KBN

FACSIMILE COVER SHEET

RECEIVED
DEC 2 1996
BUREAU OF
AIR REGULATION

DATE: 11-29-96

TO: Willard Hanks

ORGANIZATION: Florida DEP

FAX NUMBER: 904-922-6979 TELEPHONE NUMBER: 904-488-[illegible]730

FROM: David Buff

OFFICE: ☒ Gainesville ☐ Tampa ☐ Boca Raton
☐ Washington D.C. ☐ Jacksonville

TOTAL NUMBER OF PAGES: 3 (including cover page)

MESSAGE/INSTRUCTIONS:

PROJECT NUMBER: 96510026-0400 FAX OPERATOR: Maggie

( ) This is the ONLY form of delivery of the transmitted document.

( ) The original of the transmitted document will be sent by:

( ) US Mail ( ) Overnight delivery ( ) Other: _____

Return original to _____

cc: Project File _____ yes _____ no

FORMS/FAX (12/19/95)

KBN Engineering and Applied Sciences, Inc.
6241 NW 23rd Street
Gainesville, Florida, 32653-1500
(352) 336-5600/FAX (352) 336-6603

5405 West Cypress Street, Suite 215
Tampa, FL 33607
(813) 287-1717/FAX (813) 287-1716

1616 "P" Street N.W., Suite 350
Washington, DC 20036
(202) 462-1100/FAX (202) 462-2270

1801 Clint Moore Road, Suite 105
Boca Raton, FL 33487
(407) 994-9910/FAX (407) 994-9393

7785 Baymeadows Way, Suite 105
Jacksonville, FL 32256
(904) 739-5600/FAX (904) 739-7777

MEMORANDUM

TO: Willard Hanks, FDEP

FROM: David Buff, KBN/Golder DAB

DATE: November 26, 1996

RE: TDF Trial Burn Permit; OkPLP; OsPLP

Willard - I have reviewed draft trial burn permit, and have received comments from James Meriwether of OkPLP. The following comments are offered for your consideration.

Cover letter, 2nd para. - the wording concerning the time period for testing should read the same as Specific Condition (SC) 2: "for a period not to exceed 60 calendar days, and within 90 days, from the first day TDF is burned in the boiler."

SC 2 - Reword as "The maximum TDF content of the fuel shall not exceed 25 percent by weight. Performance testing shall be conducted within 60 calendar days..."

SC 3 - This condition should be clear that TDF firing should be compared to limits for coal in the permit: "Stack emissions due to TDF firing shall not exceed any limit for coal burning in the construction permit..."

SC 4 - Does the Department want total metals analysis or TCLP analysis on the bottom ash and fly ash? SC 5 would indicate that a total metals analysis is necessary. Is TCLP required as well?

SC 6 - This condition should also refer to Osceola cogeneration plant, in case this plant is tested - 23,871 lb/hr or 25 percent by weight of the total feed rate.

SC 11 - Please note that, depending on when actual TDF testing is conducted, the July 1, 1997 deadline may need to be extended. However, I believe the construction permit is automatically extended until issuance of the Title V permit (assuming such issuance has not occurred prior to July 1, 1997).

SC 13 - The purpose of this request should be stated. Is this to determine if a new PSD permit is required? Would this be based on the changes in allowable emissions due to TDF firing, if any changes are necessary? As long as the current allowable emissions are not exceeded due to TDF firing, then PSD review should not be required.

SC 16 - Reword as ".. 60 calendar days.."

SC 17 - Immediate notification could be subject to interpretation. Suggest allowing 5 days for notification.

SC 18 - Suggest reword as "...include emissions tests at the maximum practical TDF blend (not to exceed 25 percent by weight)..."

SC 19 - The pollutants to be tested were already specified in SC 7 and 8. Suggest reword as "A tes protocol, specifying the pollutants to be tested and the sampling and analysis methods, including fue and ash, shall be submitted to the Department and approved prior to commencement of testing. The protocol..."

Ending Sentence - This sentence should also refer to Permit No. PSD-FL-197C in the event that testing is performed at Osceola Power.

Public Notice - In the first sentence of the first paragraph, revise to state "...with bagasse and/or wood wastes..."

