

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Southwest Regional Office

MEMO

TO Air Quality Permit File OP-56-00159

FROM Jesse S. Parihar
Air Quality Engineering Specialist
Air Quality Program



THROUGH Thomas J. Joseph, P.E.
Environmental Engineer Manager
Air Quality Program

Mark R. Gorog, P.E.
Regional Manager
Air Quality Program



DATE September 28, 2016

RE **Comments and Response Document**
Somerset County Technical Center
Somerset Township, Somerset County
AUTH # 1141178, APS # 917341, PF # 511914

On June 13, 2016, the Department received a State Only Operating Permit (SOOP) renewal application from Somerset County Technical Center (SCTC) for their existing Technical School located in Somerset Township, Somerset County. The facility is operating under OP-56-00159 originally issued on January 24, 2006, amended on September 22, 2009, renewed on August 19, 2011, and expired on August 19, 2016. The Department did not receive the permit renewal application six months prior to the expiration of the existing permit. On August 18, 2016, a notice of violation (NOV) was sent to the applicant. On September 26, 2016, the case was closed by the operational staff.

Notice of intent to issue the Operating Permit was published in the *Pennsylvania Bulletin* on August 27, 2016, in accordance with the requirements of 25 Pa. Code § 127.44-46. The required 30-day public comment period closed as of close of business on September 26, 2016.

A copy of the permit and review memo was sent to the applicant on August 23, 2016 for comments. No comments were received on the proposed permit from the public or the applicant.

I recommend issuance of OP-56-00159 for the above referenced facility for a five (5) year term from the date of issuance of this authorization.

COMMONWEALTH OF PENNSYLVANIA
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MEMO

TO Air Quality Permit File SOOP-56-00159

FROM Jesse S. Parihar
Air Quality Engineering Specialist
Bureau of Air Quality



THROUGH Thomas J. Joseph, P.E.
Environmental Engineer Manager
Air Quality Program

Mark R. Gorog, P.E.
Regional Manager
Air Quality Program



DATE: August 23, 2016

RE: SOOP Renewal Application OP-56-00159
Somerset County Technical Center
Somerset Township, Somerset County
AUTH 1141178; APS 917341; PF 511914

BACKGROUND

Somerset County Technology Center (previously named *Somerset County Technical Institute*, or "SCTI,") is a Public Vocational-Technical School, located just outside the Somerset County in Somerset Township. Somerset County Technology Center (SCTC) has eight sending high schools, in which students attend the center for one-half of the day and their home school for the other one half. The SCTC also conducts adult education center. SCTC is a synthetic minor facility and operates under State Only Operating Permit 56-00159.

Building heat is generated and supplied to school by one fossil fuel fired combustion unit. The facility has two propane-fired emergency generators to provide emergency lighting to the school in case of emergency. There is one (1) CNB Model T-250 LW-CA/G tri-fuel coal-fired/propane fired boiler rated at 8.5 MMBtu/hour which was installed in 1986 under a previously authorized Plan Approval 56-302-018. Tri-Fuel Boiler, Source 031, is the main heating unit at the school.

On February 11, 1999, the applicant submitted the initial SOOP application. State Only Operating Permit 56-00159 was issued on January 24, 2006, amended on September 22, 2009, was renewed on August 19, 2011, and expiring on August 19, 2016. SCTC started firing coal on October 23, 2006. The particulate matter (PM) and SO_x are the primary pollutants from coal burning. This is a stoker-fired unit equipped with a Breslove Separator for particulate matter control.

The Department received a synthetic minor renewal Operating Permit application on June 13, 2016, from the SCTC for one (1) Tri-Fuel boiler which traditionally burns coal at their secondary school in Somerset Township, Somerset County.

The current SOOP expires on August 19, 2016, and the application to renew that authorization was received on June 13, 2016. According to 25 § 127.446(e), permit renewal application must be received at least 6 months prior to expiration of the existing permit. On August 18, 2016, a notice of violation (NOV) was sent to the applicant and referred to the operations staff for enforcement.

