



December 1, 1994

VIA HAND DELIVERY

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DEC 1 1994

Clair Fancy, Chief  
Bureau of Air Regulation  
Department of Environmental Protection  
Magnolia Park Courtyard  
Tallahassee, FL 32301

Bureau of  
Air Regulation

RE: C.D. McIntosh Power Plant, Unit No. 3  
Cofiring of Petroleum Coke

Dear Clair:

As you may recall, the City of Lakeland wrote to you on November 10, 1994, requesting Prevention of Significant Deterioration (PSD) and New Source Performance Standards (NSPS) applicability determinations. Your response dated November 18, 1994, indicated that a complete application for permit modification would need to be submitted prior to the Department making such determinations. Submittal of a complete application should not, however, be required before an applicability determination is made.

The federal NSPS rules, which the Florida Department of Environmental Protection has incorporated by reference, state that "when requested to do so by an owner or operator," the agency will make a determination of whether an intended action would constitute construction or modification (within 30 days of receipt of the request). 40 CFR § 60.5, incorporated by reference in Rule 62-296.800(3)(b), Florida Administrative Code.<sup>1</sup> This rule does *not* include a requirement that the request be accompanied by a completed permit modification application, and to be consistent, the Department should not require the City of Lakeland to submit a completed permit application before it makes an NSPS determination regarding the cofiring of petroleum coke. In addition, the Department's own rules actually "encourage" applicants to consult with the Department *before* submitting an application regarding the modification of any

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<sup>1</sup> In addition to this federal rule being incorporated by reference in the Department's rules, the State's delegation by the U.S. Environmental Protection Agency (EPA) is conditioned upon the Department issuing applicability determinations that are consistent with those made by EPA in the past. Letter from Bruce P. Miller, Chief, Air Programs Branch, Air, Pesticides, and Toxics Management Division, EPA Region IV, to Steve Smallwood, Chief, Bureau of Air Quality Management, dated May 2, 1988, page 3.

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 2

facility or concerning the need for pollution control equipment. Rule 62-4.060, Florida Administrative Code.

Consistent with the approach set forth under the federal NSPS and its own rules, the Department has historically made NSPS and PSD applicability determinations without requiring that a completed application be submitted. One of the primary purposes of a requested NSPS or PSD applicability determination is to allow the owner or operator to decide whether he or she wishes to proceed with a formal permit application. In addition, such determinations clarify the type of information that must be included in the application, which reduces the need for future requests for information once the application has been submitted. We recognize, however, that if information ultimately provided in an application is materially inconsistent with that provided in a request for applicability determination, the Department could revise its determination accordingly. Because of the importance of pre-application applicability determinations, the City of Lakeland respectfully requests that the Department make formal PSD and NSPS applicability determinations for the cofiring of petroleum coke at the McIntosh Power Plant, Unit No. 3. If specific information is needed, in addition to what is being provided in the subsequent portions of this letter and what was provided in the November 10, 1994, letter, please let us know and we will provide it to you.

As stated in the November 10 letter to you, the City of Lakeland plans to seek authorization for its McIntosh Unit No. 3 to cofire petroleum coke with coal (or coal and refuse) at a maximum rate of 20 percent by weight. As the test burn results indicated, when petroleum coke is blended in the appropriate amounts, the particulate matter, sulfur dioxide, nitrogen oxides, and opacity limits will not be exceeded. (A complete copy of the test burn results, which had previously been submitted to the Department in March of 1994, is included as Attachment 1.) Prior to submitting a permit revision application to allow the cofiring of petroleum coke, the City of Lakeland seeks confirmation that the planned use of petroleum coke will not trigger applicability of NSPS Subpart Da. In addition, if PSD review is required, the City of Lakeland seeks confirmation from the Department that control technology review will not be required for the boiler. The Department should be able to make both of these determinations based on information provided in this letter and in the November 10 letter.

