

**Statement of Basis - Narrative**  
**NSR SSM Permit**

**Company:** Williams Four Corners LLC  
**Facility:** Sims Mesa Compressor Station  
**Permit No(s):** 874M4 and P026R2  
**Tempo/IDEA ID No.:** 1040 - PRN20110001  
**Permit Writer:** Liz Bisbey-Kuehn

**Fee Tracking (not required for Title V)**

<b>Tracking</b>	<b>NSR tracking entries completed:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>NSR tracking page attached to front cover of permit folder:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Paid Invoice Attached:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	<b>Balance Due Invoice Attached:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	<b>Invoice Comments:</b> \$1820 permit fee paid in full

<b>Permit Review</b>	<b>Date to Enforcement:</b> NA, SSM conditions previously reviewed	<b>Inspector Reviewing:</b> NA
	<b>Date Enf. Review Completed:</b> NA	<b>Date of Reply:</b> (if necessary)
	<b>Date to Applicant:</b>	<b>Date of Reply:</b>
	<b>Date of Comments from EPA:</b> NA	<b>Date to EPA:</b> NA
	<b>Date to Supervisor:</b>	

**1.0 Plant Process Description:**

The Sims Mesa CDP compresses and dehydrates pipeline quality natural gas for pipeline transmission using natural gas-fired reciprocating engines. The natural gas stream typically contains produced water, which is separated from the gas stream via an inlet separator. The natural gas is then compressed for pipeline transmission using compressors driven by natural gas-fired reciprocating internal combustion engines. The gas stream is then routed to triethylene glycol (TEG) dehydrators which further dehydrates the gas stream. The TEG solution comes into contact with the natural gas and removes the water and some hydrocarbons. The rich TEG solution is regenerated by boiling off the water and hydrocarbons and reclaiming the glycol. The resulting produced water is stored in above ground storage tanks.

**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-6a, 11a-14a) and associated piping resulting in emissions of 76.3 pph and 8.9 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 Sims Mesa 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 an existing major PSD source. Except for the % safety factor, SSM emissions are existing and none are due to a modification. A portion or all of the 10 tpy malfunction emissions may be in addition to existing malfunction emissions but none are due to a modification. Regardless, the combined emission rates from SSM and Malfunction are less than 40 tpy VOC, which is less than the significant emission rate in Table 2, 20.2.74.502 NMAC.

B. Netting is not required, emissions are not significant.

C. BACT is not required for this permit revision since this is not a PSD major modification.

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)
0874M4	pending	NSR Significant Permit Revision	<b>SSM:</b> 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-6a, 11a-14a) and associated piping resulting in emissions of 76.3 pph and 8.9 tons per year of VOCs and small quantities of HAPs. <b>Malfunction:</b> 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.
*P026R2	3/19/2010	Title V Permit Renewal	This permitting action is currently in process and will incorporate changes which occurred from NSR 874M3
*NSR 874M3	12/08/2008	NSR Modification	This modification consists of revising the TEG dehydrator emissions using the newer version of GRI-GLYCalc 4.0 and more recent gas analysis. Revised information for condensate storage tanks TK-14 (6930 gal) and TK-15 (12,600 gal), listed as regulated equipment in the TV permit. These tanks are now designated as exempt unit numbers T-23 and T-24 (each 12,600 gal) and holding produced water, not condensate.
P026R1M2	09/15/2006	Title V Permit Modification	Company Name Change from Williams Field Services Company to Williams Four Corners LLC
NSR874M2R3	09/14/2006	NSR Revision	Company Name Change from Williams Field Services Company to Williams Four Corners LLC
P026R1M1	06/20/2006	Title V Permit Modification	Responsible official changed
NSR847M2R2	12/07/2004	NSR Revision	Update serial numbers on all engines
P026R1	07/23/2004	Title V Permit Renewal	Incorporate NSR847M2
NSR847M2R1	07/02/2003	NSR Revision	Like kind replacement of two Waukesha 7042GL's engines
P026	12/28/1998	Original Title V Permit	Incorporate NSR847M2

Permit Number	Issue Date	Action Type	Description of Action (Changes)
NSR847M2	04/10/1997	NSR Modification	This modification consisted of the addition of four 1374 hp (at 1200 rpm) Waukesha 7042GL's. The existing six Waukesha 7042GL's engines are equipped with low speed turbo chargers that limit each engine to 1000 hp. <b>To achieve 1374 hp (at 1200 rpm) high speed turbochargers shall be installed on each of the 10 Waukesha 7042GL's.</b>
NSR874M1	05/16/1994	NSR Modification	This modification consisted of the removal of one Waukesha 7042GL and increase the capacity of the remaining six engines to 990 hp resulting in a net decrease of emissions.
NSR874	01/17/1991	NSR	7 – 1000 hp (derated to 895 hp) Waukesha 7042GL's

6.0 **Public Response/Concerns:** On August 26, 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 29, 2011  
WEG & SJCA were provided a copy of the analysis on: September 29, 2011. Thirty days will be provided for review in accordance with 20.2.72.206.A(3) NMAC.

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/AQCR):**

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 0874M4.

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.

20 NMAC	Title	Applies (Y/N)	Comments
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 are Stationary Combustion Equipment.
2.70	Operating Permits	Y	Source is major for NOx, CO, and, VOC.
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	Y	This facility is a PSD major source subject to PSD applicability determination in 20.2.74.200 NMAC. According to the applicant and department review, this permitting action is not a PSD major modification nor does it affect existing sources with BACT.
2.75	Construction Permit Fees	Y	This facility is subject to NSR permit fees.
2.77	New Source Performance	N	There are no sources subject to 40 CFR 60 at this time.
2.78	Emissions Standards for HAPs	N	Not applicable.
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.	Y	Sources subject to 40 CFR 63, HH and ZZZZ.

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 20.2.72. Any 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 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.	May apply	The regulation may be applicable to the engines that have not yet been installed.

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	Y	The regulation is not applicable because no other Part 63 subparts apply.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	Y	Is applicable as the facility contains affected sources (glycol dehydrators). The facility is an area source of HAPs as defined by Subpart HH. However, venting natural gas due to SSM and/or malfunction is not subject to the requirements in HH.
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	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.

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
	MACT)		

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

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.** 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.** 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 of 9,228 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 (2,159,352 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 4/22/2011 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 % 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.