

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

January 29, 2004

4APT-APB

Mr. Dan Abrams
Georgia Environmental Protection Division
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354

Dear Mr. Abrams:

Thank you for the request from the Georgia Environmental Protection Division (GEPD) dated December 22, 2003, to provide an opinion concerning Georgia Power's proposal to burn coal-derived "synthetic fuel" at one or more of its electric power generating stations. GEPD specifically asked if synthetic fuel could be considered essentially the same as the coal now allowed for use under Georgia Power's title V permits, thereby precluding the need for a title V permit modification when synthetic fuel is burned.

To form an opinion, we reviewed the synthetic fuel documentation provided by Georgia Power. From this information, we conclude that conversion of the coal now allowed for use to synthetic fuel will not materially change the allowed coal either chemically or physically in terms of effect on emissions. Therefore, our opinion is that a title V permit modification is not needed for synthetic fuel combustion. Having said that, however, please consider the following points:

1. Georgia Power provided information on two types of synthetic fuel: latex binder synthetic fuel and Carbontronics asphalt binder synthetic fuel. It is not clear to us if Georgia Power is proposing use of just one of these fuels or both. We assume Georgia Power plans to use both. The following comments are based on this assumption:
 - a. In the documentation on asphalt binder synthetic fuel, Georgia Power states that "[t]he amounts of vanadium and mercury in the binder will be contractually limited, as is done for sulfur, to insure there is no increase in emissions of these substances. We recommend that GEPD require Georgia Power to provide the contractual limits and then to provide periodic reports on actual fuel purchases verifying that the contractual limits have been met.
 - b. Georgia Power's documentation about latex binder synthetic fuel contains information to support the contention that mercury emissions will not increase as a result of burning the latex binder material when compared with the coal

that will be displaced by binder. We are not sure that this contention is warranted for the Nalco 9838 latex emulsion. Georgia Power provides information in an emulsions composition table (Table 2) showing that the mercury content of Nalco 9838 is 57 ppb by weight. Georgia Power then cites for comparison a coal mercury content ranging from zero to 230 ppb, with a mean of 76 ppb. Our concern is that we think the latex trace element composition numbers are on an as-applied basis with moisture included and not on an a dry basis which would be more comparable to coal. Since the moisture content of Nalco 9838 is 94.1 percent by weight, correcting for moisture could make a big difference. If we understand the composition data correctly, the mercury content of Nalco 9838 on a dry basis is 966 ppb by weight. This is considerably higher than the coal mercury content. Please check this with Georgia Power.

2. Also in Georgia Power's documentation, Georgia Power comments that any emissions from synthetic fuel production need not be considered because production will not take place at the site of their power generating stations. We recommend that GEPD make clear in writing to Georgia Power that any conclusions regarding title V permit modification requirements are contingent on synthetic fuel production operations not being located on the premises of the power generating stations.

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

Sincerely,

Gregg M. Worley
Chief
Air Permits Section