



CITY HALL
TALLAHASSEE, FL
32301-1731
904/599-8100

DEBORAH A. LIGHTSEY
Mayor-Commissioner
BOB HIGHTOWER
Mayor Pro Tem-
Commissioner

DOROTHY INMAN-CREWS
Commissioner
JACK L. MCLEAN, JR.
Commissioner
STEVE MEISBURG
Commissioner

DANIEL A. KLEMAN
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

RECEIVED

AUG 6 1991

Division of Air
Resources Management

August 6, 1991

BY HAND DELIVERY

Hamilton S. Oven, Jr., P.E.
Administrator
Siting Coordination Section
Florida Department of Environmental
Regulation
2600 Blair Stone Road, Room 338
Tallahassee, Florida 32399-2400

Re: City of Tallahassee
Hopkins CFB Repowering Project
PA 74-03A
DOAH Case No. 91-1605EPP

Dear Mr. Oven:

Enclosed please find revised air emission tables regarding the City's Hopkins CFB Repowering Project. These tables, which reflect more stringent emission rates for the CFB unit, should be substituted for the tables contained in the City's "Responses to Agency Sufficiency Comments" dated May 30, 1991, which in turn replaced tables in the Application for Modification of Site Certification. Two new tables (Table A and Table B) are also enclosed.

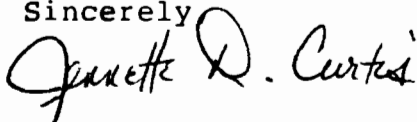
With this submittal, the City proposes a "two-tiered" approach with respect to air emission limits for the CFB unit. As shown in Table A, one set of emission limits (at or below those previously proposed) is identified for the initial two year "demonstration period" to allow the operational flexibility needed to meet the goals of the U. S. Department of Energy demonstration program. A second set of emission limits is proposed for the subsequent "operational period" for the repowered Unit 2. Table B provides data to allow comparison of the "operational period" CFB emissions with both historical and potential emissions for existing Hopkins Unit 2.

Hamilton S. Oven, Jr., P.E.
August 6, 1991
Page 2

The City believes the emission limits proposed in Table A are consistent with Best Available Control Technology levels for all air pollutants. The City is prepared to accept these as enforceable limits for the CFB unit. The new limits for particulate matter, lead and beryllium reflect the City's decision to use a baghouse filter system with greater removal efficiency than previously proposed in the Application. The new limits for sulfur dioxide and sulfuric acid mist reflect the City's commitment to utilize lower sulfur coal during the operational period, along with greater removal efficiency in the CFB boiler. The City anticipates that the nitrogen oxides emission limit proposed for the operational period can be achieved through the inherent characteristics of the CFB boiler. If experience during the operational period indicates otherwise, the City intends to meet the operational period limits through use of additional emission control. Similarly, the City proposes to evaluate mercury emissions data obtained during the demonstration period to determine whether additional control is necessary to meet the proposed operational period limit.

A copy of this letter and the enclosed tables are being provided to the Hearing Officer, all parties to this modification proceeding and recipients of the initial Application. Please do not hesitate to call me if there are any questions regarding this matter.

Sincerely



Jennette D. Curtis
Environmental Services
Administrator
Electric Department

/gbb

Enclosures

Hamilton S. Oven, Jr., P.E.
August 6, 1991
Page 3

cc: Diane K. Kiesling
Richard Donelan
Robert Kriegel
G. Stephen Pfeiffer
Paul Darst
James V. Antista
Doug Bailey
Michael Palecki
Julie E. Lovelace
Parwez Alam
Howard Pardue
Charles D. Blume
Mike Donovan
Walter Dover
Eugene McClellan
David Gluckman
Sandra Whitmire
Marvin Stuckey

CFB BOILER EMISSIONS (Demonstration Period)
Emission Calculations for Table A

POLLUTANT and (BASIS)	EMISSIONS FACTOR (lb/10 ⁶ BTU)	HEAT INPUT (10 ⁶ BTU/hr)	EMISSIONS	
			(lb/hr)	(Tons/Year)
	A	B	C	D
Nitrogen Oxides (Manufacturer)	0.28	2,414	675.9	2,457.2
Sulfur Dioxide (See Note A)	0.76	2,414	1,839.2	6,686.4
Particulate Matter (Manufacturer)	0.015	2,414	36.2	131.6
PM-10 (Manufacturer)	0.015	2,414	36.2	131.6
H ₂ SO ₄ Mist (See Note B)	0.0233	2,414	56.3	204.8
Carbon Monoxide (Manufacturer)	0.17	2,414	410.4	1,491.9
Volatile Organic Compounds (Manufacturer)	0.01	2,414	24.14	87.8
Fluorides (See Note C)	0.0014	2,414	3.4	12.4
Lead (EPA, 1989, pg 4-174)	0.00004	2,414	0.097	0.35
Mercury (See Note D)	0.000033	2,414	0.08	0.13 (See Note E)
Beryllium	0.00000225	2,414	0.005	0.020