Please call me if you want to discuss any of these suggestions.

cc: File (2)

FLORIDA DEPARTMENT OF HEALTH & REHABILITATIVE SERVICES

Working in partnership with local communities to help people be self-sufficient, experience good health and live in stable families and communities.

October 28, 1996
(Faxed)

Willard Hanks, Air Permit Engineer
New Source Review Section
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(904) 922-6979

Re: Comments on Proposed Trial Burn
Cogeneration Power Plants - Tire Derived Fuel (TDF)
Okeelanta Power Ltd. and Osceola Power Ltd.

Dear Mr. Hanks:

The Department is considering a proposal to test burn tire derived fuels (TDF) at these facilities. The Health Department believes this is reasonable and would provide information needed to make a final determination on these applications. We request the following conditions be considered in the Department's approval for a trial burn:

(1) Trial Burn Window: The trial burn is approved for a period of (60) consecutive calendar days from the initial burning of TDF.

(2) Notification: The facility shall notify the Health Department at least (1) day prior to the initial burning of TDF. The facility shall notify the Health Department at least (15) days prior to conducting any requested stack testing.

(3) Continuous Monitoring Requirements: During the entire trial burn period, the facility shall continuously monitor and record the SO_2, NOx, and CO concentrations, the opacity, and the heat input rates from each operating boiler with the certified monitors required by permit. In addition, the facilities shall continuously monitor and record the TDF, biomass, bagasse, and fuel oil feed rates during the entire test burn period.

(4) Requested Stack Testing:

(a) *Hydrochloric Acid Emissions*: At least one boiler at each facility shall stack test for HCl emissions during the test burn period.
- Test Method shall be EPA Method 26 or 26A.
- Test shall consist of a minimum of (3), one-hour runs while burning at least 90% of the requested maximum TDF feed rate.
- Emissions shall be reported in pounds of HCl per hour.

(b) *Dioxin/Furan Emissions*: At least one boiler at each facility shall stack test for dioxin/furan emissions during the test burn period.
- Test Method shall be EPA Method 23.
- Test shall consist of a minimum of (3), four-hour runs while burning at least 90% of the requested maximum TDF feed rate.

DISTRICT IX
PALM BEACH COUNTY PUBLIC HEALTH UNIT - P.O. BOX 29 - WEST PALM BEACH, FL 33402
LAWTON CHILES, GOVERNOR

- Emissions shall be reported in ng/dscm for total mass dioxins/furans AND ng/dscm for the 2,3,7,8-tetrachlorinated dibenzo-p-dioxin toxic equivalents based on the 1989 international toxic equivalency factors.
- The activated carbon feed rate (in pounds per hour) shall be monitored and recorded at least at (15) minute intervals during each test run.

(5) Test Burn Reports: Within (60) days of completion of the test burn period, the facilities shall provide the DEP and the Health Department with a report, including:

- A summary of the over all project including a description of the equipment used to handle, transfer, and burn TDF.
- Any changes in boiler operations required to accommodate TDF.
- Any problems identified during the trial burn period.
- A summary of the emissions of SO_2, NOx, CO, the opacity, the heat input rates, and the fuel feed rates as determined from the continuous monitoring records.
- A summary of the emissions of HCl and dioxins/furans, including a comparison of the measured results with the predicted emissions.
- A comparison of the measured dioxin/furan results with the new emission guidelines for municipal waste combustors.
- A summary of the compliance status with regard to the current permit limits.

If you have any questions on these comments, please contact me at the numbers below.

Sincerely,

For the Division Director
Environmental Health and Engineering

Jeffery J. Koerner

Jeffery F. Koerner, Air Permit Engineer
Air Pollution Control Section
Phone: (407) 355-4549 *Suncom: 273-4549*
FAX: (407) 355-2442

Filename: COGEN_3.CMT

cc: SD
EPA
NPS
J. Arif
W. Hanks
K. Anderson

R File

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 16, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Don Schaberg
General Manager
Osceola Power Limited Partnership
Post Office Box 606
Pahokee, Florida 33476

Re: Osceola Power Limited Partnership
Tire Derived Fuel Permit Amendment
Permit File No. AC50-269980, PSD-FL-197C

Dear Mr. Schaberg:

The Department has received the responses to our incompleteness letter for incorporating the use of Tire Derived Fuel (TDF) as a supplemental fuel at Osceola Power in Palm Beach County. Based on our review of the responses, we have determined that additional information is needed in order to continue processing this application package. Please submit the information requested below to the Department's Bureau of Air Regulation:

1. Attached are concerns raised by the Bureau of Solid and Hazardous waste pertaining to air and ash issues. Please respond to their concerns. If there are any questions on these issues, please contact Kathy Anderson at (904) 488-0300.

