipeline. The gas is then compressed and transmitted to offsite destination. High moisture TEG is regenerated and reused.

The main sources of emissions include thirteen gas-fired Waukesha 7042GL reciprocating engines (each site rated at 1,115 hp), one gas-fired Caterpillar 3306 engine (site rated at 185 hp) driving an electrical generator, and six (6) Enertek glycol dehydrators rated at 10 million cubic feet per day (MMcfd) and one (1) Enertek glycol dehydrator rated at 20 MMcfd. Other potential sources of emissions at the facility include fugitive emissions from pipeline components (i.e. including but not limited to leaking valves, flanges, pressure relief valves, etc.) and miscellaneous tanks used to store glycol, and Internal Combustion Engine (ICE) lube oil.

B. Approved Installation

The approved installation shall consist of the following equipment:

Table 1 - Emission Units
Williams Field Services Company PLA-9 Central Delivery Point

Emission Unit Id.	Description
	Thirteen (13) Waukesha 7042 GL Reciprocating Engines, 1115 hp (1000 rpm) maximum site rating, natural gas fired:
1	Serial No. C-10461/8 Installed 9/19/91
2	Serial No. 363111 Installed 8/15/91
3	Serial No. 401471 Installed 8/15/91
4	Serial No. C10985-9 Installed 2/27/92
5	Serial No. 156636 Installed 2/27/92
6	Serial No. C-11906/1 Installed 9/10/92
8	Serial No. 387758 Installed 11/18/93
9	Serial No. C11100-3 Installed 11/20/93
10	Serial No. 327860 Installed 12/9/93
11	Serial No. C11897/1 Installed 12/18/93
12	Serial No. C11474-1 Originally Installed 3/24/95 (currently not installed)
13	Serial No. 368976 Installed 3/24/95
14	Serial No. C-11493/3 Installed 3/24/95
15	Caterpillar G3306SITA Reciprocating Engine 185 hp (1800 rpm) maximum site rating, natural gas fired: serial no. 07Y05089 Installed 9/94
6	10 MMSCFD triethylene glycol dehydrators 0.4 MMBtu/hr heat rate
1	20 MMSCFD triethylene glycol dehydrator 0.48 MMBtu/hr heat rate
Ancillary Equipment	
13	500-gallon lube oil storage tanks
1	125-gallon lube oil storage tank
7	100-gallon triethylene glycol storage tanks
7	50-gallon triethylene glycol storage tanks
1	6,930-gallon used lube oil storage tank
1	4,200-gallon lube oil storage tank
1	300-gallon lube oil storage tank
1	50-gallon lube oil storage tank
1	300-gallon used lube oil storage tank
1	6,930-gallon waste water storage tank
1	12,600-gallon produced water storage tank
1	500-gallon triethylene storage tank
1	525-gallon triethylene storage tank
2	225-gallon corrosion inhibitor storage tank
n/a	piping component fugitive emissions

C. Control Requirements

1. To control NO_x emission from the Waukesha engines (1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14) the Applicant shall utilize Low NO_x combustion technology.
2. To control NO_x emissions from the Caterpillar engine (15), the Applicant shall install Non-Selective Catalytic Reduction (NSCR) and an air/fuel ratio controller.
3. To control NO_x emissions from the triethylene glycol (TEG) dehydrator reboilers (D1, D2, D3, D4, D5, D6, D7), the Applicant shall utilize Good Combustion Practices (GCP).

D. Emission Limits

1. Emissions from each Waukesha engines (1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14) shall not exceed 0.9 g/hp-hr of NO_x emissions.
2. Emissions from the Caterpillar engine (15) equipped with NSCR and an air/fuel ratio controller shall not exceed 1.9 g/hp-hr of NO_x emissions.
3. NO_x emissions from each of the 10 MMscfd TEG dehydrator reboilers (16, 17, 18, 19, 20, 21) shall not exceed 0.09 lb per MMBtu natural gas combusted, on a 1-hr average.
4. NO_x emissions from the 20 MMscfd TEG dehydrator reboiler (22) shall not exceed 0.09 lb per MMBtu natural gas combusted, on a 1-hr average.

E. Work Practice and Operational Requirements

1. Each of the Waukesha engines (1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14) shall be limited to a maximum of 1,115 horsepower and shall be operated utilizing Low NO_x combustion technology.
2. For the Caterpillar engine (15), WFS shall:
 - a) Limited the horsepower rating to a maximum of 185 horsepower;
 - b) Equip the unit with a Catalytic Converter/Silencer (SCR DeNO_x) and an air/fuel ratio controller capable of reducing NO_x emissions by at least 90% at maximum operating rate (90-110% of engine operating capacity at site elevation);

- c) Install thermocouples before the catalyst in order to monitor the inlet temperature of the exhaust;
 - d) Maintain an exhaust temperature at the inlet to the catalyst, at all times the engine operates between 700EF and 1250EF in accordance with manufacturer's specifications;
 - e) Install pressure gauges before and after the catalyst for the engine in order to monitor pressure drop across the catalyst. The pressure drop across the catalyst shall not change by more than 10% at 100% load plus or minus 10% from the pressure drop across the catalyst measured during the initial performance test; and
 - f) Follow, for the Caterpillar engine and its respective catalyst, the manufacturer's recommended maintenance schedule and procedures to ensure optimum performance.
3. The 10 MMscfd TEG dehydrator reboilers (16, 17, 18, 19, 20, 21) shall each be limited to an annual fuel usage of 3.9 MMcf/yr, based on a rolling 12 month total.
 4. The 20 MMscfd TEG dehydrator reboiler (22) shall be limited to an annual fuel usage of 4.6 MMcf/yr, based on a rolling 12 month total.
 5. All emission units at this facility shall be fired only with natural gas. The natural gas shall be pipeline-quality in all respects except that CO₂ concentrations in the gas shall not be required to be within pipeline-quality.
 6. At all times, including periods of startup, shutdown, and malfunction, the Emission Units shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator, which may include, but not be limited to monitoring results, review of operating and maintenance procedures, manufacturer's specifications, industry practices, or inspection of the Facility.