Calculation: C = A x B; D = C x 8,760 hrs/yr x Ton/2000 lb x 0.83 (83 capacity factor)

Notes: A - 90% removal based on 4% sulfur coal at 10,500 BTU/lb
 $2,414 \times 10^6 \text{ BTU/hr} \times \text{lb coal}/10,500 \text{ BTU} \times 0.04 \text{ lb S/lb coal} \times 21 \text{ lb SO}_2/\text{lb S} \times 0.10 = 1,839.2 \text{ lb/hr}$

B - 2% of SO₂; $1,839.2 \text{ lb SO}_2/\text{hr} \times 0.02 \times 98/64 = 56.3 \text{ lb/hr}$

C - 90% removal of F at 143 ppm in coal and 10 ppm in limestone; F in coal based on EPA 650/2-74-054 maximum for Illinois; F in limestone based on EPA 600/7-78-050.
 $229,905 \text{ lb coal/hr} \times 143 \text{ lb F}/10^6 \text{ coal} \times 0.1 = 3.29 \text{ lb/hr}$
Total = $3.29 + 0.06 = 3.35 \text{ lb/hr}$.

D - 50% control; Hg in coal based on maximum calculated from EPA 650/2-74-054 of 0.65 ppm; in limestone based on EPA 600/7-78-050 of 0.16 ppm; $229,905 \text{ lb coal/hr} \times 0.65 \text{ lb Hg}/10^6 \text{ lb coal} \times 0.5 = 0.075 \text{ lb/hr}$.
 $60,250 \text{ lb limestone/hr} \times 0.16 \text{ Hg}/10^6 \text{ lb coal} \times 0.5 = 0.005$
Total = $0.075 \text{ lb/hr} + 0.005 \text{ lb/hr} = 0.08 \text{ lb/hr}$

E - Same as D except maximum average Hg calculated as 0.2724 ppm; no change in limestone
 $229,905 \times 0.2724/10^6 \times 0.5 = 0.0313 \text{ lb/hr}$
Average = $0.0313 \text{ lb/hr} + 0.005 \text{ lb/hr} = 0.0363 \text{ lb/hr}$;
 $0.16 \text{ TPY} \times .83 = .13 \text{ TPY}$

CFB BOILER EMISSIONS (Operational Period)
Emission Calculations for Tables 3.4.2-1 and A.1-1 and A

POLLUTANT and (BASIS)	EMISSION FACTOR (lb/10 ⁶ BTU) A	HEAT INPUT (10 ⁶ BTU/hr) B	EMISSIONS	
			(lb/hr) C	(Tons/year) D
Nitrogen Oxides	0.20	2,414	482.8	2,114.7
Sulfur Dioxide (See Note A)	0.30	2,414	724.2	3,172.0
Particulate Matter (Manufacturer)	0.015	2,414	36.2	158.6
PM-10 (Manufacturer)	0.015	2,414	36.2	158.6
H ₂ SO ₄ Mist (See Note B)	0.0092	2,414	22.2	97.1
Carbon Monoxide (Manufacturer)	0.17	2,414	410.4	1,797.5
Volatile Organic Compounds (Manufacturer)	0.01	2,414	24.14	105.7
Fluorides (See Note C)	0.0014	2,414	3.4	14.9
Lead (See Note D)	0.00004	2,414	0.097	0.42
Mercury (See Notes E and F)	0.000017	2,414	0.04	0.073
Beryllium	0.00000225	2,414	0.005	0.024

Calculations: $C = A \times B$; $D = C \times 8,760 \text{ hrs/yr} \times \text{Ton}/2000 \text{ lb}$