As noted in the application, the facility started using propane as fuel for the Boiler (Source 031) and stopped using coal; however, coal can be used in the future if needed. The school is located about one mile east of Somerset, PA on State Route 31. The SIC and NAICS Codes for elementary and secondary schools are 8211 and 611110, respectively.

On September 21, 2009, the operating permit was administratively amended to change the responsible official, permit contact, and address for SCTC. The application was deemed administratively complete on April 1, 2011. The previous renewal operating permit for SCTC expired on February 1, 2011.

SOURCES, CONTROL DEVICES AND EMISSIONS

In November 1996, William J. Charlton, Engineering Services Chief for the Department’s SW Regional Office notified all permittee with coal-fired boilers in the region that their facilities would be considered major sources of sulfur dioxide (SO₂) unless a restriction on coal usage was accepted. SCTC accepted 2,000 tons per year (tpy) limit to avoid Title V operating permit requirements. This limit corresponds to the following potential to emit (PTE) estimates for the Tri-Fuel Boiler:

**Table: 1
Facility-wide Potential to Emit**

Pollutant	Potential to Emit (tpy)
NO _x	9.1
CO	11.0
VOC	1.3
SO _x	71.3
PM	15.0

PTE is based on 2,000 tons of coal throughput with a maximum 2.3% sulfur content per 12-month consecutive period.

These elective restrictions have been included in the operating permit. The boiler has a typical actual annual coal usage of approximately 250 tons and generally operates October through April each year during the heating season. The boiler emissions were estimated using AP-42 Section 1.1 emission factors for bituminous coal. The Breslove Separator has an estimated particulate matter removal efficiency of 72%.

There are several small emission sources at this facility which have been previously determined to be of minor significance in the previous operating permit. They include the following:

- Source # 032; one (1) propane-fired Burnham boiler; Model # 5K-200-50-G-PF, rated at 8.35 MMBtu/hr; and used for backup purposes.
- Source #101; one (1) Onan propane-fired emergency generator; Model #200101; rated at 30 kW; and test fired weekly.
- Source #102; one (1) Detroit Diesel propane-fired emergency generator; rated at 80 kW.

REGULATORY ANALYSIS

This facility is a synthetic minor source of all air pollutants. Therefore, the Somerset County Technical Center is a minor facility and an area source of HAPs. A review of potentially applicable federal and Pennsylvania air pollution control regulations was made and the results are shown in Table 2:

**Table: 2
Somerset County Technical Center (SOOP-56-00159) Regulatory Analysis**

Federal Regulations:

NSPS:

40 CFR Part 60 Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators.	Boiler at the facility is not greater than 250 MMBtu/hr. Subpart is not applicable.
40 CFR Part 60 Subpart Da – Standards of Performance for Electric Utility Steam Generating Units.	Boiler at the facility is not greater than 250 MMBtu/hr. Subpart is not applicable.
40 CFR Part 60 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.	Boiler at the facility is not greater than 100 MMBtu/hr. Subpart is not applicable.

40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.	This subpart applies to ICI boilers 10-100 MMBtu/hr constructed after June 9, 1989. The boiler (Source ID 031) is less than 10 MMBtu/hr and has no requirements under the subpart.
40 CFR Part 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.	There are no listed tanks at the facility
40 CFR Part 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.	No CI engine at the facility. Subpart is not applicable.
40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.	No SI engine at the facility is new enough (manufactured after June 12, 2006) to be applicable for this subpart. Subpart is not applicable.