F. Testing Requirements

1. Initial performance testing is required. An initial performance test shall be conducted for Waukesha engines (1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14), Caterpillar engine (15) and TEG dehydrator reboilers (16, 17, 18, 19, 20, 21, 22) for measuring NO_x to demonstrate compliance with the emission limits in section III.D.

2. The initial performance tests for all emission units shall be conducted within one hundred and eighty (180) calendar days of the effective date of this permit.
3. Upon change out of the catalyst for Caterpillar engine (15), a performance test shall be conducted for measuring NO_x emissions from the engine to demonstrate compliance with the emission limits in section III.D. and re-establish temperature and pressure correlations. The performance test shall be conducted within ninety (90) calendar days of the catalyst change out.
4. The Applicant shall provide EPA with a Testing Protocol within ninety (90) calendar days of the effective date of this permit. The Testing Protocol shall be approved by EPA prior to commencement of testing by the Applicant.
5. A source test plan for all emission units for NO_x emissions shall be submitted to EPA at least forty five (45) calendar days prior to the scheduled performance test.
6. The source test plan shall include and address the following elements:
 - a) Purpose of the test;
 - b) Emission units to be tested;
 - c) Expected operating rate(s) for each unit during test;
 - d) Schedule/dates for test;
 - e) Sampling and analysis procedures (sampling locations, test methods, laboratory identification);
 - f) Quality assurance plan (calibration procedures and frequency, sample recovery and field documentation, chain of custody procedures); and
 - g) Data processing and reporting (description of data handling and quality control procedures, report content).
7. Compliance with emission limits in condition III.D. may be determined by emission tests, when required by EPA. The Testing Protocol approved by EPA and used for the initial compliance tests shall be used by the Applicant during any emission tests, unless the Applicant chooses to use a different Testing Protocol. Any other Testing Protocols, not approved by EPA, must be submitted to EPA for approval prior to performing emissions tests.

8. All tests for NO_x emissions must meet the following requirements:
- a) Emissions tests shall be performed in accordance with the test methods specified in 40 CFR part 60, Appendix A. EPA Reference Method 7D shall be used to measure NO_x emissions.
 - b) All tests shall be performed at a maximum operating rate (90% to 110% of capacity at site elevation).
 - c) During each test run, data shall be collected on all parameters necessary to document how NO_x emissions were measured or calculated (such as test run length, minimum sample volume, volumetric flow rate, moisture and oxygen corrections, etc.).
 - d) The temperature at the inlet to the catalyst and the pressure drop across the catalyst shall also be measured and recorded during each test run for Caterpillar engine (15).
 - e) Each source test shall consist of at least three (3) 1-hour or longer valid test runs. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of the emission limits.

G. Monitoring Requirements

- 1. The Applicant shall measure NO_x emissions from the Waukesha engines (1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14) and Caterpillar engine (15) and TEG dehydrator reboilers (16, 17, 18, 19, 20, 21, 22) at least once every calendar quarter beginning the first calendar quarter after the Applicant's submittal of initial compliance test results to EPA. Upon demonstration of compliance with the permit limits for six (6) consecutive calendar quarters, the Applicant may conduct the NO_x monitoring for these emission units on a semi-annual basis.
- 2. To meet the monitoring requirements above, the Applicant shall measure the NO_x emissions from each emission unit using a portable analyzer.
- 3. The Applicant shall provide EPA with a Monitoring Protocol within ninety (90) calendar days of the effective date of this permit.
- 4. The Applicant shall not conduct NO_x emissions monitoring on the emission units that have not been operated during the specified monitoring period. The Applicant must certify that the emission units did not operate during the specified monitoring period and maintain this certification in accordance with the

recordkeeping requirements listed in Section III.H. of this permit.

5. The Caterpillar engine (15) exhaust temperature at the inlet to the oxidation catalyst shall be measured at least **once per week**. Each temperature-sensing thermocouple shall be accurate to within plus or minus three (3) degrees F.
6. The pressure drop across the oxidation catalyst shall be measured monthly. The pressure sensing devices shall be accurate to within plus or minus one tenth (0.1) inches of water.

H. Record Keeping Requirements

The Applicant shall comply with the following recordkeeping requirements:

1. Records shall be kept of all temperature and pressure measurements required by this permit.
2. Records shall be kept of vendor specifications for the thermocouples and pressure gauges.
3. Records shall be kept of vendor specifications for the catalyst and the air-to-fuel ratio controller on Caterpillar Engine (15).
4. Records shall be kept that are sufficient to demonstrate, pursuant to condition III.E.5. of this permit, that the fuel for the engines is pipeline-quality natural gas in all respects, with the exception of CO₂ concentration in the natural gas.
5. Records shall be kept of the actual consumption rate of natural gas fuel consumed by each of the dehydrators on a monthly basis.
6. The Applicant shall keep records of all required testing (section III.F.) and monitoring (section III.G.) in this permit. The records shall include the following:
 - a) The date, place, and time of sampling or measurements;
 - b) The date(s) analyses were performed;
 - c) The company or entity that performed the analyses;
 - d) The analytical techniques or methods used;
 - e) The results of such analyses or measurements; and

- (f) The operating conditions as existing at the time of sampling or measurement.
- 7. The Applicant shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. These records shall be made available upon request by EPA Region VIII. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

I. Reporting Requirements

- 1. The Applicant shall submit to EPA a written report of the results of the performance tests required in condition III.F. of this permit. This report shall be submitted within ninety (90) calendar days of the date of testing completion.
- 2. The Applicant shall submit a written report containing the emissions and operational monitoring and fuel usage rates to the EPA by October 1 and April 1 of each year. The Applicant may include this report with the semi-annual monitoring reports required in the 40 CFR part 71 permit.
- 3. The Applicant shall submit to EPA, as part of the semi-annual monitoring reports required by condition III.I.2 above, a report of any instances where the temperature at the inlet to the catalyst on the Caterpillar engine (15) is outside the limits established in condition III.E.2 or where the pressure drop across the catalyst on the Caterpillar engine (15) is outside the limits established in condition III.E.2.
- 4. The Applicant shall submit to EPA as part of the semi-annual monitoring reports where an excursion of the NO_x emission limits on any the emission units has occurred, as well as a description of any corrective actions taken. If no such instances have been detected, then a statement shall be provided to say so.
- 5. The Applicant shall send all required notifications and reports to:

Program Director
Air and Radiation Program (8P-AR)
U.S. EPA, Region 8
999 18th Street, Suite 300
Denver, CO 80202-2466

J. Title V Permitting Requirements

1. Within twelve (12) months after commencing operation of the Source, the Applicant shall submit an application for a Title V Permit to Operate in accordance with 40 CFR 71.
2. This Permit to Construct and Operate allows the construction and initial operation of the Source. The Source may be operated under this Permit to Construct and Operate until the Title V Permit to Operate is issued unless this permit is suspended or revoked. The Source is subject to all applicable Federal and Tribal rules, regulations, and orders now or hereafter in effect.

