

**South Carolina Department of Health and Environmental Control (SC DHEC)
Bureau of Air Quality (BAQ)**

**Response to Comments
Public Notice # 18-021-TV
SCE&G – Coit Combustion Facility
310 Heyward Street
Columbia, South Carolina 29201
Richland County
Air Permit No. TV-1900-0132**

The following is SC DHEC BAQ's (Department) response to comments made during the public notice period beginning June 7, 2018 through July 6, 2018, regarding the Title V permit renewal for SCE&G – Coit Combustion Facility, located at 310 Heyward Street, Columbia, South Carolina, Richland County.

The Department Decision, permit, statement of basis, this response document, and a letter of notification to citizens who submitted comments or asked to be notified of the decision are available for viewing at the SC DHEC Columbia office located at 2600 Bull Street, Columbia, South Carolina 29201 or the webpage at <https://www.scdhec.gov/air-quality-permitting-decisions>.

The Department reviewed the application, considered existing equipment, and reviewed applicable regulations as part of the permit drafting process. This process includes computer modeling that is provided by the applicant and reviewed by the Department's modeling section for completeness and accuracy.

Comment: Assertion that the facility claims to be grandfathered from all emissions controls as a facility pre-existing air pollution control requirements; commenter requests information on what, if any, controls will regulate the facility.

The combustion turbines located at the SCE&G - Coit facility were installed in 1969, pre-dating the enactment date of the Clean Air Act (CAA) of 1970. This facility was in operation prior to the onset of the Prevention of Significant Deterioration (PSD) regulations, established in 1977 as an amendment to the CAA, and is considered an existing PSD major source. Based on the information provided, the facility has made no changes or additions to the equipment that would initiate a review for PSD and the potential installation of control equipment.

Standards established specifically for turbines under the New Source Performance Standards (NSPS) (found at 40 CFR 60) were reviewed for applicability. Based on the information provided and definitions contained in Subpart A of 40 CFR 60, no construction, modification, or reconstruction has occurred which would subject the turbines to NSPS regulations. These regulations include:

- (1) 40 CFR 60, Subpart GG – Stationary Gas Turbines: This regulation is applicable to any facility, as defined in §60.330(a), which commences construction, modification, or reconstruction after October 3, 1977 (§60.330(b)). Based on the information provided, the facility has not undergone any activities that meet the definitions of construction, modification, or reconstruction since the initial installation in 1969.

- (2) 40 CFR 60, Subpart KKKK – Stationary Combustion Turbines: This regulation is applicable to stationary combustion turbines that commenced construction, modification, or reconstruction after February 18, 2005. Based on the information provided, the facility has not undergone any activities that meet the definitions of construction, modification, or reconstruction since the initial installation in 1969.

As discussed further below in the response regarding operating hours, the two turbines at this facility are peak shaving units that operate only during periods of peak power demand and to ensure proper operation. The facility is permitted to use only natural gas or distillate fuel oil with a maximum sulfur concentration of 0.0015% by weight as low sulfur fuel is the only distillate fuel oil available for purchase. This is a lower sulfur concentration than the maximum fuel sulfur concentration limit of 0.5% by weight allowed by the permit and the above subparts (§60.333(b) and §60.4365(a)).

The facility is also subject to a visual emission limitation, in accordance with SC Regulation 61-62.5, Standard No. 4, and fugitive particulate matter requirements, in accordance with SC Regulation 61-62.6.

The Department must make a permitting decision based on the information provided in the application submitted, and cannot require an applicant to install control devices if the current air quality standards and regulations can be met without such devices.

Comment: Concerns about location of the facility and proximity to Vulcan Aggregate Quarry/Idling and slowly moving diesel electric train engines

The SCE&G - Coit facility was required to submit air dispersion modeling to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). The analysis was reviewed as part of the permit renewal process and demonstrated that the facility would not cause or contribute to a violation of the NAAQS. There is not a requirement to include other nearby facilities in the SCE&G – Coit air dispersion analysis. However, the Department requires background monitoring concentrations to be added in all criteria pollutant modeling to account for impacts from any other nearby sources such as the referenced Vulcan Aggregate Quarry and mobile sources such as the diesel train engines.

Comment: Questions about Facility Operating Hours

The facility maintains annual operating hours on-site and provided the number of operating hours per year for each of the two units for the past five years. These hours include both service/maintenance time and hours of operation for peak shaving.

Annual Operating Hours		
Year	Unit CT1	Unit CT2
2013	53.50	47.90
2014	63.86	59.69
2015	18.71	52.18

Annual Operating Hours		
Year	Unit CT1	Unit CT2
2016	16.52	14.16
2017	22.08	45.25

The two SCE&G - Coit units are not intended for base load generation and only operate during periods of peak power demand, generally on hot summer days or cold winter mornings. In general, these two units are the “last on” during those high demand periods and are also the “first off.” They will be operated periodically to ensure they are functioning properly. During rare occasions, these units may serve to help restore the electric grid, since they have “black start” capability. The SCE&G - Coit units have no limits on the hours of operation; however, simple cycle turbines such as these are less economical to operate than other types of generation and thus are not likely to be used extensively.

SCE&G - Coit has operated a total of 393.85 hours since 2013, an average of about 79 hours for both units combined, per year. The units primarily operate on natural gas; however, because natural gas may be in short supply during cold winter days, the turbines are also able to combust ultra-low sulfur fuel oil.

Comment: How is SCDHEC protecting the public health and welfare from the impacts of this facility?

Federal and state air quality standards are established to be protective of public health, using scientific data and human health risk assessments. These standards are scheduled to be reviewed every five years by the EPA and have become more stringent over time.

The CAA requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for six common pollutants (“criteria” pollutants) considered harmful to public health. There are two types of NAAQS: primary standards and secondary standards. Primary standards are set to protect public health, in particular, the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, such as protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. National ambient standards have been set for the following pollutants emitted from this project: particulate matter (PM) (which consists of particulate matter less than 10 micrometers in diameter (PM₁₀) and particulate matter less the 2.5 micrometers in diameter (PM_{2.5})), sulfur dioxide (SO₂), nitrogen oxide (NO_x), and carbon monoxide (CO).

In accordance with South Carolina Regulation 61-62.1, “no permit to construct or modify a source will be issued if emissions interfere with attainment or maintenance of any state or federal standard”. The SCE&G Coit Combustion Turbine Facility was evaluated to determine if the emissions would interfere with attainment of the NAAQS. An air quality analysis was performed using an EPA-approved air dispersion computer model to simulate how the facility’s maximum emissions will be dispersed into the atmosphere surrounding the proposed site. The EPA-approved model demonstrated compliance with the NAAQS at and beyond the property boundary.

In addition to demonstrating compliance with the NAAQS, this facility is required to comply with all applicable regulatory requirements and terms included in the Title V permit. The Title V operating permit limits fuel oil sulfur content by weight (less than or equal to 0.0015 percent). The opacity of the stack emissions is also limited by the permit. SCE&G - Coit is required to submit annual compliance certification to DHEC and EPA itemizing conditions in the permit and how SCE&G - Coit has complied with each condition. The facility is also required to submit an emissions inventory every three years to DHEC, which list pollutants and emissions for the year.