

Statement of Basis - Narrative
NSR SSM Permit

Company: Williams Four Corners LLC
Facility: Trunk B Compressor Station
Permit No(s): 1832-M1 and P178-R2
Tempo/IDEA ID No.: 1350 - PRN20110001
Permit Writer: Cember Hardison

Fee Tracking (not required for Title V)

Tracking	NSR tracking entries completed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	NSR tracking page attached to front cover of permit folder: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Paid Invoice Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Balance Due Invoice Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Invoice Comments: \$1832 permit fee paid in full

Permit Review	Date to Enforcement: NA, SSM conditions previously reviewed	Inspector Reviewing: NA
	Date Enf. Review Completed: NA	Date of Reply: (if necessary)
	Date to Applicant: 9-20-11	Date of Reply:
	Date of Comments from EPA: NA	Date to EPA: NA
	Date to Supervisor:	

1.0 **Plant Process Description:** The Trunk B Compressor Station is a natural gas compressor station using 7 natural gas fueled compressor engines. It is located in San Juan County, New Mexico.

2.0 **Description of this Modification:**
SSM: In accordance with 20.2.7.15 NMAC, WFC is applying to permit emissions exceeding an emission limitation due to routine and predictable startup, shutdown, and maintenance (SSM). For this facility SSM emissions include venting natural gas from compressors (units 1a through 7a) and associated piping resulting in emissions of 120.3 pph and 22.0 tons per year of VOCs and small quantities of HAPs.

Malfunction: Applying for a maximum of 10 tpy of VOC emissions from periodic venting of natural gas caused by malfunctions as defined in 20.2.7.7.E NMAC. This request is in accordance with AQB's guidance Implementation Guidance for Permitting SSM Emissions and Excess Emissions dated January 1, 2011.

3.0 **Source Determination:**

1. The emission sources evaluated include Trunk B Compressor Station.

2. Single Source Analysis:

A. **SIC Code:** Do the facilities belong to the same industrial grouping (i.e., same two-

digit SIC code grouping, or support activity)? **Yes**

B. Common Ownership or Control: Are the facilities under common ownership or control? **Yes**

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? **Yes**

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, or 20.2.74 NMAC applicability purposes? **Yes**

4.0 **PSD Applicability:**

A. The source, as determined in the Source Determination above, is a minor PSD source before and after this permit revision.