Notes: A - Maximum hourly emission based on 92% removal of 2% sulfur coal at 10,500 BTU/lb $2,414 \times 10^6 \text{ BTU/hr} \times \text{lb coal}/10,500 \text{ BTU} \times 0.02 \text{ lb S/lb coal} \times 2 \text{ lb SO}_2/\text{lb S} \times 0.10 = 724.2 \text{ lb/hr}$

B - 2% of SO₂; maximum $724.2 \text{ lb SO}_2/\text{hr} \times 0.02 \times 98/64 = 22.2 \text{ lb/hr}$

C - 90% removal of F at 143 ppm in coal and 10 ppm in limestone; F in coal based on EPA 650/2-74-054 maximum for Illinois; F in limestone based on EPA 600/7-78-050. $229,905 \text{ lb coal/hr} \times 143 \text{ lb F}/10^6 \text{ coal} \times 0.1 = 3.29 \text{ lb/hr}$
Total = $3.29 + 0.06 = 3.35 \text{ lb/hr}$.

D - Lead emission based on EPA, 1989, pg. 4-174 and reduced to $0.00004 \text{ lb}/10^6 \text{ BTU}$ with greater particulate matter control, i.e., reduction from $0.02 \text{ lb PM}/10^6 \text{ BTU}$ to $0.015 \text{ lb PM}/10^6 \text{ BTU}$.

E - 74% control of Hg; Hg in coal based on maximum calculated from EPA 650/2-74-054 of 0.65 ppm; in limestone based on EPA 600/7-78-050 of 0.16 ppm; $229,905 \text{ lb coal/hr} \times 0.65 \text{ lb Hg}/10^6 \text{ lb coal} = 0.15 \text{ lb/hr}$. $60,250 \text{ lb limestone/hr} \times 0.16 \text{ Hg}/10^6 \text{ lb coal} = 0.01 \text{ lb/hr}$
Total = $(0.15 \text{ lb/hr} + 0.01 \text{ lb/hr}) \times (1-0.74) = 0.042 \text{ lb/hr}$

F - Annual average Hg emissions - Same as E except maximum average Hg calculated as 0.2724 ppm; no change in limestone $229,905 \times 0.2724/10^6 \times 0.063 \text{ lb/hr}$
Average = $(0.063 \text{ lb/hr} + 0.01) \text{ lb/hr} (1-0.74) = 0.017 \text{ lb/hr}$; 0.073 TPY

Table A. Proposed Emission Limits for Hopkins CFB Unit 2

Pollutant	Proposed Compliance Period	Emission Limit		Basis ^a
		lb/hr	TPY	
Nitrogen Oxides	Demonstration ^b Operation ^c	675.9	2,457.2	0.28 lb/MM Btu
		482.8 ^d	2,114.7	0.20 lb/MM Btu
Sulfur Dioxide	Demonstration ^b Operation ^c	1839.2	6,686.4	0.76 lb/MM Btu ^e
		724.2 ^d	3,172.0	0.30 lb/MM Btu ^f
Particulate Matter/PM10	Demonstration ^b Operation ^c	36.2	131.6	0.015 lb/MM Btu
		36.2	158.6	0.015 lb/MM Btu
Sulfuric Acid Mist	Demonstration ^b Operation ^c	56.3	204.8	0.0233 lb/MM Btu
		22.2	97.1	0.0092 lb/MM Btu
Carbon Monoxide	Demonstration ^b Operation ^c	410.4	1,491.9	0.17 lb/MM Btu
		410.4	1,797.5	0.17 lb/MM Btu
Volatile Organic Compounds	Demonstration ^b Operation ^c	24.1	87.8	0.01 lb/MM Btu
		24.1	105.7	0.01 lb/MM Btu
Fluorides	Demonstration ^b Operation ^c	3.4	12.4	0.0014 lb/MM Btu
		3.4	14.9	0.0014 lb/MM Btu
Lead	Demonstration ^b Operation ^c	0.097	0.35	0.00004 lb/MM Btu
		0.097	0.42	0.00004 lb/MM Btu
Mercury	Demonstration ^b Operation ^c	0.080	0.139	0.000033 lb/MM Btu
		0.042	0.079	0.000017 lb/MM Btu
Beryllium	Demonstration ^b Operation ^c	0.005	0.020	0.00000225 lb/MM Btu
		0.005	0.024	0.00000225 lb/MM Btu

^a maximum heat input is 2414 MM Btu/hr

^b 2 year DOE demonstration period; annual tons per year based on 83% capacity factor

^c after DOE demonstration period; annual tons per year based on 100% capacity factor