2. The corrected application pages submitted with the response indicates TDF firing to be 25 percent on an annual basis. The original application stated TDF firing to be limited to 16.5 percent annually. Please explain the discrepancy between the two numbers.

3. Please indicate if a waiver has been approved for an extension of the initial performance test. When will the initial performance test take place?

The Department will resume processing this application after we receive the requested information. Should you have any questions, please contact Syed Arif at 904-488-1344.

Sincerely,

Willard Hanks
for
A. A. Linero, P.E.
Administrator
New Source Review Section

AAL/sa/t

cc: D. Knowles, SD
J. Koerner, PBCHU
K. Anderson, DEP
J. Harper. EPA
J. Bunyak, NPS
D. Buff, KBN

Florida Department of

Memorandum — Environmental Protection

TO: Syed Arif

FROM: Kathy Anderson, Solid Waste Section SKA 8/12/96

DATE: August 12, 1996

SUBJECT: Osceola & Okeelanta Sugar Mill Cogeneration Facility
Tire Derived Fuel Permit Amendment

I have reviewed the July 17,1996 response that Okeelanta and Osceola had to your first RAI on Permit Amendment # AC50-269980. The following is a list of questions that I would like to see addressed pertaining to air and ash :

1. The current permit requires that the concentration of heavy metals be measured in the wood fuel prior to incineration and in the ash prior to disposal. Please provide mass balance calculations for heavy metals in the ash and wood fuel. For example, since the average concentration of arsenic is known in the fly ash, back calculate the concentration of arsenic in the wood fuel prior to incineration. How do the calculated numbers compare to the actual concentrations observed in the wood fuel ? Submit summary tables of actual data collected for heavy metals in ash and wood fuel to validate the use of average concentrations numbers used in the mass balance calculations.
2. Compare the calculated concentration of arsenic in the wood fuel with the <3% CCA treated wood by volume assumption used in the 5/2/96 Okeelanta submittal (see Table 2-11). Explain any significant differences.
3. Compare the calculated concentration of arsenic in the wood fuel with the <2.4% CCA treated wood by volume assumption used in the 4/18/95 Osceola submittal (see Table 2-9) ?
4. The TDF data presented is for TDF fuel only, what are that anticipated concentrations of heavy metals in the wood fuel combined with TDF ? What are the anticipated concentrations of heavy metals in the ash ? Please present mass balance calculations supporting the anticipated concentrations of heavy metals.

I have many more questions pertaining to ash that will be dealt with in the solid waste tire permit which is currently being processed in South District, but I felt like these questions pertained to air permit conditions and could be addessed through your RAI.

These question may have been addressed in the original application, if so please fax me a copy of the information. Additionally, please send me a copy of the portion of the facility's air permit that addresses the wood waste and TDF fuel being received and incinerated for each facility and the current ash handling requirements, i.e. wood waste sampling & storage requirements.

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Syed Ariff
2. MS #5505
3. Air Tallahassee
4. Magnolia Complex

Remarks:

RAI
Question's on
Okeelanta
TDF permit

From: Kathy Anderson

Date 8/12/96

Phone 921 9916

MS #4565

Florida Department of

Memorandum — Environmental Protection

TO: Syed Arif

FROM: Kathy Anderson, Solid Waste Section SKA 8/12/96

DATE: August 12, 1996

SUBJECT: Osceola & Okeelanta Sugar Mill Cogeneration Facility
Tire Derived Fuel Permit Amendment

I have reviewed the July 17,1996 response that Okeelanta and Osceola had to your first RAI on Permit Amendment # AC50-269980. The following is a list of questions that I would like to see addressed pertaining to air and ash :