5.0 **History (In descending chronological order, showing NSR and TV):** *The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
1832-M1*	pending	NSR Significant Permit Revision	<p>SSM: In accordance with 20.2.7.15 NMAC, permit emissions exceeding an emission limitation due to routine and predictable startup, shutdown, and maintenance (SSM). For this facility SSM emissions include venting natural gas from compressors (units 1a through 7a) and associated piping resulting in emissions of 120.3 pph and 22.0 tons per year of VOCs and small quantities of HAPs.</p> <p>Malfunction: Apply for a maximum of 10 tpy of VOC emissions from venting caused by malfunctions as defined in 20.2.7.7.E NMAC. This is in accordance with AQB's guidance <u>Implementation Guidance for Permitting SSM Emissions and Excess Emissions</u> dated January 1, 2011.</p> <p>Total Potential Emission Rates: 138.6 tpy NOx, 244.3 tpy CO, 124.4 tpy VOC, 0.18 tpy SOx, 3.1 tpy TSP, 3.1 tpy PM10, 3.1 tpy PM10, 15.5 tpy formaldehyde, 1.3 tpy toluene, 1.9 tpy xylene, 20.5 tpy Total HAPs.</p> <p>According to the application, the facility is a PSD minor source.</p>
	3-8-10	TV Admin	Report Allen Johnson as Responsible Official and Don Wicburg as alternate RO.
P178-R2*	1-4-10	Renewal	It is a mandatory permit renewal at every 5 years.
1832-R5*	9-12-06	NSR Admin	Name change of the company from Williams Field Services to Williams Field Four Corners LLC.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
P178-R1M2	9-12-06	TV Admin	Name change of the company from Williams Field Services to Williams Field Four Corners LLC.
P178-R1M1	6-21-06	TV Admin	Change of Responsible Official from Jeff Bauman to Don Wicburg
*P178-R1	5-9-05	TV Renewal	It is a mandatory permit renewal at every 5 years and include changes from , ,R2, and R1.1NSR1832 –R4
1832-R4*	12-7-04	NSR Admin Rev	Administrative amendment consisted of updating 57 air quality permits with a complete inventory of unit package serial numbers of all reciprocating I.C. engines driven and turbine driven equipment owned by Williams Field Services. This was required by NOV WIL 1006 0301.
1832-R3	9-16-04 Closed 10-12-04	NSR Tech Revision	This technical revision was to install catalytic converter to Units 5, 6, and 7 to provide avoidance of 40 CFR 63 Subpart ZZZZ (RICE MACT). However this permit was closed because Units 5 and 6 were identified as existing units and were not affected units as defined in 40 CFR63 Subpart ZZZZ. Unit 7 has never been installed at this facility.
1832-R2*	2-29-04	NSR Admin. Revision	Like kind engine replacement for a Waukesha 7042GL, Emission Unit 4 from serial number C-103322/5 to C-11177/1.
1832-R1*	9-11-01	NSR Admin. Revision	Like kind engine replacement of Units 001, 002 and. 003. This revision consisted of Waukesha 7042 GL engine replacement with an identical type engine emission Unit 3 at the Trunk B Booster. The existing engine serial C-11901/1, was replaced with the new Waukesha 7042GL, serial no. C-10413/5. Emission Unit 2 Waukesha engine, serial no. C-11900/11 has been replaced with the identical unit new engine serial no. 403191. Emission Unit 1, Waukesha 7042 GL, serial no. C-12096/4 has been replaced with identical unit, new engine serial no. 403117.
P178	10-26-99	TV Permit	It was the first Title V permit.
1832*	9-23-96	New NSR Permit	It was the first NSR permit. Total allowable emissions: 31.5 pph & 138.6 tpy NOx, 56.0 pph & 244.4 tpy CO, and 21.0 pph & 92.4 tpy VOC.

6.0 Public Response/Concerns: On August 22, 2011, WildEarth Guardians (WEG) and San Juan Citizens Alliance (SJCA) submitted written comments specifically regarding the application to permit startup, shutdown, maintenance, and malfunction emissions. Submittal of written comments was before the end of the 30-day comment period. They have also requested to review the draft permits before issuance.

To date, this permit writer is not aware of any other public comments or concerns with this permit application.

The Department's analysis was made available on: **September 20, 2011**

Per their request, WEG & SJCA were provided a copy of the analysis on: **September 20, 2011**. Thirty days will be provided for review in accordance with 20.2.72.206.A(3) NMAC.

Per their request, WEG & SJCA were provided a copy of the draft permit on: **September 20, 2011**

The applicant has met the public notice requirements in 20.2.72.203.B, C, and D NMAC.

7.0 Compliance Testing:

Unit No.	Compliance Test	Test Dates
	Not applicable to this permitting action	

8.0 Startup and Shutdown: -

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? **Yes**
- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? **Yes**
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? **Yes**
- D. Were emissions from startup, shutdown, and scheduled maintenance operations calculated and included in the emission tables? **Yes, in accordance with 20.2.7.15 NMAC, the applicant has submitted an application to permit emissions from routine and predictable startup, shutdown, and maintenance.**

9.0 Compliance and Enforcement Status [Title V only]: N/A, not a TV permit

10.0 Modeling:

The emissions subject to this permit revision are VOCs and HAPS which are not subject to air dispersion modeling. This is not a PSD major modification.

VOC is a precursor to the criteria pollutant, ozone. The AQB tracks compliance with the ozone National Ambient Air Quality Standards through monitoring and does not require pre-construction single source ozone modeling. Ozone modeling is too cost prohibitive to attach to a typical permit application. However, applications for PSD major new or modifications may require ozone modeling if the facility-wide VOC emissions are 100 tpy or more. These applicants are required to contact AQB and EPA to determine if ozone modeling is required.