^d 30-day rolling average for determining compliance

^e 0.76 lb/MM Btu is achieved with 4% sulfur coal at 10,500 Btu/lb and 90% SO₂ removal

^f 0.3 lb/MM Btu is achieved with 2% sulfur coal at 10,500 Btu/lb and 92% SO₂ removal

^g Based on annual average Mercury content of coal of 0.2724 ppm

08/05/91

Table B. Emissions Comparisons for Hopkins Unit 2 and CFB Unit

Pollutant	Unit 2	Unit 2	Unit 2		CFB Unit Potential Emissions ^d
	Actual Emissions ^a 1989-90	Actual Emissions ^b 1980-90	Potential Historical Fuel Mix ^c	Emissions Permitted	
Particulate Matter	48.3	83.7	163.6	1,018.4	158.6
Sulfur Dioxide	337.4	1,371.5	3,248.3	19,043.1	3,172.0
Nitrogen Oxides	1,324.4	1,612.2	3,055.0	3,055.1	2,114.7
Carbon Monoxide	194.2	195.7	383.7	339.5	1,797.5
Volatile Organic Cpds.	7.5	9.7	19.0	51.6	105.7
Lead	.005	0.020	0.040	0.285	0.423
Sulfuric Acid Mist	8.0	32.5	63.5	451.0	97.1
Fluoride	0.001	0.005	0.009	0.064	14.9
Mercury ^e	0.001	0.002	0.005	0.033	0.073
Beryllium	0.001	0.003	0.006	0.043	0.024
TOTAL:	1,919.8	3,305.3	6,933.2	23,959.0	7,461.0

PERCENT INCREASE OVER
HISTORICAL FUEL MIX : 7.6%

All columns represent tons per year.

- a Based on 1989-90 historical fuel mix of 96% gas and 4% oil with oil at 1.7% sulfur at a 49% capacity factor.
- b Based on 1980-90 historical fuel mix of 86% gas and 14% oil with oil at 2.1% sulfur at a 51% capacity factor.
- c Based on 1980-90 historical fuel mix of 86% gas and 14% oil with oil at 2.1% sulfur (i.e. 2.27 lb/MM Btu) at 100% capacity factor.
- d CFB operational period at 100% capacity factor with 2% sulfur coal.
- e Figures for Unit 2 assume zero for mercury emissions for gas firing.

08/05/91

Table 3.4.1-1
CFB Unit Emissions

<u>Pollutant</u>	<u>Emission Rate (lb/MMBtu)</u>	<u>Potential Emissions* (TPY)</u>
Carbon Monoxide	0.17	1797.5
Nitrogen Oxides	0.20	2114.7
Sulfur Dioxide	0.30 (1)	3172.0
Volatile Organic Compounds	0.01	105.7
Particulate Matter	0.015	158.6
PM-10	0.015	158.6
Sulfuric Acid Mist	0.0092	97.1
Fluorides	0.0014	14.9
Lead	0.000040	0.42
Mercury	0.000017	0.073
Beryllium	0.00000225	0.024

* Based on Design Coal

(1) 30-day rolling average.

Table 3.4.2-1

Hopkins CFB Repowering Project
Potential Emission Comparison

<u>Pollutant</u>	<u>Unit 2 (1)</u> <u>Potential</u> <u>(TPY)</u>	<u>CFB (2,3)</u> <u>Emissions</u> <u>(TPY)</u>	<u>P to P</u> <u>Net Change</u> <u>(TPY)</u>
<u>Category A (4)</u>			
Nitrogen Oxides	3055.1	2120.0	-935.1
Sulfur Dioxide	19043.2	3172.0	-15871.2
Particulate Matter	1018.4	160.8	-857.6
PM-10	1018.4	160.8	-857.6
<u>Category B (5)</u>			
Sulfuric Acid Mist	451.0	97.1	-353.9
Beryllium	0.0428	0.024	-0.019
<u>Category C (6)</u>			
Carbon Monoxide	339.5	1802.7	1463.2
Volatile Organic Compounds	51.6	106.6	55.0
Fluorides	0.0639	14.9	14.8
Lead	0.285	0.423	0.14
Mercury	0.0326	0.073	0.04

