

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

February 21, 2003

4APT-APB

Ms. Susan Jenkins
Georgia Environmental Protection Division
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, Georgia 30354

Dear Ms. Jenkins:

Thank you for the letter from the Georgia Environmental Protection Division (GEPD) dated January 13, 2003, requesting an opinion from the Region 4 office of the U.S. Environmental Protection Agency (EPA) concerning a proposed fuel switch at Georgia Power's Scherer Steam Electric Generating Plant in Monroe County, Georgia. The proposed fuel switch applies to Plant Scherer Unit 1 and Unit 2 and consists of switching from eastern bituminous coal to western Powder River Basin (PRB) coal. GEPD's specific questions are as follows: (1) Does the proposed fuel switch qualify as a pollution control project (PCP) under new source review (NSR) rules for prevention of significant deterioration (PSD)? (2) Does the proposed fuel switch constitute a modification under federal new source performance standards (NSPS)?

Regarding the first question, we believe the proposed fuel switch on its face qualifies as a PCP and may further qualify for the PCP exclusion. However, GEPD should conduct further evaluation as discussed in Item I. below before concluding that the proposed project warrants the PCP exclusion. Regarding the second question, Region 4's opinion is that no modification would occur under NSPS provided that there is no increase in the hourly emission rate of sulfur dioxide (SO₂), nitrogen oxides (NO_x), or particulate matter (PM). While Georgia Power has indicated that the emissions of these pollutants on a pounds per million Btu (lb/MMBtu) heat input basis would either decrease or remain at the current level, the hourly emission rates are not discussed in the company's proposal. We provide the basis for our NSPS opinion in Item II. below.

I. POLLUTION CONTROL PROJECT ASSESSMENT

A. Applicable Rules

GEPD has incorporated by reference the federal rules for PSD NSR in 40 CFR 52.21. Although rule revisions for 40 CFR 52.21 were promulgated on December 31, 2002, these revisions will not become effective in Georgia until GEPD revises its State Implementation Plan (SIP) to incorporate the revisions. The PSD rules currently applicable in Georgia are those in 40 CFR 52.21 prior to the December 2002 revisions. These rules specify that a pollution control

project at an electric utility steam generating unit (EUSGU) is not considered a qualifying physical change or change in the method of operation. Therefore, a qualifying EUSGU PCP can be excluded from PSD review.

The definition of PCP in 40 CFR 52.21(32) provides a list of the only types of activities or projects that can be considered an EUSGU PCP. This list includes “An activity or project to accommodate switching to a fuel which is less polluting than the fuel in use prior to the activity or project.” Switching from eastern bituminous to PRB coal would appear to be the kind of fuel switch that could be considered a PCP. However, to qualify for the PCP exclusion, the following three regulatory considerations must be taken into account:

1. “Pollution control project means any activity or project undertaken at an existing electric utility steam generating unit for purposes of reducing emissions from such unit.” [40 CFR 52.21(b)(32)] (Hereafter we refer to this as the “purpose test.”)
2. A PCP qualifies for the exclusion unless the reviewing authority “determines that such addition, replacement, or use renders the unit less environmentally beneficial.” [40 CFR 52.21(b)(2)(iii)(h)] (Hereafter we refer to this as the “environmentally beneficial test.”)
3. For a project that otherwise qualifies as a PCP, a PCP exclusion cannot be granted if it “would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I [of the Clean Air Act], if any,” and the reviewing authority “determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment or visibility limitation.” [40 CFR 52.21(b)(iii)(h)(1) and (2)] (Hereafter we refer to this as the “cause-or-contribute test.”)

B. The Purpose Test

To support its position that the proposed fuel switch is a PCP, Georgia Power provided a letter dated January 8, 2003, and an attached “White Paper.” In its White Paper, Georgia Power explains that accomplishing the fuel switch is not simply a matter of importing PRB coal rather than eastern bituminous coal. Several equipment changes are needed to accommodate PRB coal combustion. While we understand the need for such changes, equipment changes of this magnitude call into question whether a companion purpose of the proposed fuel switch might be to achieve an increase in the capacity of Units 1 and 2 or to extend the life of the units. We recommend that GEPD obtain a written statement from Georgia Power that the only purpose to be served by the proposed fuel switch is a reduction in emissions. Although not required by rule, we further recommend that Georgia Power provide information on the generating rates of Units 1 and 2 for the last five years and report generating rates for the first five years after the switch to PRB coal if the switch is approved by GEPD. This information would help confirm that the switch was not accomplished for a purpose other than emissions reduction.