Regional ozone modeling for the Four Corners area was done in 2009 (see <http://www.nmenv.state.nm.us/aqb/4C/Modeling.html>) and the Air Quality Bureau is

continuing to analyze ozone in the region.

11.0 **State Regulatory Analysis(NMAC/AOCR):**

The permit writer verified the state and federal regulatory applicability determinations that applied to the units and the activity of venting from SSM and Malfunction emissions in permit application number 1832M1. Some determinations are taken from the Title V Permit P178R2 statement of basis.

According to the applicant's applicability determination and verification by the department, the venting of natural gas due to SSM or malfunction and any units from which this venting would occur are not currently subject to any NSPS or NESHAP. Regardless, the permitting of SSM and/or malfunction emissions do not supersede any other federal or state regulation. The most stringent requirement applies.

20 NMAC	Title	Applies (Y/N)	Comments
2.1	GENERAL PROVISIONS	Y	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards NMAAQS	Y	This section does not limit the applicability of this part to sources required to obtain a permit under 20.2.72 NMAC, nor does it limit which terms and conditions of permits issued pursuant to 20.2.72 NMAC are applicable requirements for permits issued pursuant to 20.2.70 NMAC.
2.7	Excess Emissions	Y	Applies to all facilities' sources.
2.61	Smoke and Visible Emissions	Y	Reciprocating Engines 1-7 are Stationary Combustion Equipment.
2.70	Operating Permits	Y	Source is major for NOx, CO, and, Formaldehyde.
2.71	Operating Permit Fees	Y	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Y	Section 20.2.72.219.D NMAC
2.73	NOI & Emissions Inventory Requirements	Y	Applicable to all facilities that require a permit.
2.74	Permits-Prevention of Significant Deterioration	N	This facility is a PSD minor source before and after this permit revision.
2.75	Construction Permit Fees	Y	This facility is subject to NSR permit fees.

20 NMAC	Title	Applies (Y/N)	Comments
2.77	New Source Performance	N	There are no sources subject to 40 CFR 60.
2.78	Emissions Standards for HAPs,	N	There are no sources subject to 40 CFR 63.
2.79	Permits – Nonattainment Areas	N	This facility is not located in, nor does it affect an adjacent nonattainment area.
2.80	Stack Heights	N	Not applicable.
2.82	MACT Standards for Source Categories of HAPs.	N	Not applicable.

12.0 Federal Regulatory Analysis:

Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Applies (Y/N)	Comments
C	Federal Ambient Air Quality Standards	Y	Defined as applicable at 20.2.70.7.E.11, and 20.2.72Any national ambient air quality standard.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
A	General Provisions	N	The regulation is not applicable because no other Part 60 subparts apply.
40 CFR 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.	N	The regulation is <u>not applicable</u> because all storage tanks at the facility have capacities less than the minimum applicability threshold capacity of 40,000 gallons (see 40 CFR 60.110(a)). See Table 2-L.
40 CFR 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 July 23, 1984	N	Tanks at this facility are below the applicable capacity threshold.
NSPS	Volatile Organic Liquid Vessels 9 including	N	Tanks at this facility are below the applicable capacity threshold.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
40CFR 60 Subpart Kb	petroleum liquid Storage Vessels) for which Construction, Reconstructions or Modification Commenced After July 21, 1948.		
40 CFR 60, Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	N	This regulation is not applicable as this facility is not a natural gas processing plant as defined by the subpart.
40 CFR 60, Subpart JJJ	Standards of Performance for Stationary Compression Ignition Internal Combustion Units.	N	The regulation is <u>not applicable</u> because the engines currently located at the station were constructed before the applicability date of June 13, 2006 (see the dates for 1-7 provided in Table 2A of the application form).

NESHAP Subpart (40 CFR 61)	Title	Applies (Y/N)	Comments
A	General Provisions	N	The regulation is <u>not applicable</u> as the facility is not subject to any of the standards listed.

