

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

December 13, 2000

4APT-ARB

Mr. Ronald Methier, Chief
Air Protection Branch
Georgia Environmental Protection Division
4244 International Parkway, Suite 120
Atlanta, Georgia 30354

SUBJ: Southern LNG, Inc., Elba Island Terminal, Savannah Georgia
Draft Air Quality Permit and PSD Preliminary Determination

Dear Mr. Methier:

We are in receipt of the letter from the Georgia Environmental Protection Division (GAEPD) dated November 6, 2000, transmitting a draft air quality permit and prevention of significant deterioration (PSD) preliminary determination for the above facility. This project consists of reactivating the Southern LNG Elba Island liquified natural gas (LNG) terminal. The terminal has not been in commercial operation since 1982. As part of the project, Southern LNG proposes to replace five existing natural gas-fired LNG vaporizers with five larger capacity LNG vaporizers. We have discussed the project with representatives from GAEPD and Southern LNG.

Our comments on the preliminary determination, draft permit, and permit application are as follows:

1. Southern LNG has taken the position that, except for the new vaporizers, all other emissions units at the facility should be collectively considered an existing source and not a new source for PSD applicability purposes. Support for this position has been supplied in terms of EPA's Reactivation Policy. In brief, the Reactivation Policy provides that a reactivated facility can be considered an existing source if the facility owner can rebut the presumption that the deactivation of the facility was intended to be a permanent shutdown. GAEPD apparently agrees with the applicant's position and has not required PSD review for emissions units other than the new vaporizers. At this time we are not taking exception with conclusions regarding the Reactivation Policy, although concluding that a facility commercially inactive for 18 years is not a new source definitely extends the Reactivation Policy presumptive rebuttal provision to its limits.

What the permit application and the preliminary determination did not address, however, is whether the planned reactivation constitutes a modification under PSD rules. In two recent actions, EPA concluded that reactivation of a long dormant facility constituted a change in the method of operation and was therefore a modification. The more definitive of these two actions was a June 1999 Order issued by the EPA Administrator in relation to Entergy Louisiana's Monroe Electric Generating Plant (Entergy). In the Entergy case, the Administrator determined that the PSD exemption excluding an increase in hours of operation from consideration as a modification was not applicable. The Administrator reasoned that the intent of this exemption was to allow operating facilities to respond to changes in market conditions, and not to accommodate startup of facilities that had long been dormant. The second action was an August 2000 opinion from EPA Region 1 citing the Entergy Order in concurring with a state permitting agency that the reactivation of a power generating facility should be considered a modification.

In response to our concern (stemming from the Entergy Order) about whether reactivation constitutes a modification under PSD rules, Southern LNG recently provided an assessment to demonstrate that the circumstances in the Entergy case and in the Region 1 case differ from those in the Elba Island terminal case. Although we appreciate Southern LNG's timely comments, we do not believe these comments distinguish the LNG terminal from the Entergy facility. Southern LNG comments that the Elba Island terminal was never in a "shutdown" mode as was the Entergy facility. In fact, EPA did not rule on whether the Entergy facility was ever permanently shut down. Rather, EPA's position in the Entergy case was that the Entergy facility had long been dormant and that the increase in hours of operation resulting from reactivation should be considered a change in the method of operation because reactivation of a long-dormant facility did not meet the intent of the increase-in-hours-of-operation exemption. Similarly, we are not necessarily contending that the Elba Island terminal was permanently shut down. Our view instead is that, by any objective standard, the emissions units at the terminal have long been dormant just as in the Entergy case.

In summary, we request that GAEVD reconsider whether reactivation of the Southern LNG Elba Island terminal constitutes a major modification under PSD rules. This reconsideration should take into account the findings in the Entergy Order issued June 11, 1999.

2. The existing permit for the Southern LNG terminal is dated March 1979 and does not refer to any emissions units other than the existing vaporizers. We understand from GAEVD that the internal combustion reciprocating engine generators and combustion turbine generators were not listed in the permit because Georgia rules at the time did not cover such emissions units. If the draft construction permit for the reactivation project remains unchanged, the generators (with a total potential regulated pollutant emission rate of more than 1,000 tons per year) will continue without enforceable permit restrictions. Unless the generators are addressed in the construction permit for the reactivation, we

anticipate that the generic applicable requirements for these units in the title V operating permit eventually issued for the Elba Island terminal will allow emissions far in excess of those considered in the modeling evaluation for the reactivation.