1. The current permit requires that the concentration of heavy metals be measured in the wood fuel prior to incineration and in the ash prior to disposal. Please provide mass balance calculations for heavy metals in the ash and wood fuel. For example, since the average concentration of arsenic is known in the fly ash, back calculate the concentration of arsenic in the wood fuel prior to incineration. How do the calculated numbers compare to the actual concentrations observed in the wood fuel ? Submit summary tables of actual data collected for heavy metals in ash and wood fuel to validate the use of average concentrations numbers used in the mass balance calculations.
2. Compare the calculated concentration of arsenic in the wood fuel with the <3% CCA treated wood by volume assumption used in the 5/2/96 Okeelanta submittal (see Table 2-11). Explain any significant differences.
3. Compare the calculated concentration of arsenic in the wood fuel with the <2.4% CCA treated wood by volume assumption used in the 4/18/95 Osceola submittal (see Table 2-9) ?
4. The TDF data presented is for TDF fuel only, what are that anticipated concentrations of heavy metals in the wood fuel combined with TDF ? What are the anticipated concentrations of heavy metals in the ash ? Please present mass balance calculations supporting the anticipated concentrations of heavy metals.

I have many more questions pertaining to ash that will be dealt with in the solid waste tire permit which is currently being processed in South District, but I felt like these questions pertained to air permit conditions and could be addessed through your RAI.

These question may have been addressed in the original application, if so please fax me a copy of the information. Additionally, please send me a copy of the portion of the facility's air permit that addresses the wood waste and TDF fuel being received and incinerated for each facility and the current ash handling requirements, i.e. wood waste sampling & storage requirements.

FLORIDA DEPARTMENT OF HEALTH & REHABILITATIVE SERVICES
Working in partnership with local communities to help people be self-sufficient, experience good health and live in stable families and communities.

August 5, 1996

Al Linero, P.E.
New Source Review Section
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Cogeneration Power Plants - Tire Derived Fuel (TDF)
Okeelanta Power Ltd. and Osceola Power Ltd.
Second Comments

Dear Mr. Linero:

The Health Unit has reviewed the additional information received regarding the above projects and has the following comments. I have numbered my comments to correspond with the additional information submittal for Osceola Power Ltd.

Comments on Response to DEP Request for Additional Information

(1) We agree that there are operational and equipment difficulties with the boilers at Osceola Power. The request for an extension of the requirement to test within 60-days of reaching maximum production should be granted. We also believe that many operational and equipment problems continue to exist at Okeelanta Power, as evidenced by several failed performance tests.

(2) These facilities receive yard waste, i.e., commingled yard waste and construction and demolition debris. Originally, the air permits were modified to restrict the boilers to burn less than 30% municipal solid waste (MSW) by weight in order to avoid additional NSPS requirements. To date, tests on biomass received at the cogeneration sites have tested high for arsenic and TCLP ash tests have seen high results for both arsenic and chromium. We find it difficult to support adding another MSW fuel (TDF) before the fully functional and operating in compliance with the *currently permitted fuels.*

(3) No comment.

(4) Recent testing at Okeelanta Power has indicated several failed tests for mercury emissions as well as lead. The applicant states that maximum short term mercury emissions occur during coal firing, yet the failures occurred during biomass firing. The Health Unit does not believe there is reasonable assurance that the facility can meet the current mercury emissions limit or continuously meet the lead emission limit.

(5) The Health Unit is willing to consider tire derived fuel as a tradeoff for burning coal. However, we would prefer the applicant to pursue this additional fuel source after the power generation facility is fully operational and in compliance with the emission limiting standards for the currently permitted fuels.

(6) Again, recent TCLP ash tests indicate high levels of arsenic and chromium in the ash from burning biomass fuels.

(7) Again, recent TCLP ash tests indicate high levels of arsenic in the ash from burning biomass fuels.

DISTRICT IX
PALM BEACH COUNTY PUBLIC HEALTH UNIT - P.O. BOX 29 - WEST PALM BEACH, FL. 33402
LAWTON CHILES, GOVERNOR

Comments on Response to PBCPHU Request for Additional Information

(1-3) No comments.

(4) We agree that potential HCl emissions are an order of magnitude lower than potential SO_2 emissions, however, so are the major source applicability thresholds. The increase in HCl emissions will make this facility a major source of this hazardous air pollutant. The facility has installed a storage silo and injection system for activated carbon to control mercury emissions. There are products available on the market which consist of the combination of activated charcoal and lime which could be used with the existing injection equipment and ESPs to provide control for the acid gases. We recommend at least initial tests be performed to determine uncontrolled HCl emission levels.