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
A	General Provisions	N	The regulation is not applicable because no other Part 63 subparts apply.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	N	There are no affected units subject to this part (63.760(b)). Additionally, the HAP content in the field gas is less than 10 percent therefore, ancillary equipment is not in VHAP service (63.760(b)(1)(iv)).
40 CFR 63 Subpart HHH	Natural Gas Transmission and Storage Facility	N	The facility is not a natural gas processing or storage facility. Therefore, this regulation is not applicable.
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Y	According to the application, there are compressor engines subject to this part. However, venting natural gas due to SSM and/or malfunction is not subject to the requirements in ZZZZ.

Miscellaneous	Title	Applies (Y/N)	Comments
40 CFR 64	Compliance Assurance	N	The regulation is <u>not applicable</u> because

Miscellaneous	Title	Applies (Y/N)	Comments
	Monitoring		none of the sources at the station meet the following requirements: CAM monitoring is applicable to units located at a Title V major source and have uncontrolled criteria pollutant emission rates equal to or exceeding the major source threshold (100 tons per year) and using a control device to achieve compliance with an emission limit or standard.
40 CFR 68	Chemical Accident Prevention	N	The regulation is <u>not applicable</u> because the station does not store any of the identified toxic and flammable substances in quantities exceeding the applicability thresholds.

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:**

NSR Exempt Equipment (not entered into Tempo database)

Description	JUSTIFICATION
None reported	

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

Specific Condition B. SSM VOC Emission Limits – Condition limits emissions from routine and predictable emissions due to startup, shutdown, and/or maintenance (SSM). SSM emissions are due to venting of field gas. Permittee demonstrates compliance with limits by applying the mol % VOC content from the most recent gas analysis to the amount of field gas vented.

Specific Condition C. Malfunction Emission Limits – Malfunction emissions are also from venting field gas. Since they are not predictable, the permittee must identify the source of the malfunction emissions so that enforcement and compliance can determine if any state or federal regulations were violated during the malfunction event. The permittee tracks malfunction emissions in the same manner as for SSM emissions.

General Condition 1. The condition reiterates the requirement that SSM emissions be minimized regardless if the SSM emission limit has been met or not (20.2.72.14.A NMAC).

General Condition 2. The condition emphasizes that although malfunction emission limits may be established, permittees must still minimize emissions during startup, shutdown, and malfunction. This requirement applies regardless if the malfunction limit has been met or not.

MONITORING SPECIFICATIONS:

Emission unit Nos.	Parameters To Monitor	To Comply With	Monitoring Required	Monitoring Conditions
N/A, not a Title V Permit				

15.0 For Title V action: Cross Reference Table between NSR Permit 1832M1 and TV Permit P178R2. NSR permit conditions cross referenced to the TV permit are federally enforceable conditions, and therefore brought forward into the TV permit:

NSR Changed by TV*	NSR Condition #	TV Section #
	N/A, not a TV permit	

16.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.

Emission Estimate Verification:

The permit writer verified the calculations and assumptions used in emission estimates.

SSM emissions are due to venting of predictable quantities of field gas from compressors and associated piping during routine and predictable startup or shutdown.

Pound per hour SSM emissions were calculated using a compressor blowdown venting loss 38,668 scf/event which is equal to the compressor with the highest loss during a startup or shutdown.

Ton per year SSM emissions, were determined using the venting loss (14,113,820 scf/yr) from the annual number of startups and shutdowns of the area-wide average of the highest annual facility average startup and shutdown rates during 2006 through 2008.

A 0.3 mol % VOC content was applied to the cubic feet of gas vented to determine VOC emissions. The percent VOCs was determined from a 7-19-10 extended gas analysis. HAPs were determined using the same method. No hydrogen sulfide was detected in the gas.

Added to VOC and HAP emissions was a 2.35% safety factor to account for variations in gas composition and annual number of venting events.

Malfunction emissions due to venting of field gas apply to all operations at the facility except combustion and dehydrator still vent emissions.

Applicant requested 10 tpy VOC malfunction emissions, which is the allowable limit according to department guidance and does not exceed any permitting threshold.

There are no NESHAP applicable to these activities and so no HAP limits apply.