3. We have the following comments on the vaporizer best available control technology (BACT) section of the September 2000 revised permit application:
 - a. On page 6-1, the applicant states that the volatile organic compounds (VOC) emissions increase exceeds the PSD significant emissions increase level of 40 tons per year (TPY) and refers to Table 6-1 as consistent with this statement. Table 6-1 shows a VOC emissions increase of 19.3 tpy which is less than the significant increase level. (Section 6.4.3 of the BACT evaluation contains a review for VOC emissions but refers to this as a “voluntary” review for information purposes only.) The draft permit includes emission limits for nitrogen oxides (NO_x) and carbon monoxide (CO) but not for VOC. We recommend that GAEPD consider including a VOC emission limit to insure that PSD avoidance for VOC is enforceable.
 - b. Within the NO_x BACT evaluation section of the permit application, the applicant discusses good combustion control practices (page 6-9). The first paragraph of this discussion refers repeatedly to gas turbines and not to vaporizers. GAEPD should confirm that the good combustion control practice assessment is appropriate for vaporizers.
 - c. On page 6-11 of the permit application, the applicant makes the following statement: “T-Thermal plans to institute future modifications to the combustion air staging design to further reduce NO_x production in this burner, but a commercial prototype is not currently available.” We recommend that GAEPD ask Southern LNG to provide periodic reports on progress in T-Thermal burner improvements and to assess the feasibility of burner retrofit when improvements are commercially available.
4. In terms of the air quality impact assessment, our review comments on this PSD application have been discussed with GAEPD. The additional information through these discussions resolved some of our comments and questions. The following are our remaining comments:
 - a. Impact Area Visibility Analysis - The Additional Impact Analysis of the permit application (Section 7.0) addressed visibility in the “near field region” (i.e., the area within 50 km of the Elba Island terminal). Of concern in this analysis are visibility sensitive receptors within the impact area (e.g., airports, state parks, etc.). The provided analysis appears to have been performed only at a distance of 50 km from the Elba Island terminal. Confirmation is needed that no visibility sensitive receptors exist closer than 50 km from the terminal.

- b. Growth, Soils, and Vegetation Analysis - The Additional Impact Analysis of the permit application (Section 7.0) provided no assessment of growth, soils, and vegetation impacts. This section only refers to a Federal Energy Regulatory Commission (FERC) favorable environmental assessment (EA) published in January 2000. Because no specific analysis is provided in the application, it is unknown whether: 1) the EA is appropriate to the current facility configuration, and 2) the EA analysis is appropriate and sufficient to satisfy PSD requirements. Not providing this information in the application means it may not have been available for public review of the draft PSD permit.
- c. ISCPRIIME - The separately provided project specific justification for the use of the non-regulatory model ISCPRIIME in this application has been reviewed and found appropriate and sufficient. ISCPRIIME is an acceptable air quality model to estimate Southern LNG's impacts.
- d. Southern LNG PSD Sources - The Elba Island terminal has not operated since 1982. The PSD major source NO₂ baseline date is February 8, 1988. The PSD minor source NO₂ baseline date for the impact area is April 12, 1991. The baseline concentration, the reference point for air quality deterioration under the PSD program, is defined as the air quality at the time the first complete PSD application is received for an area. For major sources, all actual emissions associated with construction (i.e., physical changes or changes in the method of operation) after the major source baseline date affect increment. Because Southern LNG has not operated since 1982, emissions associated with the total facility operation appear to consume PSD increment and should be included in future PSD impact modeling in the area.
- e. Impact Modeling Site Boundary - Figures D-3 through D-5 and the plot plan provided in the application show a fenced area about the facility that does not include the total island. As the application acknowledges, the public can access Elba Island via the Savannah River or South Channel. Evaluations of site boundaries for other facilities have determined that a shoreline by itself is not a sufficient barrier to public access to qualify the land area as non-ambient air for impact modeling. Therefore, to consider the total island as non-ambient air, additional "barrier(s)" to the public are needed along the shorelines.
- f. Load Modeling - The application states, without supporting information, that modeling analysis to determine worst impact under various loads was determined to be unnecessary. Although the modeling protocol indicates only the generators will operate at reduced loads, no other reason is given to justify not considering load in determining the worst case impact.

g. Emission Inventories - The selected other emission sources used in the national ambient air quality standards and PSD increment compliance modeling are

provided in Table D-1 of the permit application. The following are comments/questions concerning the inventories:

- All emission units from each source were combined into one representative emission point independent of the source's location. This technique is appropriate for sources with only one set of available coordinates or sources located a considerable distance from the significant impact area. The relative location of emission points becomes important the closer the source is to the Elba Island terminal. To determine the importance of this issue in the provided impact analysis, the location of each emission unit within the significant impact area should be provided for each emission source.
- Table D-1 of the permit application does not distinguish PSD emission sources. The PSD sources should be identified.
- Tanker unloading will occur approximately once per week. Unloading pumps will be maintained and powered by the tanker's power source. This secondary emission source was not included in the ambient air quality impact assessment. Because of the frequency and stationary nature of the tanker while unloading, tanker emissions during unloading should be considered for inclusion in all impact assessments.

h. Ozone Ambient Conditions - Total VOC emissions from the Elba Island terminal are greater than the PSD significant emission rate. Although ozone impact modeling is not normally required for single sources, information on the current ozone levels in the area should be cited to provide qualitative assurance that the increased VOC emissions from facility operation will not cause or contribute to violations of the ozone national ambient air quality standards.

If you have any questions concerning comments not related to the air impact assessment, please contact Darren Palmer at (404) 562-9052 or Jim Little at (404) 562-9118. Questions concerning our comments on the air impact assessment should be directed to Stan Krivo at (404) 562-9123.

Sincerely,

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division