IV. General Conditions

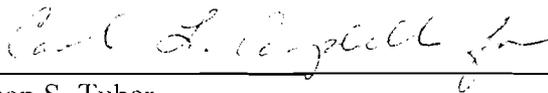
On the basis of the findings set forth in Section II above, and pursuant to the authority (as delegated by the Administrator) of 40 CFR 52.21(u), EPA hereby conditionally grants Williams Field Services Company a PSD permit for PLA-9 Central Delivery Point. This authorization is expressly conditioned as follows:

- A. The Applicant shall abide by all representations, statements of intent and agreements contained in the application submitted by Williams Field Services Company, dated September 12, 2002. EPA shall be notified ten (10) days in advance of any significant deviation from the permit application as well as any plans, specifications or supporting data furnished. The issuance of this Permit to Construct and Operate may be suspended or revoked if EPA determines that a significant deviation from the permit application, specifications, and supporting data furnished has been or is to be made.
- B. The Applicant shall take all reasonable precautions to prevent and or minimize fugitive emissions during the construction period.
- C. The Applicant shall submit a notification of the anticipated date of initial start-up of the Source to EPA not more than 60 days nor less than 15 days prior to such date. A notification of the actual date of initial start-up shall be submitted within 15 days after such date.
- D. Nothing in this authorization shall excuse the Applicant, the owner and/or the operator from complying with all other applicable Federal and Tribal regulations.
- E. Permit Transfers shall be made in accordance with 40 CFR part 122, subpart D. The Director shall be notified in writing if the company is sold or changes its name.
- F. EPA or its authorized representatives may inspect the Source during normal business

hours for the purpose of ascertaining compliance with all conditions of this permit.

- G. At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements or paragraphs (j) through (s) of 40 CFR 52.21 shall apply to the source or modification as though construction had not yet commenced on the source or modification.
- H. Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Administrator may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.
- I. This permit is issued in reliance upon the accuracy and completeness of the information set forth in the Applicant's application and its addendums to EPA. On the effective date of this permit, the conditions herein become enforceable by EPA pursuant to any remedies it now has or may have in the future, under the Clean Air Act. Each and every condition of this permit is a material part thereof, and is not severable. This permit is effective thirty (30) days after receipt of the permit, unless the Applicant notifies this Regional Office, in writing, that this permit or a term or condition of it is rejected. Such notice should be made within thirty days of receipt of the permit, should include the reason or reasons for rejection and should be sent to the Air Program Director at the address shown in Section III.I. of this permit.

Authorized By: United States Environmental Protection Agency, Region VIII



Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

Date:

Air Pollution Control

40 CFR 52.21(i)

Prevention of Significant Deterioration Permit to Construct

Statement of Basis for Permit No. PSD-SU-0003-02.00

December 2006

Williams Field Services Company (WFS)

PLA-9 Central Delivery Point

Southern Ute Reservation

La Plata County, Colorado

In accordance with requirements at 40 CFR ' 124.7, the Environmental Protection Agency (EPA) has prepared this Statement of Basis for issuance of a Prevention of Significant Deterioration (PSD) permit to Williams Field Services Company (WFS). This Statement of Basis discusses the background and analysis of the PSD permit for the PLA-9 Central Delivery Plant. It also presents information relevant to the permit action and the derivation of the permit conditions.

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I. Introduction

The Williams Field Services Company, PLA-9 Central Delivery Point (WFS, PLA-9) dehydrates and compresses natural gas to “pipeline quality” for transmission to different sales pipelines using Internal Combustion Engines (ICEs). The facility currently consists of thirteen (13) Waukesha 7042GL ICEs, one (1) Caterpillar G3306 generator and seven Enertek glycol dehydrators. PLA-9 is defined as a major stationary source under the Prevention of Significant Deterioration (PSD) regulations at 40 CFR 52.21(b) (1) (i). EPA issued a Compliance Order to WFS on June 18, 2002, which was filed on June 19, 2002, to address PSD violations due to a series of modifications. WFS submitted a PSD application on September 13, 2002, which EPA deemed complete on October 10, 2002. This permit action is intended to memorialize the requirement of the Compliance Order, and is not intended to approve new construction.

II. Authority

40 CFR ' 52.21, Prevention of Significant Deterioration (PSD): Requirements under ' 52.21 to obtain a Federal PSD preconstruction permit apply to construction of new major stationary sources (A_{major} as defined in ' 52.21), as well as to major modifications of existing major stationary sources (A_{major modification} as defined in ' 52.21). EPA is charged with direct implementation of these provisions where there is no approved State or Tribal implementation plan for implementation of the PSD regulations. Pursuant to section 301(d) (4) of the Clean Air Act (42 U. S. C. ' 7601(d)), EPA is authorized to implement the PSD regulations at ' 52.21 in Indian country. The WFS PLA-9 facility is located in the southwest corner of Colorado in La Plata County, approximately 18 miles southwest of Durango. The facility lies within the western half of Section 22, Township 32 North, Range 10 West, at an elevation of approximately 6,235 feet above mean sea level. This site lies within the boundaries of the Southern Ute Indian Reservation and is approximately 0.6 mile north of the Colorado – New Mexico state line.

