

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Southwest Regional Office

MEMO

TO: Air Quality Case File OP-56-00149

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DATE: June 21, 2011

RE: SOOP Renewal Application OP-56-00149
Somerset Area School District
Maple Ridge & Eagle View Elementary Schools
Somerset Borough, Somerset County
APS 715538 AUTH 827073 PF 513319

BACKGROUND

The Department received a synthetic minor renewal Operating Permit application on February 26, 2010 from the Somerset Area School District (SASD) for their Maple Ridge and Eagle View Elementary Schools (MREVES) in Somerset Borough, Somerset County. The schools are located on State Route 281 south of Somerset, PA. The SIC and NAICS Codes for elementary and secondary schools are 8211 and 611110, respectively. The schools submitted separate permit applications in 1999 and 2003 but were consolidated into a single permit when the Department's inspector noted that the schools were located on contiguous and adjacent property.

Each school operates two (2) tri-fuel boilers as well as an emergency electric generator. Maple Ridge has two coal-fired CNB Tri-Fuel, 3 pass wetback, Model T-125L units rated at 4.3 mmbtu/hr. They are equipped with hydraulic RAM stokers and single stage Breslove separators which exhaust to a single stack. Maple Ridge #1, Source #031, is capable of burning both coal and natural gas. It generally runs on gas in the fall and spring. Maple Ridge #2, Source #032, uses coal only. The emergency generator at Maple Ridge is a Cummins Power Model #GGFD-5563985, 35 kW natural gas-fired unit designated as Source #036 in the permit and is test fired weekly.

The boilers at Eagle Ridge are CNG Tri-Fuel, Model #T-125LW-CA/G units rated at 4.3 mmBtu/hr and were installed in July 1997 (Source #033 and #034). The boilers are equipped

with auburn stokers and single stage Breslove separators. These units are alternately fired between coal and gas from year to year. The boiler burning gas is used in the spring and fall and the coal unit is used the entire heating season. Eagle Ridge also has a Kohler Model #50-R2282, 55 kW emergency generator, Source #035, on site which is test fired weekly.

The application was deemed administratively complete on April 2, 2010. The previous renewal operating permit expired on June 7, 2010.

SOURCES, CONTROL DEVICES AND EMISSIONS

In 1996 the permittee was advised by the Department to take a 2,160 tpy coal usage limit to avoid Title V status. SASD proposed a 2,150 tpy coal limit which corresponds to the following potential to emit estimates at the schools:

Table 1 - Potential To Emit After Limitation of 2,150 tpy Coal

Pollutant	PTE after limitation of 2,150 tpy coal
NO _x	10.2
CO	11.8
VOC	1.4
SO _x	99.4
PM	16.1

This elective restriction has been included in the operating permit. Typical actual annual coal usage is in the range of 200 to 300 tpy at both schools. The boiler emissions were estimated using AP-42 Section 1.1 emission factors for bituminous coal. The boilers are equipped with overfire air systems and opacity monitoring devices with alarms to control excess air flow if opacity is exceeded.

Coal sulfur content is limited to 2.3% by weight and ash content to 10%. The Breslove Separator has a minimum estimated particulate matter removal efficiency of 72%. The particulate is collected in a hopper and evacuated as needed to discharge into a 55 gallon drum with a dust tight cover.

REGULATORY ANALYSIS

There are no new regulatory requirements which apply to this facility. There is one recently promulgated NESHAPs standard which potentially could apply to MREVES. 40 CFR Part 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines (SRICE) applies to both major and area sources of hazardous air pollutants (HAPs). However, 40 CFR 63.6590(b)(3)(vii) exempts existing institutional emergency SRICE located at area sources of HAP emissions from having to meet the requirements of Subpart ZZZZ.

There are no applicable New Source Performance Standards. Notable SIP standards which apply include 25 Pa. Code Section 123.11 – 0.4 lb PM/mmbtu, 123.22 – 4 lb SO₂/mmbtu, the malodor provisions of 123.31, and the opacity standards of 123.41. As mentioned above, the boilers are limited to burning no more than 2,150 tons of coal total per consecutive 12 month period. The permittee is required to do weekly monitoring for fugitive, visible, and malodor emissions and to keep records of the observations. Annual fuel usage records are required to be kept as well as coal analysis. The emergency generators are limited to 500 hours of operation per consecutive 12 month period apiece and records of operation must be maintained.

CONCLUSIONS AND RECOMMENDATIONS

I have completed my review of SASD's Synthetic Minor renewal application for the Maple Ridge and Eagle View Elementary Schools. SASD has met the regulatory requirements associated with this application submittal. The attached draft permit includes the applicable regulatory requirements for this facility. I recommend that the proposed Operating Permit be issued for this for a five (5) year permit term.