-
- (1) Potential emissions based on 100% oil firing at permitted operating rates and emission limits, AP-42 emission factors, Estimating Air Toxics Emissions From Coal and Oil Combustion Sources (EPA, 1989) and Emissions Assessment of Conventional Stationary Systems, Volume III, External Combustion Sources for Electricity Generation (EPA, 1981). The emissions conform with the definition of potential emissions found in F.A.C. 17-2.100(157).
- (2) CFB boiler emissions reflect proposed emission limits for operational period and are based on Ruch study of Illinois Basin coals (1974), EPA study of trace element release from CFB boilers (1978), and Estimating Air Toxics Emissions from Coal and Oil Combustion Sources (EPA, 1989).
- (3) CFB boiler heat input: 2414 MMBtu/hr
 Coal Quality: 10,500 Btu/lb, 2% sulfur, 92% SO₂ removal
 Coal Feed - 229,905 lb/hr Limestone Feed - 60,250 lb/hr
 CFB Emissions (lb/MMBtu) NO_x: 0.20; CO: 0.17; PM: 0.015; VOC: 0.01
 Particulate includes materials handling (1.78 TPY) and limestone dryer (0.44 TPY); Nitrogen oxides and carbon monoxide includes emissions from limestone dryer (5.26 TPY). Volatile organic compounds includes emissions from limestone dryer (0.88 TPY).
- (4) Pollutants for which there is no increase in potential emissions and for which Unit 2 is subject to source specific, federally enforceable emission limits.
- (5) Pollutants for which there is no increase in potential emissions, but for which Unit 2 is not subject to a source specific, federally enforceable emission limit.
- (6) Pollutants for which there is an increase in potential emissions.

Table III.C

Airborne Contaminants (Operational Period)

<u>Contaminant</u>	<u>----Emissions----</u>		<u>Allowable Emission Rate</u>	<u>Allowable Emissions (lb/hr)</u>
	<u>Maximum (lb/hr)</u>	<u>Actual (TPY)</u>		
CFB Boiler Stack				
Carbon Monoxide	410.4	1797.5	n/a	n/a
Nitrogen Oxides	482.8	2114.7	0.6*	1448.4*
Sulfur Dioxide	724.2	3172.0	1.2*	2896.8*
Volatile Organics	24.1	105.7	n/a	n/a
Particulate	36.2	158.6	0.02*	48.3*
Sulfuric Acid Mist	22.2	97.1	n/a	n/a
Fluorides	3.40	14.9	n/a	n/a
Lead	0.097	0.42	n/a	n/a
Mercury	0.042	0.073	n/a	n/a
Beryllium	0.005	0.024	n/a	n/a
Limestone Dryer				
Carbon Monoxide	1.2	5.2	n/a	n/a
Nitrogen Oxides	1.2	5.2	n/a	n/a
Volatile Organics	0.2	0.88	n/a	n/a
Particulate	0.1	0.44	n/a	n/a
Materials Handling Particulatates				
Coal Unloading Area	0.0015	5.5e-04	4.9	1.8
Coal Storage Area	0.1060	4.6e-02	112.5	66.4
Crusher Feed Conveyor	0.0420	3.0e-02	21.0	15.2
Crusher Tower Area	0.3780	2.8e-01	189.0	137.6
CFB Boiler Building	0.0840	6.1e-02	42.0	30.6
Limestone Unloading Area	0.0015	1.5e-04	4.9	0.5
Limestone Storage Area	0.0206	3.2e-03	40.0	7.8
Crusher Feed Conveyor	0.0048	9.9e-04	2.4	0.5
Crusher Tower Area	0.0048	9.9e-04	2.4	0.5
Limestone Prep Bldg.	0.0588	8.2e-02	29.4	41.2
Fly Ash Silo	0.7550	6.3e-01	7.5	8.2
Bottom Ash Silo	0.7550	6.3e-01	7.5	8.2
Ash Pile (Active)	0.0031	1.4e-02	0.0031	0.014

* Emission rates shown are from 40 CFR 60 Subpart Da. As discussed in Attachment A, Section 415(b)(3) of the 1990 CAA Amendments exempts the project from NSPS requirements.

NOTE: Limestone contaminants have been included in the calculations for trace metal emissions.