40 CFR ' 124, Procedures for Decision Making: Federal administrative permitting standards at 40 CFR part 124, *Procedures for Decision Making*, provide requirements for several environmental permit programs, including the PSD program. General administrative procedures are codified in this Part, including those that relate to the PSD program. EPA PSD permit actions, such as issuing, modifying, reissuing, or terminating permits, are addressed in 40 CFR ' 124.1, subpart A, *General Program Requirements*. Part 124 also includes requirements that pertain to draft permits, Statement of Basis, Fact Sheets, public notices of permit actions and public comment periods, public comments and requests for public hearings, public hearings, and appeals of the PSD permit decision. Requirements in part 124, which provide for public review and involvement in this proposed action, will be used by EPA in its decision making.

In particular, the administrative requirements at 40 CFR part 124, subpart C, *Specific*

Procedures Applicable to PSD Permits, will be followed. Specifically, whenever a major source's air emissions might affect a Class I area, 40 CFR ' 124.42, *Additional Procedures for PSD Permits Affecting Class I Areas*, states that the Regional Administrator must provide notice of receipt of a permit application to the Federal Land Manager and the Federal official charged with direct responsibility for management of lands within such area.

III. Public Notice

Public notice for this proposed PSD permit has been published in the Durango Herald. The public notice period shall be from November 8, 2006 to December 8, 2006. States, Tribes, Federal and Local governmental agencies, the public, and WFS may comment on this proposed PSD permit during the public notice period. Organizations or persons wishing to comment on this proposed permit must send written comments no later than December 8, 2006, to:

Deirdre Rothery
U.S. EPA Region VIII
Air and Radiation Program
999 18th Street, Suite 300 (8P-AR)
Denver, CO 80202

Email: rothery.deirdre@epa.gov
Fax: 303-312-6064

States, Tribes, local governmental agencies, and the public may review a copy of the application, analysis, and proposed permit prepared by EPA. Copies of these documents are available at:

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

and

Southern Ute Indian Tribe
Environmental Programs Office
205 Ouray Drive, Building #293
Ignacio, Colorado 81137

and

U.S. EPA Region VIII
Air and Radiation Program Office
999 18th Street, Suite 300 (8P-AR)

Denver, Colorado 80202

All documents will be available for review at the U.S. EPA Region VIII office Monday through Friday from 8:00 a.m. to 4:00 p.m. (excluding federal holidays).

Any interested person may submit written comments on the proposed PSD permit during the public comment period to the Permit Contact at the U.S. EPA Region VIII address listed above. All comments shall be considered and answered by EPA in making the final decision on the permit. EPA will keep a record of the commenters and of the issues raised during the public participation process.

Anyone, including the applicant, who believes any condition of the proposed permit is inappropriate must 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 has been 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.

This permit represents a proposed Agency action to issue a federal PSD permit to Williams Field Services Company for the PLA-9 Compressor Station, under Title I, part A, *Air quality Emission Limitations*, and part C, *Prevention of Significant Deterioration of Air Quality*, of the Clean Air Act, as amended. For completeness, this Statement of Basis should be read in conjunction with the proposed PSD permit.

EPA does not plan to hold a public hearing on this proposed permit unless requested in writing by a commenter. A request for a public hearing should meet the requirements at ' 124.11, *Public Comments and Requests for Public Hearings*. The request should state the reasons for the need for a public hearing.

This proposed permit shall become effective immediately upon issuance, if no comments request a change in the proposed permit, in accordance with requirements at ' 124.15, *Issuance and Effective Date of Permit*. If changes are requested, the permit shall become effective thirty days after a final Agency decision. An appeal of the final permit decision may be made by any person, including the Permittee, who filed comments on the proposed permit in accordance with requirements at ' 124.19, *Appeal of RCRA, UIC, and PSD Permits*.

IV. Description of the Source

A. Definition of the Source

PLA-9 is primarily a natural gas compression facility as defined under Standard Industrial Classification (SIC) 1311. The facility dehydrates and compresses natural gas to pipeline quality specification for transmission to sales pipelines using Internal Combustion Engines (ICE) to power the compression units. This source is considered a major source (PTE is greater 250 tpy for at least one of the criteria pollutants) and is thus considered a major for the purposes of PSD regulations.

B. Facility Location

The facility is located in the southwest corner of Colorado in La Plata County, approximately 18 miles southwest of Durango. The facility lies within the western half of Section 22, Township 32 North, Range 10 West, at an elevation of approximately 6,235 above the mean sea level. The facility UTM coordinates are approximately 239,800 meters east, 4,099,000 meters north, Zone 13. The site lies within the boundaries of the Southern Ute Indian Reservation and is approximately 6/10 of a mile north of the Colorado – New Mexico border. Two federal Class I designated areas, Weminuche Wilderness Area and the Mesa Verde National Park, are within 100 kilometers of the source.

C. Facility Contacts

The WFS, PLA-9 contact responsible for the environmental matters at the facility is:

Mr. David Bays,
Senior Environmental Specialist
Williams Field Services Company
188 County Road 4900
Bloomfield, NM 87413
Phone: (505) 634-4951

D. Process Description

PLA-9 facility compresses and dehydrates coal seam natural gas received from various producers. The gas received is metered on a continuous basis as it enters the facility. The incoming gas is either routed to the dehydrator or the transmission lines depending on the quality of the gas. When incoming gas is of lesser quality than the “pipeline quality”, it is routed to a dehydrator where the gas is contacted with Triethylene Glycol (TEG) solution to remove moisture, trace amounts of hydrocarbon impurities and other natural gas condensates present in

the pipeline. The gas is then compressed and transmitted to an offsite destination. High moisture TEG solution is regenerated and reused.

The main sources of emissions include thirteen gas-fired Waukesha 7042GL reciprocating engines (each site rated at 1,115 hp), one gas-fired Caterpillar 3306 engine (site rated at 185 hp) driving an electrical generator, and six (6) Enertek glycol dehydrators rated at 10 million cubic feet per day (mmcf) and one (1) Enertek glycol dehydrator rated at 20 mmcf. Other potential sources of emissions at the facility include fugitive emissions from pipeline components, including but not limited to, leaking valves, flanges and pressure relief valves.

E. Description of Control Equipment

The thirteen (13) gas-fired Waukesha 7042GL engines utilize Low NO_x combustion technology for pollution control. The gas-fired Caterpillar generator 3306 engine utilizes catalytic converter as control technology for reduction of NO_x. The seven (7) Enertek dehydrators utilize Good Combustion Practice (GCP).