C. The Environmentally Beneficial Test

The only pollutants mentioned in Georgia Power's White Paper are sulfur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter. Conceivably, the proposed fuel switch might also affect emissions of other pollutants. Of specific interest to us are any likely increases in carbon monoxide (CO) emissions and emissions of pollutants that derive from the trace chemical constituents in coal. The pollutants in the latter pollutant category that are of most interest to us are lead, mercury, fluorine, and chlorine. (GEPD might also wish to inquire about other pollutants such as arsenic, chromium, polycyclic organic matter, and any other substance reported by Georgia Power as an air release in its annual toxic chemical release inventory report for Plant Scherer.)

Georgia Power should provide an assessment of whether any collateral emission increases might result for CO, lead (and lead compounds), mercury (and mercury compounds), fluorides (including hydrogen fluoride), and hydrogen chloride. If any collateral increases might result, then a further assessment should be made to evaluate whether such increases are consistent with the environmentally beneficial test. Further related to the collateral emissions effects of the proposed fuel switch, Georgia Power should provide a statement as to whether the sulfur trioxide (SO₃) conditioning system needed to maintain electrostatic precipitator collection efficiency might lead to an increase in sulfuric acid mist emissions or whether the lower coal sulfur content of PRB coal would compensate for any effect of the SO₃ conditioning system.

In the absence of information about the effect of the project on emissions of pollutants other than NO_x, SO₂, and particulate matter, we are unable to conclude that the proposed fuel switch is environmentally beneficial. GEPD needs to be assured that the project will result in an environmentally beneficial outcome before agreeing that the project merits the PCP exclusion.

D. The Cause-or-Contribute Test

As discussed above, the cause-or-contribute test must be applied if the project "would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I, if any." We do not have information that would allow us to comment on whether annual emissions from Plant Scherer Units 1 and 2 have been used previously for purposes of title I. We will leave this assessment to GEPD. What we can say is that the emissions information for NO_x, SO₂, and particulate matter in the Georgia Power White Paper is in terms of lb/MMBtu heat input and not in terms of representative actual annual emissions. Furthermore, the White Paper does not provide information on emissions of CO and lead, both of which are criteria pollutants. Before agreeing that the PCP exclusion is appropriate, GEPD should confirm that the cause-or-contribute test is either not required or has been met.

Even if a formal cause-or-contribute analysis is not required, GEPD might wish to obtain information from Georgia Power on possible changes in stack dispersion characteristics produced by the switch, specifically changes in exhaust gas temperature and volumetric flow.

With this information, GEPD could conduct a screening analysis to confirm that the proposed project should not affect ambient air quality adversely.

II. NEW SOURCE PERFORMANCE STANDARDS APPLICABILITY

As indicated in NSPS Subpart A at 40 CFR 60.14(a), a modification is any physical or operational change to an existing facility which results in an increase in the emission rate of any pollutant to which a standard applies. This paragraph also indicates that, upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere. Subpart A at 40 CFR 60.14(b) indicates that an emission rate is to be expressed as an hourly emission rate (i.e., kg/hr). For an electric utility steam generating unit, 40 CFR 60.14(h) indicates that no physical change or change in the method of operation will be considered a modification unless the change increases the maximum hourly emissions achievable at the unit during the 5 years prior to the change.

Georgia Power has indicated that there will be a decrease in NO_x and SO₂ emissions on a lb/MMBtu basis, and changes in the electrostatic precipitators are designed to maintain PM emissions at the current level or lower. Provided there is no increase in the hourly emission rate of SO₂, NO_x, or PM, no modification will have occurred due to the proposed changes for Units 1 and 2. If there are increases in hourly emission rates, further evaluation would be necessary in relation to the provisions of 40 CFR 60.14(e)(4) and (5).

As a minor note, in the third paragraph on page 5 of the White Paper, we assume that Georgia Power meant to say “under NSPS” rather than “under PSD.” PSD applicability is not based on maximum hourly emissions.

III. OTHER COMMENTS

In its letter of support for a PCP exclusion, Georgia Power states its understanding “that a SIP construction permit is not required for the proposed project.” Federal PSD regulations do not speak to this point. We leave to GEPD the determination as to whether Georgia’s rules require a minor source construction permit and opportunity for public comment when granting a PCP exclusion. Some sort of permitting action will be needed to implement the lower emissions limits for NO_x and SO₂.

On page 4 of its White Paper, Georgia Power uses the term “routine maintenance” with reference to some of the work that will be performed on the electrostatic precipitators to accommodate the fuel switch. Nothing either stated in or omitted from Region 4’s opinion letter should be taken to mean that EPA either agrees or disagrees that any of the work described should be considered routine.

On page 4 of its White Paper, Georgia Power states that it is considering changing to a dry system for conveyance of ash from the electrostatic precipitators to the ash pond. Georgia

Power should state whether this change poses the possibility of an increase in particulate matter emissions.

If you have any questions concerning this letter, please contact Jim Little at (404) 562-9118.

Sincerely,

/s/

Jeanne M. Gettle
Acting Chief
Air Permits Section