

STATEMENT OF BASIS

To: Reviewers
Through: Lori Bocchino, Operating Permit Program Manager
From: Don Watzel, Lead Air Quality Modeler/Meteorologist
Subject: Draft Chapter 6, Section 3 Operating Permit 3-2-200, Basin Electric Power Cooperative, Barber Creek Generating Station
Date: August 21, 2013

Introduction

Attached for your review is the draft renewal Wyoming Air Quality Standards and Regulations (WAQSR) Ch 6, Sec 3 operating permit for the Basin Electric Power Cooperative, Barber Creek Generating Station. The facility uses three natural gas driven Solar Taurus 70 turbine engines to provide local generation and also provide line voltage stability to the region. A Caterpillar 3412 diesel generator is used to start the turbines in cold weather.

Permitting History

CT-2712 (02/8/2002): allowed for the construction of three turbine engines and one diesel generator. Emission limits for NO_x and CO, a maintenance program, and ambient temperature recordkeeping were established for the turbines with an operating hour limit set for the diesel generator. This permit was corrected on November 21, 2003 for the site rating of the turbines.

Waiver wv-11332-2 (1/7/2011): corrected the diesel generator engine configuration at the facility, and supersedes the generator engine conditions listed in CT-2712. Applicable requirements for the generator engine include an operating hours limit and a visible emissions limit.

Applicable Requirements

The turbine engines are subject to the requirements of 40 CFR 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines*. The turbine engines are not subject to the requirements of 40 CFR 63 Subpart YYYY, *Stationary Combustion Turbines*, since the facility is not a major source of hazardous air pollutants. Additionally, the turbine engines are subject to the visible emission requirements in WAQSR Ch 3, Sec 2. The diesel generator engine is subject to the requirements of 40 CFR 63 Subpart ZZZZ, *Hazardous Air Pollutants for Stationary Internal Combustion Engines*. The diesel generator engine was purchased in 2001 and is not subject to 40 CFR 60 Subpart IIII, *Requirements for Stationary Compression Ignition Internal Combustion Engines*.

Periodic Monitoring

Monitoring of NO_x and CO emissions from all the turbine engines is required at least every 2160 hours of operation. The permittee shall also ensure natural gas is the sole fuel source for the turbine engines to comply with visible emission monitoring requirements. The permittee is required to monitor and record the operating hours of the diesel generator and each turbine engine. The permittee shall also measure the turbine engine fuel sulfur content to comply with 40 CFR 60, Subpart GG. Additionally, the permittee shall monitor the diesel generator engine at least semi-annually to comply with visible emission requirements.