F. Source Emission Points

Emission Unit Id.	Description
1 2 3 4 5 6 8 9 10 11 12 13 14	Thirteen (13) Waukesha 7042 GL Reciprocating Engines, 1115 hp (1000 rpm) maximum site rating, natural gas fired: Serial No. C-10461/8 Installed 9/19/91 Serial No. 363111 Installed 8/15/91 Serial No. 401471 Installed 8/15/91 Serial No. C10985-9 Installed 2/27/92 Serial No. 156636 Installed 2/27/92 Serial No. C-11906/1 Installed 9/10/92 Serial No. 387758 Installed 11/18/93 Serial No. C11100-3 Installed 11/20/93 Serial No. 327860 Installed 12/9/93 Serial No. C11897/1 Installed 12/18/93 Serial No. C11474-1 Originally Installed 3/24/95 (currently not installed) Serial No. 368976 Installed 3/24/95 Serial No. C-11493/3 Installed 3/24/95
15	Caterpillar G3306SITA Reciprocating Engine 185 hp (1800 rpm) maximum site rating, natural gas fired: serial no. 07Y05089 Installed 9/94
6	10 MMSCFD triethylene glycol dehydrators 0.4 MMBtu/hr heat rate
1	20 MMSCFD triethylene glycol dehydrator 0.48 MMBtu/hr heat rate
Ancillary Equipment	
13	500-gallon lube oil storage tanks
1	125-gallon lube oil storage tank
7	100-gallon triethylene glycol storage tanks
7	50-gallon triethylene glycol storage tanks
1	6,930-gallon used lube oil storage tank
1	4,200-gallon lube oil storage tank
1	300-gallon lube oil storage tank
1	50-gallon lube oil storage tank
1	300-gallon used lube oil storage tank
1	6,930-gallon waste water storage tank
1	12,600-gallon produced water storage tank
1	500-gallon triethylene storage tank
1	525-gallon triethylene storage tank
2	225-gallon corrosion inhibitor storage tank
n/a	piping component fugitive emissions

G. Potential -to- Emit (PTE) limits

The facility’s historical and current PTEs have been tabulated in “Table 2” below. The Table is a chronological construction history and corresponding PTE limits.

Table 2 – Potential-to-Emit Values Used to Determine PSD Applicability

Year		NOx EF, g/bhp-hr	CO EF, g/bhp-hr	VOC EF g/bhp-hr	NOx, tpy	CO, tpy	VOC, tpy
1991 - Installed 7 Waukesha Engines with a maximum site rating of 1115 hp/engine and 1 Caterpillar 3304, 75 hp Generator. Actual configuration of the turbo-chargers and other Waukesha engine settings at the time resulted in an actual horse power rating of 895 hp/engine.							
1991 Increase in emissions	7 Waukesha Engines, 1115 hp/engine 1 Caterpillar 3304 Generator, 75 hp	1.60 16.73	2.75 0.90	1.00 0.31	120.6 <u>12.1</u> 132.7	207.3 <u>0.6</u> 207.8	75.4 <u>0.2</u> 75.6
1991 Total PTE					132.7	207.9	75.6
1993 - Installed 5 Waukesha Engines with a maximum site rating of 1115 hp/engine. Actual configuration of the turbo-chargers and other Waukesha engine settings at the time resulted in an actual horse power rating of 895 hp/engine.							
1993 Increase in emissions	5 Waukesha Engines, 1115 hp/engine	1.60	2.75	1.00	86.0	148.0	53.9
1993 Total PTE					218.7	355.9	129.5
1994/1995 - Installed two (2) additional Waukesha Engines with a maximum site rating of 1115 hp/engine. Actual configuration of the turbo-chargers and other Waukesha engine settings at the time resulted in an actual horse power rating of 895 hp/engine. Replaced the Caterpillar 3304 Generator with a Caterpillar 3306 Generator, and added seven (7) glycol dehydrators.							
1994/1995 Increase in emissions	2 Waukesha Engines, 1115 hp/engine 1 Caterpillar 3306 Generator, 185 hp 1 Caterpillar 3304 Generator, 75 hp 6 - 10 mmcf glycol dehydrators* 1 - 20 mmcf glycol dehydrators* *VOC values for dehydrators include both combustion and process emissions; process emissions are from regenerator and flash tank. Annual fuel usage 3.9MMcf /10mmcf dehydrator and 4.6MMcf/20mmcf dehydrator.	1.60 18.82 16.73 100 lb/MMcf fuel usage	2.75 0.74 0.90 84 lb/MMcf fuel usage	1.00 0.15 0.31 0.39 lb/hr	34.5 33.6 -12.1 1.2 <u>0.23</u> 57.4	59.2 1.3 -0. 0.96 <u>0.19</u> 61.14	21.5 0.3 -0.2 10.25 <u>1.71</u> 33.56
1994/1995 Total PTE					276.3	417.0	163.06
1999/2000 - Removed one Waukesha engine. Configuration of the turbo-chargers and other Waukesha engine settings for remaining 13 engines modified to run engines at the maximum power rating of 1115 hp/engine from the previous 895 hp/engine.							
1999 Actual Emissions	13 Waukesha Engines, 895 hp/engine (based on information from revised P71 application submitted on November 1, 2000 for 8040 hours of operation)	0.90	2.65	1.00	92.8	273.6	103.2

1999/2000- Emission Decrease	Removed 1 Waukesha Engine, 1115 hp	1.60	2.75	1.00	-17.2	-29.6	-10.77
1999/2000 - PTE	13 Waukesha Engines, 1115 hp/engine	1.60	2.75	1.00	223.9	384.9	140.0
Actual-to-Potential Increase (Includes netting out the engine removed)) 113.9) 81.7) 26.0
(1994/1995 PTE) - (1999/2000 Emission Decrease) = 1999/2000 Total PTE					259.1	387.4	152.29

H. Construction and Permitting History

The PLA-9 Central Delivery Plant was originally constructed and began operation in 1991. The original facility consisted of seven Waukesha 7042GL natural gas-fired reciprocating compressor engines and one Caterpillar 3304 natural gas fired electrical generator. The original facility was a minor source for PSD purposes.