(5) We realize that this facility will not be burning "garbage". However, TDF contains a substantially higher chlorine content than the current fuels which leads us to believe that the conditions exist which may cause the formation of dioxins and furans in the flue gas. If TDF becomes a permitted fuel, we recommend at least initial tests be performed to determine the levels of dioxins and furans while burning TDF. Tested levels should be below NSPS levels for municipal waste combustors as well as any ARC.

(6) The PSD permits require sulfuric acid mist (SAM) to be tested by EPA Method 8. Tests performed using this method at Okeelanta failed the SAM limits in the permit. The test team made modifications to the test method to remove interference from the combination of high moisture and SO_2 present in the flue gas. The DEP Emissions Monitoring Section should make a determination on whether or not the modified test method used is acceptable for this facility and whether or not it indicates compliance with the permit limit.

(7) Does the Department consider burning TDF in these cogeneration plants similar enough in nature to burning wood residue in a paper mill to constitute "reasonable assurance"?

CONCLUSION AND RECOMMENDATIONS

If these units were fully operational and had passed all required emissions performance tests, the Health Unit would not be as hesitant in approving TDF as a replacement fuel for coal. However, this is not the case. There have been numerous construction and equipment problems which have resulted in delays and shutdowns. Biomass has been received on site which tested high for metals. Ash tests have also indicated elevated metals content. Emissions performance tests indicate failure to meet the emission limiting standards for lead, nitrogen oxides, sulfuric acid mist, mercury, and visible emissions. The Health Unit asks the Department to request a withdrawal of the application for a permit to authorize the burning of tire derived fuels until such a time that the cogeneration plants are fully operational and able to comply with the current conditions of the air construction permit.

Also, I am enclosing the following reports for your records:

- Summary of the Okeelanta Power Ltd. Compliance Test Review (Performed by the Health Unit)
- Summary of the Ash Issues at Okeelanta Power Ltd. (Solid / Hazardous Waste Sections of DEP, Tallahassee)

If you have any questions on these comments please contact me at the numbers below.

Sincerely,

For the Division Director
Environmental Health and Engineering

Jeffery J. Koerner

Jeffery F. Koerner, PE
Air Pollution Control Section
Phone: (407) 355-4549 FAX: (407) 355-2442

CC: D. Buff, KBN
✓ D. Knowles, SD
EPA
NPS
S. Arif, BAR

Filename: COGEN_2.CMT

Okeelanta Power Limited Partnership
Cogeneration Facility
Summary of Compliance Testing, May 1996

The Okeelanta Power Limited Partnership (OPLP) owned cogeneration facility has three spreader stoker boilers which are fired with biomass (bagasse and wood chips) as primary fuel and No. 2 fuel oil as an start-up fuel. This facility is also permitted to use coal with low sulfur content. This facility currently possesses a source construction permit from Florida Department of Environmental Protection.

Each boiler at the facility has a heat input of 715 million british thermal unit (MMBTU) / hour on biomass and 490 MMBTU / hour on fossil fuel. The design capacity for steam production for each boiler is 455,400 pounds/ hour (lb/hr) of steam at 1,500 psig and 975 degree F.

Each boiler is equipped with an electrostatic precipitator (ESP), a thermal De NOx system, and an activated carbon injection system to control particulate matter, nitrogen oxides, and mercury emissions. Emission controlled flue gas from each boiler is exhausted out in to the ambient air through its 242 feet tall stack.

The facility contracted with the Clean Air Engineering ,Inc. to conduct the required compliance tests for the various regulated pollutants. The test was performed in the month of May 1996. Required test notifications and its amendments were submitted to by the Palm Beach County Public Health Unit. Test reports for Boiler A and Boiler B were received on July 15, 1996. Report for Boiler C was received on July 25, 1996.

The emission rate of lb/MMBTU was calculated using a fuel factor (F-factor) of 8489 dry standard cubic feet(dscf)/ MMBTU. This was obtained from fuel analysis of five fuel samples. For Boiler C, the fuel factor of 9567 dscf/MMBTU was utilized after analysis of 11 fuel samples.

