

STATEMENT OF BASIS

To: Reviewers

Through: Michael Stoll, Operating Permit Program Manager *Michael Stoll*

From: Lori Bocchino, Operating Permits Program Principal

Subject: Draft Operating Permit 3-1-046 for Devon Gas Services, L.P., Beaver Creek Gas Plant

Date: October 9, 2006

Attached for your review is the draft renewal Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 6, Section 3 operating permit for the Devon Gas Services, L.P., Beaver Creek Gas Plant.

The facility has changed ownership a number of times in the last eight years. It was originally owned by the Amoco Production Company, then in 1998 was taken over by Snyder Oil Corporation. In 1999, the company name became Santa Fe Snyder Corporation, and in 2000, it was changed to Devon SFS Operating, Inc. The current owner is Devon Gas Services, L.P.

The Beaver Creek Gas Plant is a sour (H₂S-containing) natural gas processing and liquids recovery plant. The facility consists of two separate plants: the Phosphoria (sour) Gas Plant and the Joint Interest (JI) (sweet) Gas Plant. The Phosphoria Plant is presently designed to process approximately 15 MMSCFD of sour gas. After sweetening, the gas is sent to the JI Plant for additional processing. The JI Plant is designed to process 40 MMSCFD of gas and recover propane, butane, natural gasoline, and pipeline quality sales gas. Under normal operating conditions at the Phosphoria Plant, the acid gas stream from the amine regenerator is reinjected back into the Phosphoria Formation in the Beaver Creek Field. If the acid gas injection system is inoperable, the acid gas will be flared in accordance with the Sulfur Dioxide Minimization Plan. The facility produces pipeline quality natural gas, condensate, and natural gas liquids.

The principal emission sources at the facility are compressor engines, turbines, boilers, heaters, and the plant flare.

WAQSR Chapter 6, Section 2 Permit History

The original facility predates WAQSR Chapter 6, Section 2 permitting requirements. Several permits and waivers were issued beginning in 1984 and have been described in the Reviewer's Memo for Chapter 6, Section 3 permit 30-046. These have all been superseded by permit MD-401.

Permit MD-401 was issued to Snyder Oil May 17, 1999. Under this permit, Snyder removed a Cooper-Bessemer GMXE-4 compressor engine (unit C-7) from service; installed two new Waukesha L7042GSI compressor engines with catalytic converters (units C-7A and C-13A); retrofit an existing Waukesha L7042GSI with a catalytic converter (C-10); and revised allowable emissions for a Clark HBA-6 engine (C-6). The emission limits on Waukesha L7042GSI compressor engine C-9 were also revised since this unit was fitted with controls to demonstrate good faith when the unit was installed in 1994, without a Chapter 6, Section 2 permit, to replace an identical unit that failed. Since only the drive on the compressor was replaced, 40 CFR 60 Subpart KKK does not apply. The emission limits on the Clark HBA-6 compressor engine (unit C-8) were revised to reflect tested emissions; the original emission limits set for this unit were based on estimated emission rates from AP-42.

Permit MD-401 sets NO_x and CO limits for all engines, turbines, boilers, and large heaters at the site. All performance testing required by the permit has been completed. The two new Waukesha L7042GSI compressor engines (units C-7A and C-13A) have an annual average emissions limit (1.0 g/hp-hr and 13.6 tpy) that is more stringent than what would apply if only the lb/hr and hourly g/hp-hr limits were

considered. Compliance with the annual limit is demonstrated as described in an attached Preventative Maintenance Plan, which the permit requires be followed for these two engines. The permit also specifies compliance with 40 CFR 60 Subpart GG for the turbines, and Part 60 Subpart KKK for various affected sources.

The permit requires that the plant flare be equipped and operated with an automatic ignitor or a continuous burning pilot. It also sets a 20% opacity limit, which is superseded by a more stringent requirement from Subpart KKK. The permit application states that the flare is used as a control device for some equipment which is subject to Subpart KKK; this means it is subject to WAQSR Chapter 5, Section 2(m). The opacity limitation from this is no visible emissions, as measured by Method 22.

Permit MD-401 was amended on February 8, 2006 (MD-401A) to address several issues. The permittee prepared an SO₂ Minimization plan, which was approved by the Division in 2001, to allow the use of the plant flare to control emissions in the event the acid gas reinjection system is unavailable, and minimize the likelihood and duration of such events. Permit MD-401 had required Devon to route acid gases to a 2-stage Claus unit with incinerator if they could not be reinjected. The amended permit now requires the facility to follow the SO₂ Minimization plan instead of utilizing the Claus unit, which is inoperable and is no longer listed as an emission source for this facility. MD-401A also removed the g/hp-hr NO_x limitations for the Solar Centaur turbines (units ST#1 and ST#2); these limitations were not possible to meet consistently during low load conditions. The amended permit also gives Devon the option of demonstrating the use of natural gas as fuel in order to comply with 40 CFR 60 Subpart GG, in accordance with the 7/8/04 revisions to Subpart GG. Permit MD-401A supersedes all previous permits and waivers.

Applicable Requirements

Applicable requirements include the requirement to submit SO₂ emissions inventories under WAQSR Chapter 14, the opacity limits from WAQSR Chapter 3, Section 2, and the permit limits and requirements from WAQSR Chapter 6, Section 2 permit MD-401A. The facility is also subject to NSPS standards in 40 CFR 60 Subparts KKK and GG. Gas-fired furnaces are subject to NO_x limitations from WAQSR Ch 3 Sec 3. The five catalytically controlled compressor engines are subject to CAM (Compliance Assurance Monitoring). Additionally, the facility is subject to the accidental release prevention requirements of 40 CFR Part 68.

Based on AP-42 factors, potential formaldehyde emissions (the largest single HAP emitted at the facility) are 6.5 tons per year and total potential HAP emissions are 18.7 tons per year. This would indicate that the site is not a major source of HAPs and not subject to the major source NESHAPs (National Emission Standards for Hazardous Air Pollutants) of 40 CFR Part 63.

Periodic Monitoring

Where periodic monitoring is not specified by an applicable requirement, periodic monitoring methods are established according to the Division's "Guidance for Periodic Monitoring Requirements of the Operating Permit Program," issued July 1, 2003.

For visible emissions, the permittee shall verify the use of natural gas as fuel for all units except the flare. For the flare, the pilot flame monitoring required by Part 60 Subpart KKK shall be considered periodic monitoring for visible emissions.

For NO_x emissions from engines not subject to CAM, the permittee shall monitor emissions once per quarter or per semiannual period consistent with the Periodic Monitoring Guidance. The heaters and boilers shall be operated and maintained in accordance with manufacturer's or supplier's specifications

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and recommendations or good maintenance practices. CO monitoring is not required for the sources not subject to CAM.

For the requirement to follow the SO₂ Minimization Plan, the permit shall monitor events when the acid gas reinjection system is inoperable to estimate SO₂ emissions from the event and determine whether there were any deviations from the SO₂ Minimization Plan.

Compliance Assurance Monitoring

Compliance Assurance Monitoring (CAM) applies to CO and NO_x emissions from units C-7A and C-13A, and to CO emissions from units C-6, C-9, and C-10. CAM consists of monitoring daily the temperature of the gas entering the catalysts and monthly the pressure drop over the catalysts, as well as periodic emissions testing and following written inspection and maintenance procedures. The temperature and pressure drop monitoring is similar to the monitoring requirements in the NESHAP for reciprocating internal combustion engines.