In 1993, five additional Waukesha 7042 engines were installed and began operation at the facility. This modification increased the facility's emissions by 48.5 tpy for NO_x, 142.7 tpy for CO, and 53.8 tpy for VOCs. Although these increases were higher than PSD significant levels¹ for these pollutants, they did not trigger PSD review because the modification itself was minor (less than 250 tpy for any of the pollutants) and was performed on an existing minor source (facility total emissions were less than 250 tpy for any of the pollutants prior to the modification). This action, however, made the facility a major source for PSD purposes from this point on because the potential for CO then exceeded the 250 tpy threshold.

In 1994 and 1995, seven glycol dehydrators and two additional Waukesha 7042GL engines were added to the facility. The original Caterpillar 3304 generator was replaced by a Caterpillar 3306 generator. This modification increased NO_x emissions by 57.4 tpy, triggering PSD review for NO_x, based on NO_x significance levels.

In 1999/2000, Williams Field Services Company (WFS) increased the horsepower rating of thirteen (13) of the fourteen (14) existing engines by increasing the fuel throughput. The pre-change horsepower rating for each of the engines was 895 hp; this was increased to 1,115 hp. According to the definition of major modification at 40 CFR § 52.21(b) (2) (i), this change in method of operation constituted a major modification. Based on actual to potential emissions this modification triggered a PSD review due to an increase in NO_x emissions of 113.9 tpy.

V. Description of this Permitting Action

A. Compliance Order

Compliance Order, EPA Docket No. CAA-08-2002-05: EPA determined that the preceding modifications in 1994/1995 and 1999/2000 should have been subject to PSD review

1 . Significant levels for NO_x = 40 tpy, CO = 100 tpy, and VOCs = 40 tpy

for NO_x emissions. A Compliance Order, dated June 18, 2002, and filed on June 19, 2002, was issued to WFS. The Compliance Order required that WFS either submit an approvable PSD permit application with a BACT and increment consumption analyses by August 1, 2002, or amend its part 71 permit application to include federally enforceable conditions that would limit the facility's PTE below 250 tpy (below major source status). WFS requested an extension to the deadline of August 1, 2002, for submitting an approvable PSD permit application with a BACT and increment consumption analyses. EPA granted the extension to September 16, 2002, in the first amended Compliance Order which was filed on July 18, 2002.

B. Application Submittals and Addendums

WFS submitted the PSD permit application on September 13, 2002. The application was determined to be complete by EPA on October 10, 2002.

C. Purpose

The PSD permit EPA proposes to issue addresses historical compliance issues at the currently existing and operating compressor station for modifications that occurred at the facility in 1994/1995 and 1999/2000. The attainment of this permit was a required element of a Compliance Order, dated June 18, 2002. In addition to the requirement to attain a PSD permit, the Compliance Order required a review of Best Available Control Technology (BACT) for several engines and a nitrogen dioxide increment consumption analysis, both of which have been completed.

The PSD permit that EPA is proposing to issue does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations. This action is intended only to memorialize the Compliance Order requirements.

VI. Best Available Control Technology Analysis

Pursuant to ' 52.21(j), a new major stationary source shall apply best available control technology for each pollutant subject to regulation under the Clean Air Act (CAA) that it would have the potential to emit in significant amounts. A major modification shall apply best available control technology for each pollutant subject to regulation under the CAA for which it would result in a significant net emissions increase at the source. The requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

The definition of Best Available Control Technology (BACT) at ' 52.21(b)(12) states, in part, that BACT is an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the CAA which

would be emitted from any proposed major stationary source or major modification which the administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

For this administrative action, the BACT determination for the engines and generator were discussed during negotiations for the final Compliance Order in June 2002. At that time, EPA agreed that BACT emission levels could be attained using Low-NO_x technology and good combustion practices.

A. BACT Analysis for NO_x Emissions from Compressor Engine

PLA-9 utilizes the thirteen (13) Waukesha 7042GL natural gas fired reciprocating engines to drive compressor units for natural gas transmission to sales pipelines. Each of these engines produces a continuous maximum power of 1232 hp when utilizing a low-speed turbo charger and it is de-rated to 1,115 hp at a site elevation of 6235 feet. PLA-9 submitted documentation to support manufacturer guarantees and test results to verify NO_x emission levels of each compressor engine at 0.9 gram per horsepower-hour (g/hp-hr).

PLA-9 identified three (3) control technologies as technically feasible for the control of NO_x emissions from natural gas fired reciprocating engines driving compressors as follows:

- Low NO_x combustion (lean burn or clean burn technology);
- Catalytic converter; and
- Fuel type and/or good combustion practices.

The applicant performed an exhaustive search of EPA’s RACT/BACT/LEAR Clearinghouse (RBLC) as part of the BACT analysis for NO_x emissions from reciprocating engines of 2000 hp or less (Waukesha 7042GL engines are site rated to operate at 1,115 hp). The search identifies a wide range of emissions levels for each control technology as follows:

Control Technology	NO _x BACT Range From RBLC
Low NO _x Combustion	1.4 to 7.0 g/hp-hr
Catalytic Converter	1.01 to 2.0 g/hp-hr

Since the Waukesha 7042GL engines utilized Low NO_x combustion technology and the manufacturer’s guaranteed NO_x emission rates of 0.9 g/hp-hr falls within the NO_x range found in the RBLC retrieval, this control technology was agreed on by EPA and WFS to be BACT during negotiations in 2002 on the Compliance Order. Since EPA agreed that NO_x emission rates of 0.9 g/hp-hr was BACT and WFS could meet that limit using Low NO_x technology, no further analysis was performed.

NO_x Emission Summary for Compressor Engines (Based on BACT applied)

Emission Unit Description	BACT Limit for NO _x	NO _x Emissions based on BACT (tpy)
Thirteen (13) Waukesha 7042GL Reciprocating Engines, 1,115 hp @ 1,000 rpm maximum site rating, natural gas fired	0.9 g/hp-hr	125.97

B. BACT Analysis for NO_x Emissions for Generator Engine

PLA-9 utilizes the single Caterpillar generator engine G3306 to drive an electrical generator that provides electricity for heating equipment such as electrical trace elements during the winter months. This engine replaced the original Caterpillar generator G3304 engine. The G3306 engine is site-rated at 185 hp and will be permitted to operate at 8760 hours per year.