Emissions test results:

1. Particulate and PM10 Emissions	Passed emissions standards for Boiler A, B and C.
2. Lead Emissions	Boiler C failed the lb/MMBTU limit. Actual emissions were 2.8*E-5 lb/MMBTU, allowable standard is 2.5*E-5 lb/MMBTU.
3. Nitrogen Oxides Emissions	Boiler C failed the lb/MMBTU limit. Actual emissions were .16 lb/MMBTU, allowable standard is .15 lb/MMBTU.
4. Carbon Monoxides and VOC	Passed emissions standards for Boiler A, B and C.

5. Sulfur Dioxides Emissions	For all the boilers, permitted test methods for this pollutant are Method 6, 6C or 19. Test was performed using Method 8. Even though the emissions from the test are showing compliance with the permitted standard, the results are unacceptable.
6. Sulfuric Acid Mist Emissions	Failed compliance test for all the boilers when tested utilizing the permitted specified method. Facility informed the PBCPHU about this during the testing period and decided to run tests using Modified Method 8. It is argued that high levels of sulfuric acid mist was due to suspected positive bias caused by interference from the combination of high percent of moisture and sulfur dioxide in the flue gas resulting in the standard Method 8 samples to be non-representative of the actual stack gas concentration of sulfuric acid mist.
7. Visible Emissions	Test failed for Boiler A. The Visible Emissions evaluation performed on 5/11/96 at 12:30-13:30 failed the emission standards. The rolling average of one hour reading indicates several six minutes average above 20% and 27% opacity.
8. Mercury Emissions	Test failed for Boilers A, B and C. Allowable emissions for wood waste are .29*E-6 lb/MMBTU and .00021 lb/hr. Actual emissions for Boiler A were .97*E-6 lb/MMBTU and .000673 lb/hr. For Boiler B, the emissions were .96*E-6 lb/MMBTU and .00067 lb/hr. For Boiler C, the emissions were 1.7*E-6 lb/MMBTU and .0011 lb/hr.
9. Arsenic, Chromium, Copper, and Beryllium	No emission standard for biomass in the permit. All these pollutants were tested using the specified methods in the permit.
10. Testing within rated capacity	All the tests were conducted within the 10% of the design capacity of steam production rate.
11. Visible Emissions Test for Mercury Reactant Silo	Not included with the test reports.

Okeelanta Cogeneration Facility
Ash Issues

The Solid Waste Section of the FDEP in Tallahassee and the Hazardous Waste Section of the South District office of FDEP are in the process of reviewing the test results of the boiler ash for the above referenced facility. The test results extend over the period of November 1995 to April 1996. It was observed for the Okeelanta facility that out of 11 samples of fly ash taken that 3 samples appeared to fail for the toxicity characteristic leaching procedure (TCLP) for chromium. It was also observed that the average total metals concentration of arsenic in the fly ash was 493 mg/kg, exceeding the FDEP Bureau of Waste Clean-Up's soil clean-up goals guidance value of 0.8 mg/kg for residential use and 3.7 mg/kg for industrial use.

On July 18,1996 Kathy Anderson, Mary Jean Yon and Richard Tedder of the FDEP Tallahassee Solid Waste Section met with Mr. James Merriwether, environmental manager for the facility, in Tallahassee to discuss issues pertaining to the metals concentrations in the fly ash and concerns with land application of the fly ash. Mr. Merriwether stated he did not believe the earlier fly ash samples were representative of normal facility operations due to a blade deterioration problem in the process fans. He also stated that to fully evaluate the toxicity characteristic (TC) of the ash, the facility would perform an initial characterization of the ash residue when the facility was fully operational in September of 1996. Additionally he stated that the facility would perform ash characterization in accordance with the EPA's Guidance For The Sampling And Analysis Of Municipal Waste Combustion Ash For The Toxicity Characteristic, June 1995.

The Tallahassee Solid Waste Section and the Hazardous Waste Section of the South District office of FDEP agree the facility should use the TC protocol by EPA. Once the facility adequately characterizes their ash, the FDEP will review the data presented.

