



Florida Power
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BUREAU OF AIR REGULATION

October 16, 2001

Mr. Scott Sheplak, P.E.
Administrator, Title V Section
Division of Air Resources
Florida Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Dear Mr. Sheplak:

Re: Crystal River Plant - Use of Coal Binder

Florida Power Corporation (FPC) intends to burn coal at the Crystal River facility that has been treated with a dust suppressant type binder. Application of the binder will occur prior to delivery. A copy of the MSDS for this binder, along with a review (signed and sealed by a Professional Engineer) summarizing the lack of environmental effects due to the use of the treated coal are enclosed for your review.

FPC is requesting written concurrence from the Department that the binder material falls within the classification of "chemical dust suppressant" currently authorized by the facilities Title V permit (0170004-008-AV, Appendix TV-3) and that the treated fuel is classified as coal, not as the coal/briquette fuel also identified in the Title V permit

Please feel free to contact me at (727) 826-4363 if you have any questions or need additional information.

Sincerely,

Jamie Hunter
Environmental Specialist

jjh/JJH003

enclosures

c(w/enc): Jonathan Holtom, FDEP – Tallahassee
Hamilton Owen, FDEP – Tallahassee
Jerry Kissel, FDEP – SW District

Review of Product CLC-3 (Chemical Change Agent/Dust Suppressant)

Background

Florida Power proposes to receive, handle, store and combust coal treated with the above referenced product at its Crystal River Power Plant. This product is applied to the coal prior to receipt at the power plant and aids in the suppression of dusting during handling and storage of the treated coal. This review address collateral environmental issues related to potential effects on air emissions.

Review


Based on the information provided in the Material Data Safety Sheet (MSDS), this product is primarily a mixture Tall Oil Pitch and water with smaller amounts of surfactants and emulsifiers.

A review of Tall Oil Pitch shows it is typically produced as a by-product in the wood based pulping process. Its uses include that of an environmentally benign bio-fuel and as an ingredient in chemical dust suppressants.

As indicated in the laboratory analysis of the CLC-3 product, it contains a relatively high heat content (dry basis) and a relatively low sulfur content when compared with the typical coal to which the product is applied. On this basis, the amount of sulfur in the product would not result in any increased potential for sulfur dioxide (SO₂) emissions resulting from the combustion of the treated fuel, as the product heat content would more than offset the heat content of the coal at a lower sulfur content.

Since the product is primarily an emulsion of hydrocarbons and water, the high combustion temperatures and combustion residence times occurring in the Crystal River coal-fired boilers would be expected to result in complete oxidation of the product material to carbon dioxide (CO₂) and water (H₂O). The small amount of SO₂ expected from the combustion of the product has been addressed above.

The fact that the product will be applied offsite (allowing for curing of the product on the surface of the coal), the resultant cured product will represent a very small portion of the total mass of the treated coal and the sulfur-to-heat content ratio is lower than that of the coal alone, results in the conclusion that use of coal treated with this product results in no detrimental environmental effects.


Jennifer A. Stenger, P.E.
Professional Engineer No. 52125

10/16/01
Date