NESHAPs:

40 CFR Part 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. (RICE)	The existing two emergency generators are of minor significance and have no requirements under this subpart.
40 CFR Part 63 Subpart DDDDD - National Emission Standards for Industrial, Commercial, Institutional (ICI) Boilers and Process Heaters.	The facility is not subject to this subpart as it is not a major source of HAP emissions.
40 CFR Part 63 Subpart UUUUU - National Emission Standards for Hazardous Air Pollutants (NESHAP) for electric utilities.	The facility is not subject to this subpart as there is no EGU source.
40 CFR Part 63 Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers.	<p>The Tri-Fuel boiler rated at 8.5 MMBtu/hr (Source ID 031) is authorized to burn a limited amount of coal. This boiler has requirements under the subpart and is considered existing, coal-fired boiler with heat input capacity of less than 10 MMBtu/hr that do not meet the definition of limited use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio. The owner/operator must conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.</p> <p>The Burnham boiler propane-fired rated at 8.35 MMBtu/hr (Source ID 032) is operated to meet the definition of a gas-fired boiler and has no requirements under the subpart.</p>

Air Programs:

40 CFR Part 64, Compliance Assurance (CAM) Monitoring.	No source at the facility is major for uncontrolled emissions.
40 CFR Part 98, Mandatory Greenhouse Gas Reporting	The SCTC is less than the 25,000 metric tons and is not required to report these emissions to the federal govt.

Pennsylvania Air Pollution Control Regulations:

25 Pa Code § 123.1 (Prohibition of Certain Fugitive Emissions)	Section is applicable.
25 Pa Code § 123.2 (Fugitive Particulate Matter)	Section is applicable.
25 Pa Code § 123.11 (Combustion Units)	Section is applicable to boiler (Source ID 031) and is limited to maximum particulate emission of 0.4 lb/MMBtu.
25 Pa Code § 123.22 (Combustion Units)	Section is applicable to boiler (Source ID 031) as it emits oxides of sulfur. The concentration of sulfur from the boiler is limited to 4 pounds per MMBtu of heat input over a 1- hour period.
25 Pa Code § 123.31 (Odor Emissions)	Section is applicable
25 Pa Code § 123.41 (Limitations - Visible Emissions)	Section is applicable
25 Pa Code § 123.42 (Exceptions - Visible Emissions)	Section is applicable
25 Pa Code § 123.43 (Measuring Techniques)	Section is applicable
25 Pa Code Chapter § 127.441 (Operating permit terms and conditions)	Section is applicable
25 Pa Code Chapter § 129.14 (Open Burning Operations)	Section is applicable. Facility is not in an air basin and open burning is allowed, with certain exceptions.

Existing Permit Requirements:

Conditions from the existing Operating Permit were carried forward into this proposed operating permit, with some deletions, changes, and additions. Permit language has been updated.

The following are new regulatory requirements which apply to this facility which were erroneously omitted from the previous State Only Operating Permit.

Notable SIP standards which apply to the above facility include 25 Pa. Code Section 123.11 – 0.4 lb PM/MMBtu, 25 Pa Code §123.22 – 4 lb SO₂/MMBtu, the malodor provisions of 25 Pa Code §123.31, and the opacity standards of 25 Pa Code §123.41 have already been included in the permit.

As mentioned above, the boilers are limited to burning no more than 2,000 tons of coal 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. Coal sulfur content is limited to 2.3% and ash content to 10%. Annual fuel usage records are required to be kept as well as coal analysis.

A site level condition has been added to permit which limits each emergency generator to 500 hours of operation per consecutive 12-month period and requires records of operation to be maintained.

The existing malfunction conditions of the permit have been revised and replaced with the new malfunction conditions.

CONCLUSIONS AND RECOMMENDATIONS

Somerset County Technical Center has met the regulatory requirements associated with this renewal application submittal. On March 25, 2011, an annual compliance monitoring inspection was performed by Mr. Michael Kaufman, Air Quality Specialist. No permit deviation or violation was observed by the Department during the inspection. The attached permit reflects the applicable regulatory requirements associated with this facility.

The “Intent to issue Notice” will be published in the PA Bulletin for a 30-day public comment period on August 27, 2016. The proposed State Only Operating Permit Synthetic Minor renewal will be sent to the applicant for review as well as the Department’s Air Quality Specialist and District Supervisor for any comments.

It is my recommendation that the proposed State Only Operating Permit renewal be issued for this facility for a five (5) year permit term.