COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Southwest Regional Office

MEMO

TO Air Quality Permit File Title V Operating TVOP-32-00040

FROM Martin L. Hochhauser, P.E.
Air Quality Engineering Specialist
Bureau of Air Quality

THROUGH Barbara R. Hatch, P.E.
Environmental Engineering Manager
Bureau of Air Quality

Mark A. Wayner, P.E.
Environmental Program Manager
Bureau of Air Quality

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SUBJECT Comments and Response Document
Review of Title V Operating Permit Application
GenOn Wholesale Generation L.P./Seward Generating Station
East Wheatfield Township, Indiana County

The main sources at the Seward Generating Station are two (2) circulating fluidized bed (CFB) waste coal-fired boilers (Source IDs 034 and 035), with nominal fuel heat inputs of 2,532 MMBtu/hour each, which power a single electrical generator with a nameplate capacity of 525-MW. Emissions from the CFB boilers are controlled by limestone fed into the fluidized bed to control sulfur dioxide (SO_2) emissions, selective non-catalytic reduction systems (SNCR) and low combustion temperatures to control emissions oxides of nitrogen (NO_x), and flash dryer absorber (FDA), coarse particulate cyclone separation with reinjection into the bed, followed by pulsejet cleaned fabric filters to control PM emissions and further control SO_2 emissions. Collection of SO_2 and acid gases, including hydrochloric acid and hydrofluoric acid, by calcium in the limestone takes place in the boiler, FDA, cyclone, and fabric filter. Run-of-mine coal is also burned in the boilers as necessary, and No. 2 fuel oil is combusted during startup and emergencies.

Supporting equipment at this site includes one 685-bhp emergency diesel generator engine, one 600-bhp emergency diesel boiler feed water engine, one 265-bhp emergency diesel firewater pump engine, two diesel air compressor engines (440-bhp & 300-bhp), a 85-bhp portable diesel water pump engine, a 13.6-bhp light tower diesel engine, a 100,000 gas fuel oil storage tank, two 30 gallon cold cleaning machines, coal processing and handling, limestone processing and handling, conveying equipment including a fuel barn, four, fuel oil-fired limestone dryers, with a total heat input capacity of 68 MMBtu per hour, and plant roads.

The application for the renewed Title V Operating Permit (TVOP) for the current equipment that comprises the Seward Generating Station was received on March 18, 2005. Also, the proposed Operating Permit incorporates changes requested by submittal of Operating Permit modification (Auth. ID# 729002), received on June 2, 2008, in advance of issuance of this proposed Operating Permit. In addition, the proposed TVOP incorporates later changes to the facility authorized by modifications of Plan Approval (PA-32-00040B) and issuance of a General Permit (GP9-32-0040). Changes to the original authorization under the Plan Approval are discussed below.

The Seward Generation Station is a repowered electrical generating unit facility. Previously, the facility consisted of three pulverized coal-fired boilers generating steam for two steam turbines/generators. Net electrical output from the facility was 200-MW. Only the 600 foot tall, single flue, stack (Source ID S04) and the Emergency Diesel Generator Engine (Source ID 103) from the previous plant are part of the current facility. The Emergency Diesel Firewater Pump Engine (Source ID 111) is an existing engine from another facility.

A renewed Title V Operating Permit TVOP-32-00040 was issued for the old equipment which comprised the Seward Generation Station on September 19, 2000. The life of this permit was extended by the submittal on March 18, 2005, and determination as Administratively Complete of an application to renew the TVOP. The issued TVOP presently authorizes operation of the Emergency Diesel Generator Engine only, since it is the only process unit operating that was authorized by the TVOP issued in 2000.

On April 23, 2001, Plan Approval PA-32-00040B was issued to authorize construction and temporary operation of primary equipment currently operated at the Seward Generating Station, subject to the permanent shutdown of the existing boilers at the facility. This Plan Approval included the CFB boilers and their emission control systems, the limestone dryers, #2 fuel oil tank, and plant fugitive sources including material processing and roads. The Plan Approval had an expiration date of April 23, 2006.

On April 15, 2005, the Plan Approval was modified to authorize additional fuel handling and sizing equipment. On September 30, 2009, the Plan Approval was modified to authorize installation of an additional 200 MMBtu/hr, fuel-oil fired burner in the primary air inlet duct of each CFB boiler. On February 17, 2010, the Plan Approval was modified to authorize installation of an emergency, 600-bhp, diesel, boiler water pump engine. Finally, on October 21, 2011, Plan Approval, PA-32-00040B was modified to authorize construction of the fuel processing barn. A General Permit, GP9-32-0040 was issued on May 3, 2012 to allow the construction of a 300-bhp, diesel engine to drive a portable air compressor used to support the trammel and screening operation.

About two dozen time extensions for the Plan Approval to repower the Seward Generating Station have been granted to authorize temporary operation until the present. Initially, each of these time extensions were valid for 120 days; later, after Pa. Code was changed, time extensions valid for a 180 day period were issued. The current time extension was issued on September 7, 2012 and expires on April 11, 2013.

Notice of the Department's intent to issue the proposed TVOP for the Seward Generating Station was published in the Pa. Bulletin on November 17, 2012 and in the Indiana Gazette, Indiana, PA, on December 6, 7, and 8, 2012. The 30-day public comment period closed on January 7, 2013. Copies of the proposed TVOP and the associated Technical Review Memo were sent to EPA on November 20, 2012. Their 45-day comment period closed on January 4, 2013.

During the comment period, comments were received from Clean Air Council (CAC), GenOn, and 3 individual commenters. Their comments and the Department's responses are contained in ATTACHMENT 1. A list of all changes that have been made to the TVOP since the draft was sent to EPA on November 20, 2012 is contained in ATTACHMENT 2. A list of all who provided comment is included as ATTACHMENT 3.

After thorough review and careful consideration of the comments received during the comment period, the TVOP has been revised where indicated in the Comments and Response Document. I recommend that this permit be issued with a five year term.