PLA-9 identified two control technologies for the G3306 by performing a similar RBLC query as was performed for compressor engines. The exercise resulted in the same control technologies for controlling NO_x emissions from the compressor engines as outlined above. PLA-9 proposed to install NSCR on the generator G3306 engine and achieve a NO_x emission rate of 1.9 g/hp-hr.

NO_x Emission Summary for G3306 Generator Engine (Based on BACT applied)

Emission Unit Description	BACT Limit for NO _x	NO _x Emission Based On BACT (tpy)
Caterpillar G3306 SITA Reciprocating Engine, site-rated at 185 hp @ 1800 rpm maximum capacity, natural gas-fired	1.90 g/hp-hr	3.4

VII. WFS PLA-9 Control Strategy

A. Control Requirements

WFS will be required to operate the Wakesha compressor engines with Low NO_x combustion technology, the Caterpillar engine with Non-Selective Catalytic Reduction (NSCR) and the triethylene glycol (TEG) dehydrator reboilers using Good Combustion Practices (GCP).

B. Emission Limits

WFS will be required to limit NO_x emissions from each Waukesha engines to 0.9 g/hp-hr, the Caterpillar engine to 1.9 g/hp-hr and the TEG dehydrator reboilers to 0.09 lb per MMBtu on a 1-hr average.

C. Work Practice and Operational Requirements

WFS will be required to limit the Waukesha engines to a maximum of 1,115 horsepower and operate them utilizing Low NO_x combustion technology. In addition, WFS will be required to limit the Caterpillar engine to a maximum of 185 horsepower, equip it with Catalytic Converter/Silencer (SCR DeNO_x) and use an air/fuel ratio controller.

To ensure optimal conditions for catalysts operation, WFS will be required to install thermocouples before the catalyst in order to monitor the inlet temperatures of the catalyst and maintain at an exhaust temperature at the inlet to the catalyst, at all times the engine operates between 700EF and 1250EF in accordance with manufacturer's specifications. WFS will further be required to monitor pressure across the catalyst to ensure the catalyst is not blocked or blown out.

WFS will be required to limit the annual fuel usage for the TEG dehydrator reboilers to an annual fuel usage of 3.9 MMcf/yr for the six 10 MMscfd units and 4.6 MMcf/yr for the one 20 MMscfd unit, based on a rolling 12 month total.

Finally, WFS will be required to use only natural gas fuel in all combustion equipment.

D. Monitoring

WFS will be required to monitor NO_x emissions from the engines and the dehydrator reboilers quarterly using a portable monitor. If WFS demonstrates compliance with emission limits for six (6) consecutive calendar quarters, then the permit will allow WFS to conduct the NO_x monitoring for these emission units on a semi-annual basis.

WFS will be required to monitor the exhaust temperature from the Caterpillar engines at the inlet to the catalyst once per week and the pressure drop across the catalyst monthly.

VIII. Air Quality Impact Analysis

During negotiations for the Compliance Order in 2002, EPA required WFS to perform an air quality impact analysis. The main purpose of the air quality analysis is to demonstrate that criteria pollutant emissions emitted from the source have not caused or contributed to a violation of any applicable NAAQS or PSD increment. The NAAQS are maximum concentration

“ceilings” measured in terms of the total concentration of a pollutant in the atmosphere. For a new or modified source, compliance with any NAAQS is based upon the total estimated air quality, which is the sum of the ambient estimates resulting from existing sources of air pollution and the modeled ambient impact caused by the applicant’s emissions increase and associated growth. A PSD increment is the maximum allowable increase in concentration that is allowed to occur above a baseline concentration for a pollutant. The baseline concentration is defined for each pollutant and is the ambient concentration existing at the time that the first complete PSD permit application affecting the area is submitted. Significant deterioration is said to occur when the amount of new pollution would exceed the applicable PSD increment. PSD increments exist for particulate matter, sulfur dioxide, and nitrogen dioxide and levels, in $\mu\text{g}/\text{m}^3$, have been established for Class I, Class II, and Class III areas.

A. Models used

The latest version of the Industrial Source Complex, Short-Term Model ISCST3 (Version 0235) was used to assess the pollutant impacts of this source based on the characteristics of the emissions being evaluated. ISCST3 is a versatile steady-state Gaussian dispersion model capable of assessing impacts from a variety of separate sources in regions of simple, intermediate, and complex terrain. This model is designed for use with stack, point, area, and volume emission sources situated in terrain where ground level elevations can exceed the stack height of the emission sources. It is capable of accounting for settling and dry deposition of particulate in area, line, and volume sources. The model is also capable of estimating concentration for a wide range of averaging periods from one hour to one year.

The ISCST3 model is preferred for this application because it incorporates algorithms for the simulation of aerodynamic downwash induced by buildings. These effects are important because many of the emission points may be below Good Engineering Practice stack height.

The CTSCREEN model, which is the screening mode of CTDMPLUS, is a refined point-source Gaussian air quality model for use in all stable conditions for complex terrain applications. In this instance, the CTSCREEN model (Version 94111) was used. In order for the model to account for the dimensional nature of the plume and terrain interaction, the model requires digitized terrain of the nearby topography. The digitization of the terrain is accomplished by the terrain pre-processors, FITCON and HCRIT. The wind direction used in CTSCREEN is based on the source-terrain geometry, resulting in computation of the highest impacts likely to occur.

The terrain data required by the CTSCREEN model was created by digitizing terrain contours at 14 meters intervals. A sufficient number of points were selected to define the basic shape of each contour. All digitized points were input to the pre-processor programs FITCON and HCRIT to generate a file that was used in the model. CTSCREEN is designed to provide data to calculate maximum 1-hour impacts at all receptors as well as provide estimates of worst

case 3-hour, 24-hour and annual impacts. Scaling factors of 0.7, 0.15 and 0.03 are used to convert calculated 1-hour concentration to 3-hour, 24-hour, and annual estimates respectively.