Table A.1-1

Hopkins CFB Repowering Project
Potential Emission Comparison

<u>Pollutant</u>	<u>Unit 2 (1) Potential (TPY)</u>	<u>CFB (2,3) Emissions (TPY)</u>	<u>P to P Net Change (TPY)</u>
<u>Category A (4)</u>			
Nitrogen Oxides	3055.1	2120.0	-935.1
Sulfur Dioxide	19043.2	3172.0	-15871.2
Particulate Matter	1018.4	160.8	-857.6
PM-10	1018.4	160.8	-857.6
<u>Category B (5)</u>			
Sulfuric Acid Mist	451.0	97.1	-353.9
Beryllium	0.0428	0.024	-0.019
<u>Category C (6)</u>			
Carbon Monoxide	339.5	1802.7	1463.2
Volatile Organic Compounds	51.6	106.6	55.0
Fluorides	0.0639	14.9	14.8
Lead	0.285	0.423	0.14
Mercury	0.0326	0.073	0.04

-
- (1) Potential emissions based on 100% oil firing at permitted operating rates and emission limits, AP-42 emission factors, Estimating Air Toxics Emissions From Coal and Oil Combustion Sources (EPA, 1989) and Emissions Assessment of Conventional Stationary Systems, Volume III, External Combustion Sources for Electricity Generation (EPA, 1981). The emissions conform with the definition of potential emissions found in F.A.C. 17-2.100(157).
- (2) CFB boiler emissions reflect proposed emission limits for operational period and are based on Ruch study of Illinois Basin coals (1974), EPA study of trace element release from CFB boilers (1978), and Estimating Air Toxics Emissions from Coal and Oil Combustion Sources (EPA, 1989).
- (3) CFB boiler heat input: 2414 MMBtu/hr
 Coal Quality: 10,500 Btu/lb, 2% sulfur, 92% SO₂ removal
 Coal Feed - 229,905 lb/hr Limestone Feed - 60,250 lb/hr
 CFB Emissions (lb/MMBtu) NO_x: 0.20; CO: 0.17; PM: 0.015; VOC: 0.01
 Particulate includes materials handling (1.78 TPY) and limestone dryer (0.44 TPY); Nitrogen oxides and carbon monoxide includes emissions from limestone dryer (5.26 TPY). Volatile organic compounds includes emissions from limestone dryer (0.88 TPY).
- (4) Pollutants for which there is no increase in potential emissions and for which Unit 2 is subject to source specific, federally enforceable emission limits.
- (5) Pollutants for which there is no increase in potential emissions, but for which Unit 2 is not subject to a source specific, federally enforceable emission limit.
- (6) Pollutants for which there is an increase in potential emissions.

TO: Patty Adams
Buck Oven

FROM: Cindy Phillips

DATE: April 3, 1991

SUBJECT: 3rd-Party Notification

Ms. Thelma M. Royce called today and requested that she be put on the mailing list for information about the City of Tallahassee power plant permitting project. She especially wants to be notified of any public meetings or hearings. Her mailing address is:

Ms. Thelma Royce
Route 4, Box 412
Tallahassee, FL 32304

If you can not comply with her request, or you need additional information from her, her work phone no. is 644-3803 and her home phone no. is 575-2211.

I N T E R O F F I C E M E M O R A N D U M

Date: 09-Apr-1991 11:58am GMT
From: Iris Littleton
LITTLETON_I
Dept: Office General Counsel
Tel No: 904/488-9730

TO: DUANE REVELL

(REVELL, DUANE)

CC: Pat Manning

(MANNING_P)

Subject: New OGC Case Assignments

TO: Duane Revell

FROM: Iris - OGC - Tallahassee

Received 3/14/91 request for an Administrative Hearing from Laura Markowitz, Dottie Devane, Kathy Younkin, Eleanor Salkin & Tony Palms against intent to issue permit AC29-181544 to MacDill Air Force Base.

Received 4/02/91 two requests for Extensions of Time from Donzi Marine Corp. concerning permits AC41-192558 and AC41-165759.

Received 3/11/91 petition re: Modification of Site Certification from City of Tallahassee, Arvah B. Hopkins Generating Station PA74-03.