On July 30,1996 Mr. Merriwether telephoned Ms. Anderson and stated that the facility would be sending the FDEP a letter of their intent to sample the ash for the TC and total metals concentrations when the facility is fully operational. Mr. Merriwether also stated that the facility anticipates land applying their ash on the sugar cane farm once the facility is fully operational. In the interim, the facility is stockpiling the ash on-site in the wood fuel pile area.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 17, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Don Schaberg
General Manager
Osceola Power Limited Partnership
Post Office Box 606
Pahokee, Florida 33476

Re: Osceola Power Limited Partnership
Tire Derived Fuel Permit Amendment
Permit File No. AC50-269980, PSD-FL-197C

Dear Mr. Schaberg:

Further to our completeness letter dated June 13, please address the attached comments form the Palm Beach County Public Health Unit with the information requested by the Department.

If you have any questions regarding this supplementary request, please call Jeff Koerner of the PBCPHU at (407) 355-4549 or Syed Arif at (904) 488-1344.

Sincerely,

6/17

A. A. Linero, P.E.
Administrator
New Source Review Section

AAL/sa/t

cc: D. Knowles, SD
J. Koerner, PBCHU
J. Harper, EPA
J. Bunyak, NPS
D. Buff, KBN

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Dennis Space, Gen. Mgr.
Okeelanta Power, LP
PO Box 8
South Bay, Fl 33493

4a. Article Number
P 339 251 110

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
6-21-96

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

HRS / PALM BEACH COUNTY PUBLIC HEALTH UNIT
DIVISION OF ENVIRONMENTAL HEALTH AND ENGINEERING
Air Pollution Control Section

FACSIMILE TRANSMITTAL COVER SHEET

DATE: June 13, 1996

FROM: Jeff Koerner, PE
Phone #: (407) 355-4549 [Sun Com: 273-4549]
FAX #: (407) 355-2442

TO: Syed Arif, Engineer IV
New Source Review Section
DEP - Bureau of Air Regulation
142600 Blair Stone Road
Tallahassee, FL 32399-2400
FAX #: (904) 922-6979

Subject: Comments on the Recent PSD Permit Modifications
Okeelanta Power Corporation and Osceola Power Corporation

Total Pages: 2 (including this cover sheet)

I apologize for not submitting these comments sooner. We did not receive the applications until May 31st and I have been out of the office for most of that time.

Palm Beach County Public Health Unit
Comments on New PSD Permit Modifications for Tire-Derived Fuel (TDF)
Osceola Power Corporation
Okeelanta Power Corporation

(1) Will the facility receive any whole tires? Does the facility plan to install any additional equipment that may be necessary to chip, screen, process, and handle whole tires or chipped tires?

(2) Recent inspections by the Health Unit indicate continued problems with the fuel handling systems. In particular, several sections of ductwork appear to have been damaged by the high velocities at which the fuels are being fed. Also, frequent jamming of the fuel handling system has occurred near the inlet to the boilers. Representatives of both facilities have proposed moving ID fans to alternate positions in an effort to fix this problem.

(a) Have any modifications been performed on the fuel handling systems or ID Fans yet?

(b) Should the fuel handling system be modified to adequately handle Tire Derived Fuel (TDF)?

(3) Are each of the following statements correct? If not, please provide additional supporting information.

(a) The facilities are requesting exemption from 40 CFR 60, Subpart Cb for municipal waste combustors. (What is the justification (and rule citation) for the exemption?)

(b) The facilities are subject to 40 CFR 60, Subpart Da for boilers.

(c) The facilities are requesting exemption from 40 CFR 60, Subpart Ea for municipal waste combustors. The exemption is claimed based on 40 CFR 60.50a (d) for cofired combustors. The indication is that the cogeneration boilers will burn less than 30% municipal solid waste which is less than the 50% defined in 40 CFR 60.51a, over which the units would qualify as incinerators.

(4) Are the emissions of hydrochloric acid increasing from that of the original application? For example, in the Osceola Power application, it appears that the previous highest HCl levels would be 19.42 tons per year while burning about 5% coal. The estimated annual emissions of HCl while burning about 7% by weight TDF is 67 tons per year. Okeelanta Power's application indicates HCl emission over 100 tons per year. Are any control devices planned for the control of HCl emissions? Would such high HCl emissions have a detrimental effect on existing ductwork, fans, stacks, and control equipment?

