MEMORANDUM

To: Reviewers

Through: Lori Bocchino, Operating Permit Program Manager

From: Maggie Endres, Scientist

Subject: Draft Chapter 6, Section 3 Operating Permit 3-0-246, Anadarko E&P Company, LP, Federal 1691 8i Wellsite

Date: January 6, 2011

Introduction

Attached for your review is a draft Wyoming Air Quality Standards and Regulations (WAQSR) Ch 6, Sec 3 operating permit for the Federal 1691 8i Wellsite. The facility compresses coal-bed methane. Emission sources include six Caterpillar G3516TA and four Deutz TBG 620 V12K engines.

Permitting History

The permits in this paragraph have been superseded, but are listed to document the permitting history. Waiver AP-0505 (1/21/03): was issued for the construction of the station, consisting of two Katolight generator engines. Permit MD-986 (2/24/04): allowed replacement of the two Katolight engines with one Caterpillar engine. Permit MD-1110 (1/18/05): allowed installation of two additional Caterpillar engines. Permit MD-1499 (12/18/06)/MD-1499A (5/14/08): allowed installation of three additional Caterpillar engines. The permit was amended to modify the site-rated horsepower and emission factors for the six Caterpillar engines, and extend the construction timeframe. Each Caterpillar engine is equipped with air-fuel ratio controls (AFRC) and non-selective catalytic reduction (NSCR) catalysts. Initial performance testing was completed for all Caterpillar engines.

Permit MD-8146 (2/17/09): allowed installation of four Deutz engines, each equipped with an oxidation catalyst. Permit requirements include the following: NO_X and CO emission limits for all engines, as well as VOC limits for the Deutz engines; emissions testing every 12 months; notification and retesting if any engine tests outside the permitted limits; compressor engine stack height requirements (which have all been met); and maintaining the engines and air pollution equipment, and monitoring the control equipment. Equipment monitoring includes installation of a thermocouple to measure the inlet catalyst temperature, and installation of a device to measure pressure drop across the catalyst. Initial performance testing was completed for all Deutz engines.

Applicable Requirements

In addition to the permit requirements listed above, the sources at the facility are subject to the visible emission limits set forth in WAQSR Ch 3, Sec 2. The permittee must also comply with any applicable requirements from Ch 5, Sec 2 New Source Performance Standards, and 40 CFR Part 60, Subpart JJJJ - *Stationary Spark Ignition Internal Combustion Engines* (Affected engines are defined at §60.4230 of the subpart), and from Ch 5, Sec 3 National Emission Standards for Hazardous Air Pollutants, and 40 CFR Part 63, Subpart ZZZZ for *Stationary Reciprocating Internal Combustion Engines* (All engines are subject to any applicable requirements from Subpart ZZZZ).

Periodic Monitoring

For periodic monitoring of visible emissions from the engines, the permittee shall monitor the type of fuel used to ensure natural gas is the sole fuel source for these units. Each engine will be tested annually, and monitored as required by permit MD-8146.