*New Source Performance Standard - Subpart Da*

The City of Lakeland's McIntosh Unit No. 3 is an "existing" unit and not subject to NSPS Subpart Da. This is supported by correspondence from the U.S. Environmental Protection Agency (EPA). In December of 1978, the City of Lakeland wrote to EPA Region IV seeking a determination as to whether NSPS Subpart Da applied to the new McIntosh Power Plant Unit No. 3, which had been under a continuous program of construction for a period of time well in excess of one year prior to September 19, 1978 (the relevant date for Subpart Da applicability). See letter from Stephen C. Watson, Assistant City Attorney, City of Lakeland,

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 3

to William R. Phillips, General Counsel, EPA Region IV, dated December 13, 1978 (Attachment 2). Apparently based on a request for additional information, the City of Lakeland supplemented the December 1978 letter with a January 9, 1979, letter (Attachment 3). In response, William R. Phillips, Assistant General Counsel for EPA Region IV, prepared a memorandum dated January 11, 1979, which found that McIntosh Unit No. 3 was *not* subject to Subpart Da (Attachment 4). This conclusion was restated in a letter from Sanford W. Harvey, Jr., Regional Counsel, EPA Region IV, to the City of Lakeland dated March 2, 1979 (Attachment 5), and in a letter from the Chief of the Air Facilities Branch, EPA Region IV, to the City of Lakeland dated January 30, 1981 (Attachment 6). As you can see from these attached letters, McIntosh Unit No. 3 was not subject to NSPS Subpart Da when it was constructed and is therefore considered an "existing facility." What is more, the cofiring of petroleum coke in the unit should not trigger Subpart Da applicability.

The federal NSPS rules, which have been incorporated by reference by the Department, provide that physical or operational changes to an existing facility which result in an increase in the emission rate of any pollutant to which a standard applies are considered a "modification." Upon such a modification, the NSPS for the appropriate source category becomes applicable to the existing facility. 40 CFR § 60.14(a), incorporated by reference in Rule 62-296.800(3)(k), Florida Administrative Code. Under Subpart Da, an affected "facility" is an electric utility steam generating *unit* (not the entire plant site). Because the emission rates of the pollutants regulated under Subpart Da (sulfur dioxide, nitrogen oxides, particulate matter, and opacity) do not increase when petroleum coke is cofired at a maximum rate of 20 percent (based on total heat input) with coal (or coal and refuse) in Unit No. 3, the use of petroleum coke should not constitute a "modification" under NSPS.

Moreover, even if the emission rates of any regulated air pollutant were increased, the change would not constitute a "modification" because of the exception for the use of alternative fuels. Section 60.14(e) provides that where an existing facility is designed to accommodate an alternative fuel prior to the effective date of a standard, the use of the alternative fuel will not be considered a modification. A unit is considered to be "designed to accommodate" an alternative fuel if it could use the alternative fuel under its construction specifications. 40 CFR § 60.14((e)(4)). Subpart Da became effective for electric utility steam generating units in September of 1978, and because petroleum coke is so similar in substance to coal, Unit No. 3 can easily burn petroleum coke without changes to its design, as demonstrated by the recent test burn. Because the Unit was therefore designed to accommodate petroleum coke, the NSPS definition of "modification" should not be triggered and Subpart Da should not apply.

Furthermore, EPA has consistently determined that the use of an alternative fuel in a unit that was designed to accommodate such fuel does not constitute a modification, and, as stated previously in footnote 1, the Department is required by EPA under the State's NSPS delegation to issue applicability determinations that are consistent with those made by EPA in the past.

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 4

Letter from Bruce P. Miller, Chief, Air Programs Branch, Air, Pesticides, and Toxics Management Division, EPA Region IV, to Steve Smallwood, Chief, Bureau of Air Quality Management, Florida Department of Environmental Protection, dated May 2, 1988, page 3. For examples of EPA NSPS applicability determinations based on the alternative fuels exemption, see letter from Director, Division of Stationary Source Enforcement, EPA Region VI, to Arkansas Power & Light Company, dated March 22, 1974 (Attachment 7) and letter from Jewell A. Harper, Chief, Air Enforcement Branch, EPA Region IV, to Clair H. Fancy, P.E., Chief, Bureau of Air Regulation, Florida Department of Environmental Regulation, dated May 22, 1990 (finding that the exemption at 40 CFR § 60.14(e)(4) was applicable because, as originally constructed, the unit could accommodate an alternative fuel) (Attachment 8).