B. NO_x Increment analysis

NO_x increment-consumption from all background sources and WFS PLA-9 were identified and modeled using ISCST3. The result showed NO_x concentration above the applicable NO_x increment limit from all emission sources at numerous receptor locations. As a result, a more refined estimate of concentrations resulting from the operation of PLA-9 was used to estimate impact from the source by performing the CTSCREEN model. Receptors used in the CTSCREEN model consisted of the initial ISCST3 modeling which predicted the potential exceedance of NO_x increment plus additional RECGEN receptors to identify areas with potentially high concentrations. Because of the close proximity of the Amoco Production Company, Area 7 Injection Station (AIRS ID No. 08670063), it was included in the modeling to refine the model-predicted concentration. The results showed significant contribution by Area 7 Injection Station to the total increment consumed by the background sources located near the PLA-9.

Predicted impacts from PLA-9 and the Amoco Production Company Area 7 Injection Station sources were added to predicted impacts from the other background sources on a receptor-by-receptor basis. The predicted maximum annual NO_x increment consumption was calculated to be 19.05 µg/m³ which occurred at UTM location 240,617 meters east, 4,097,808 meters north. Based on the refined modeling analysis, annual predicted NO_x concentration from the operation of the facility along with the predicted impact of the surrounding sources are projected to be below the federal annual NO_x PSD increment limit of 25 µg/m³.

C. Building Wake effects

Direction-specific wake effects were calculated for the PLA-9 using EPA-approved Building Profile Input Program (BPIP). It was assumed that each engine and the associated air cooler could potentially cause downwash of the exhaust plumes. The direction-specific building dimensions were input to the ISCST3 model. Building downwash parameters from a preliminary SUIT draft EIS inventory were used for a large number of background sources.

D. Receptor locations

The receptor grid consisted of receptors with 50 meter spacing along the facility fence line, 100 meter spacing from the plant fence line out to 1,000 meters, and 500 meter spacing from 1,000 meter out to 5,000 meters from the facility. Concentrations were calculated only outside of the facility fence line. A total of 1,673 receptors were included in the dispersion modeling.

Receptors used in the refined CTSCREEN modeling consisted of those from the ISCT3 modeling where potential exceedances of the PSD NO_x increment were identified plus additional receptors generated by the RECGEN preprocessor program. The RECGEN program was used to place receptors on the terrain feature and the resolution of these receptors was approximately 50 to 100 meters apart on each digitized contour. All receptor information was extracted from Digital Elevation Modeling (DEM) data with a 30 meter horizontal resolution (1:24,000 DEM) as provided by the United States Geological Survey. The coordinate system used to reference both the emission source and the receptor coordinates was the Universal Transverse Mercator convention.

E. Meteorology

The meteorological data set collected at Meridian Oil's Buena Vista site, located approximately 27 kilometers southwest of the facility, was used in the dispersion modeling. The data was collected during 1993 and was obtained from the New Mexico Environmental Department, Air Quality Bureau. This same data set was used by the Colorado Department of Public Health and Environment (CDPHE) in their *Phase I Air Quality Modeling Report: Periodic Assessment of Nitrogen Dioxide PSD Increment Consumption in Southwest Colorado* dated October 29, 1999.

Analysis of the meteorological data set compared to the surrounding terrain shows that the wind pattern is influenced by the canyon orientation. Analysis of a wind rose shows that the predominant flow is from the north-northwest and north, consistent with the canyon orientation. Because the topography surrounding the facility (PLA-9) is similar to the topography surrounding the Buena Vista station, the meteorological conditions expected to occur at PLA-9 should be similar to those observed at Buena Vista. Both sites are located in the same airshed, are separated by approximately 17 miles, have similar vegetation cover surrounding the area, and have similar climatic conditions. Based on the location of the PLA-9, and the likelihood of meteorological conditions similar to those observed at the Buena Vista station, the 1993 Buena Vista meteorological data set is appropriate for use in the dispersion modeling.

IX. NO₂ NAAQS Analysis

Cumulative modeling was performed using emissions from PLA-9 plus all background sources, including increment-consuming sources. The ISCST3 model calculated a maximum cumulative annual average NO₂ concentration of 41.58 µg/m³ (after applying ARM) at 239,885 meters east, 4,098,368 meters northing. This maximum-modeled concentration is below the federal NO₂ NAAQS of 100 µg/m³.

A. Additional Impacts Analysis

There are two Class I areas located within 120 kilometers (km) of the PLA-9 CDP. Mesa Verde National Park is located approximately 44 km to the northwest of the PLA-9 CDP and Weminuche Wilderness Area is located approximately 56 km southeast of the PLA-9 CDP. Mesa Verde National Park is managed by the National Park Service and Weminuche Wilderness Area is managed by the U.S. Forest Service.

The National Park Service and the U.S. Forest Service were contacted regarding the PSD permit application. Based on the proposed NO_x emissions increase from the facility (approximately 23 tons per year) and the distance from the facility to the Class I areas, each agency determined that adverse impacts to Class I areas were not expected and therefore impacts to Class I areas were not assessed.

B. Endangered Species Act

The U.S. EPA Region 8 Air Program (EPA) is planning to issue a Prevention of Significant Deterioration (PSD) permit to the Williams Field Services PLA-9 Compressor Station (PLA-9). Pursuant to Section 7 of the Endangered Species Act (ESA), 16 U.S.C. §1536, and its implementing regulations at 50 CFR, part 402, EPA is required to ensure that any action carried out by EPA is not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or result in the destruction or adverse modification of such species' designated critical habitat.

The PSD permit EPA plans to issue is an administrative action addressing historical compliance issues at the currently existing and operating compressor station for modifications that occurred at the facility in 1994/1995 and 1999/2000. The attainment of this permit was a required element of a Compliance Order, dated June 18, 2002. In addition to the requirement to attain a PSD permit, the Compliance Order required the installation of Best Available Control Technology (BACT) on several engines and a nitrogen dioxide increment consumption analysis, both of which have been completed.

This action does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations. Therefore, EPA has concluded that this administrative action will have no effect on listed species or the critical habitat.