(5) The factor used for estimating emissions of dioxins and furans was for wood waste boilers. A similar AP-42 emission factor for refuse-derived fuel burned in municipal waste combustors indicates several orders of magnitude higher. Shouldn't this more conservative estimate be used for the maximum (30%) municipal waste portion allowed by permit? Shouldn't these adjusted dioxin and furan emissions be compared with existing standards and modeling analyses?

(5) It is my understanding that the preliminary results for an initial stack test of sulfuric acid mist (SAM) indicates an exceedance of the emissions limiting standard. The applications indicate that SAM will be increased with the use of TDF replacing about 7% by weight of the biomass. Since the tests were conducted while burning *only* biomass, what reasonable assurance can be provided which would indicate compliance with the existing permit standard?

(6) Please provide more information on the sulfur capture in combination bark boilers. Figure 11 uses the phrase "ton wood residue per lb of sulfur in combined fuel feed". Does "ton wood residue" mean the *tons of wood burned in the boiler* or the *tons of ash generated from burning of wood in the boiler*?

Thank you for the opportunity to comment on this application.

Filename: TDF_PSD.FAX

Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 13, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Don Schaberg
General Manager
Osceola Power Limited Partnership
Post Office Box 606
Pahokee, Florida 33476

Re: Osceola Power Limited Partnership
Tire Derived Fuel Permit Amendment
Permit File No. AC50-269980, PSD-FL-197C

Dear Mr. Schaberg:

The Department has received the application for incorporating the use of Tire Derived Fuel (TDF) as a supplemental fuel at Osceola Power in Palm Beach County. Based on our initial review of the proposed project, we have determined that additional information is needed in order to continue processing this application package. Please submit the information requested below to the Department's Bureau of Air Regulation:

1. 40 CFR 60.8(a) requires that owners and operators of NSPS facilities conduct an initial performance test no later than 60 days after reaching maximum production or 180 days after initial startup, whichever comes first. Specific Condition No. 20 (a) of the above referenced permit also requires the same. If the test was conducted, please submit results for the same. If the test was not conducted, please explain the reasons for the variance from 40 CFR 60.8(a) and Specific Condition No. 20 (a) requirements.

2. 40 CFR 60, Subpart Ea defines Cofired combustor as a unit combusting 30 percentor less by weight municipal solid waste (MSW) with a non-MSW fuel as measured on a calendar quarter basis. What measures will be taken by the facility to comply with the 30 percent by weight requirements, particularly noting that yard wastes and tires are considered MSW, and will be used as fuel for the boilers.

3. Please submit the PSD source applicability analysis table for the facility, similar to the one submitted as Table 3-1, page 3-2 for the Okeelanta Power facility.

4. Please quantify increases in mercury emissions, if any, due to TDF firing. Also, indicate if a test program will be introduced by the facility to establish actual mercuryemission factors for each fuel.

5. Please indicate if the TDF emissions are being offset by reduction in coal burning at the facility. If so, what percent in reduction will be achieved for coal firing.

6. Please quantify ash content (bottom, siftings and fly) generated from TDF combustion, and provide the chemical analyses for each element. What measures will be taken for offsite disposal, and where will be the final destination.

7. Are there further measures available since the submittal of the April, 1995, permit amendment application that Osceola Power could take that would limit arsenic impacts to levels below the Florida Ambient Reference Concentrations?

The Department will resume processing this application after we receive the requested information. Should you have any questions, please contact Syed Arif (engineering) or Cleve Holladay (modeling) at 904-488-1344.

Sincerely,

A. A. Linero, P.E.
Administrator
New Source Review Section

AAL/sa/t

cc: D. Knowles, SD
J. Koerner, PBCHU
J. Harper, EPA
J. Bunyak, NPS
D. Buff, KBN

P 339 251 105

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to: Don Schabers	
Street & Number: Osceola Power, LP	
Post Office, State, & ZIP Code: Pahokee, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 6-13-96	

PS Form **3800**, April 1995

AE50-269980
PSO-FI-197C

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Don Schabers, Gen. Mgr.
Osceola Power, LP
PO Box 6006
Pahokee, Fl 33476

4a. Article Number
P339 251 105

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
6-17-96

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Calvin Brisse

PS Form **3811**, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.