To be consistent with the Department's own Rule 62-296.800(3)(k), Florida Administrative Code, 40 CFR § 60.14, and earlier EPA determinations, the City of Lakeland respectfully requests that the Department concur in its analysis that because the McIntosh Unit No. 3 is not currently subject to NSPS Subpart Da (i.e., it is an "existing unit") and because the Unit was designed to accommodate petroleum coke, the NSPS definition of "modification" is not triggered and Subpart Da does not become applicable. As stated above, if additional information is needed for the Department to make this determination, please let us know.

#### *PSD Review*

As stated in the November 10 letter to you, it is the City of Lakeland's position that the cofiring of petroleum coke in Unit No. 3 should not constitute a "modification" under Rule 62-212.200(46), Florida Administrative Code. The Department defines modification to be a physical change or change in the method of operation which causes an increase in actual emissions of any regulated air pollutant.<sup>2</sup> As demonstrated by the recent test burn, the burning of petroleum coke does not require any physical or operational changes. Petroleum coke has slightly different characteristics than coal, but it is so similar substantively that no changes to the plant are necessary for its use. Petroleum coke can be burned in Unit No. 3 without any changes to the fuel transportation and handling systems or to the boiler itself. Unlike a typical fuel switch situation, the cofiring of petroleum coke, which is so similar to coal, will not require changes at the plant. Because no physical or operational changes are required for the use of petroleum coke, the definition of modification should not be triggered.

Even if the Department finds that the use of petroleum coke constitutes an operational change, the use should not constitute a modification since it will not result in an increase in the

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<sup>2</sup> The definition includes certain limited exceptions for routine maintenance, repair, or replacement of component parts and changes in the hours of operation or production rate, none of which apply.

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 5

actual emissions of any regulated air pollutant. In fact, when petroleum coke is cofired with other fuels at a maximum rate of 20 percent by weight, the potential emissions are actually decreased. Currently, Unit No. 3 is allowed to use coal that contains up to 3.3% sulfur. As proposed by the City of Lakeland, only a small amount of petroleum coke, which has a sulfur content of approximately 5%, will be cofired with medium sulfur coal (2.5%) at a maximum cofiring rate of 10 percent, and with low sulfur coal (1%) at a maximum cofiring rate of 20 percent. As a result, the total sulfur content would be a maximum of 2.75 percent, which is lower the sulfur content allowed for coal alone and which would therefore be environmentally beneficial. In addition to the reduction in potential sulfur dioxide emissions, the test results indicate that, at these cofiring percentages, all regulated air pollutant emissions would be within the permitted limits.

In determining whether an increase in actual emissions has occurred, the Department's rules generally require that past actual emissions be compared to future potential emissions or, for electric utilities, to representative (future) actual emissions. Alternatively, the Department's rules allow the Department to *presume* that *federally enforceable allowable emissions* are equivalent to an emission unit's *actual* emissions, even where a source has begun normal operations. Rule 62-212.200(2)(a), (b), Florida Administrative Code. If the federally enforceable allowable emissions for Unit No. 3 are presumed to be the actual emissions, then no increase will occur. Certainly the City of Lakeland could burn a high sulfur coal (maximum of 3.3% sulfur) at any time, and the use of a lower emitting fuel in recent years should not be used to the detriment of the City when determining whether a modification has occurred. Any increase in actual emissions based on historical data where low sulfur coal has been used would artificially indicate an increase in actual emissions when compared to allowable emissions (regardless of whether coal is fired alone or coal is cofired with petroleum coke). The increase in emissions is therefore not caused by the use of petroleum coke as much as it is caused by the comparison between historical emissions and allowable emissions. The City of Lakeland therefore respectfully requests that the Department exercise its discretion to presume that Unit No. 3's allowable emissions are equivalent to the actual emissions. If this presumption is made, then no increase in actual emissions will occur because the emissions during petroleum coke cofiring will not exceed the allowable emissions.

As stated in the City of Lakeland's December 10 letter, Dennis Crumpler of EPA's Office of Air Quality Planning Standards generally agreed that the proposed cofiring of petroleum coke would not constitute a modification, and that neither PSD nor NSPS would apply. Likewise, Greg Worley of EPA Region IV stated that EPA would likely adopt a state determination that the cofiring of petroleum coke did not constitute a modification and that neither PSD nor NSPS were triggered.

If the Department rejects this analysis and determines that use of petroleum coke would constitute a "modification" and that PSD review applies, control technology review should

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 6

nevertheless *not* be required for Unit No. 3. The City of Lakeland requests the Department's concurrence that Best Available Control Technology (BACT) review should not be required for Unit No. 3 since it is capable of accommodating petroleum coke and since no physical or operational changes are necessary to the boiler. Such a determination would be completely consistent with the coal conversion policy developed by EPA over a decade ago. That policy exempted boilers designed to accommodate an alternative fuel from BACT review where the individual boiler was capable of firing the new fuel with minimal physical changes (e.g., change of burners only). BACT analysis was not required for the boilers since, individually, they were designed to accommodate the alternative fuel and therefore were not undergoing a physical change or change in the method of operation. Letter from Chief, Air Management Branch, EPA Region IV, to Steve Smallwood, Chief, Bureau of Air Quality Management, Florida Department of Environmental Regulation, dated June 7, 1983 (Attachment 9).

Consistent with this determination, EPA's Office of Air Quality Planning and Standards issued a determination in 1990 stating that even if the use of an alternative fuel triggered PSD review for the facility (plant site), the use of an alternative fuel in a boiler (even if slight changes to the burners were required) is not "a physical change or change in the method of operation in the unit, and, consequently, would not subject the boiler to a BACT review." EPA stated that if the sole change to a boiler were the addition of new burners (gas canes) then the only requirements necessary for a PSD permit would be "an air quality analysis, additional impacts analysis, and (if applicable) a Class I impact analysis." Specifically, the application of BACT to the boiler was *not required*. Letter from Gerald A. Emison, Director, Office of Air Quality Planning and Standards, EPA, to Detroit Edison Company, dated January 18, 1990 (attached as Attachment 10). Later that same year, EPA issued yet another determination that where a boiler itself is capable of accommodating an alternative fuel, the applicant is not required to perform a BACT analysis. Letter from EPA Region IV to the Florida Department of Environmental Regulation, dated May 22, 1990 (Attachment 8).

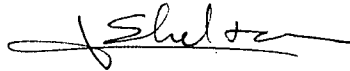
Like the boilers in these determinations, the McIntosh Unit No. 3 boiler is capable of accommodating an alternative fuel and, even if PSD review is required for the facility, BACT review should not be required for the boiler. The McIntosh Unit No. 3 boiler is completely capable of accommodating petroleum coke--not even minor changes are required, as evidenced by the recent test burn. The City of Lakeland therefore requests the Department's concurrence that, because the McIntosh Unit No. 3 boiler is capable of accommodating petroleum coke and no physical or operational changes are necessary, no BACT analysis will be required for the unit. Again, if additional information is needed for the Department to make its determination, please let us know.

Thank you for your continued cooperation and for your consideration of this request. We look forward to meeting with you on Thursday, December 1, 1994, at 3:30 p.m. to discuss

Clair Fancy, Chief  
Bureau of Air Regulation  
December 1, 1994  
Page 7

these issues with you in greater detail. If you have any questions prior to that time, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Farzie Shelton". The signature is fluid and cursive, with a long horizontal stroke at the end.

Farzie Shelton

cc: Dennis Crumpler, EPA/OAQPS  
Greg Worley, EPA/Region IV  
Ken Kosky, KBN  
Angela Morrison, HBGS