Received 3/29/91 petition re: Site Certification from Orlando Utilities Commission Stanton Unit 2 PA81-14B.

cc: B. Mitchell
B. Owen



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To	Location
To	Location
To	Location
From	Date

Interoffice Memorandum

PSD-FL-172
log in &
set up site
(PL) 3/11

TO: Power Plant Siting Review Committee

FROM: Steve Palmer *[Signature]*

DATE: March 11, 1991

SUBJECT: A.B. Hopkins CFB Repowering Project
Power Plant Siting Application
PA 74-03A, Module No. 8042

Enclosed please find a copy of the above referenced power plant siting application. Please let me know who from your respective areas will be reviewing this project. We must determine the completeness of the application by March 21, 1991. There will be a meeting to discuss the application at 1:30 p.m., on March 19, 1991, in Room 338-D.

cc: Howard L. Rhodes
Mark Latch
Rick Wilkins
Barry Andrews
Max Linn

[Handwritten mark]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION IV
AIR, PESTICIDES AND TOXICS MANAGEMENT DIVISION

345 Courtland Street, N.E.

Atlanta, Georgia 30365

Fax Number: FTS 257-5207 or (404) 347-5207

FACSIMILE TRANSMISSION SHEET

DATE: 5-3-91NUMBER OF PAGES (including this sheet) 5
(preparer must number all pages)TO: Clair Fency

PHONE: _____

ADDRESS: FDERFAX NO. (404) 922-6972FROM: Gregg WorleyPHONE: 347-2904If the following pages are received poorly, please call _____
at FTS 257- 2904 or (404) 347- 2904

SPECIAL INSTRUCTIONS FOR RECEIVER: _____

Copy to Clair/Buck/Gary
Conid. As necessary
on any action needed.

WHITE FILE COPY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4APT-AEB

MEMORANDUM

DATE: April 17, 1991

SUBJECT: City of Tallahassee Request for a Non-applicability
Determination of PSD and NSPS Review to the Repowering of
Hopkins Unit 2.FROM: Winston A. Smith, Director *Winston A. Smith*
Air, Pesticides, and Toxics
Management DivisionTO: John B. Rasnic, Acting Director
Stationary Source Compliance Division (M3202)

Background: By letter dated April 12, 1991, you received a request from the City of Tallahassee to make a determination of non-applicability of PSD and NSPS to their repowering project pursuant to §415(b)(3) of the Clean Air Act of 1990. By letter dated March 11, 1991, the City of Tallahassee transmitted to EPA Region IV a copy of their Florida Site Certification Application for the repowering of Unit 2. The purpose of this memorandum is to provide you with several items of information which were not addressed in the letter to you, which we feel are pertinent to this case. In addition, we would like to point out the fact that Florida has a federally approved State Implementation Plan, including a PSD program; thus, we do not feel that it is appropriate for EPA to make a determination of PSD applicability pursuant to the CAA of 1990 prior to any regulatory changes in Florida.

Location of the Source: The Avraha Hopkins Energy Center is located approximately 1/2 mile north of a Class II National Forest, the Apalachicola National Forest. Perhaps more importantly, the source is located within a range of 25 to 50 kilometers from two Class I Areas: St. Marks National Wildlife Refuge and Bradwell Bay National Wilderness Area. We feel that it would be appropriate to obtain the input from the Federal Land Managers with responsibilities for each of these areas.

Emissions Estimates: The statutory language of §415(b)(3) of the 1990 CAAA has been interpreted by EPA to allow the increase (or decrease) in emissions due to "repowering" with a permanent clean-coal technology project to be calculated on a "potential-to-potential" basis. Utilizing this procedure, the City of Tallahassee has provided potential emissions estimates for pollutants emitted by Unit 2. This procedure has shown a decrease in potential emissions for several pollutants; however, the documentation to support the calculations of potential emissions for the existing Unit 2 was not provided in the letter to you or in the

-2-

Site Certification Application. We are unable to estimate past potential emissions without a copy of the previous permit for Unit 2 (e.g., with sulfur-in-fuel limits, hours of operation limits, etc.). In addition, the May 20, 1975, Site Certification clearly states that the capacity of the gas/oil fired Unit 2 is a nominal 238 MW rather than the 250 MW that is claimed as the generating capacity in the letter to you. We would suggest that before any concurrence with the applicability of the statutory exemptions is given, adequate documentation should be provided to support the applicant's claims for past potential emissions.

Clean Coal Technology: The CAAA of 1990 has provided regulatory incentives for clean coal technology projects. The apparent purpose of these incentives is to induce industry to utilize less polluting technologies for the combustion of coal at new sources and to allow industry to replace "dirtier" coal burning operations with cleaner coal burning technologies. The City of Tallahassee is claiming that the repowering of Unit 2 qualifies for the exemptions specified in §415(b)(3) of the Act, based on the definition of "repowering" contained in §402(12). Although the majority of the definition refers to the replacement of existing coal-fired boilers with new technology, the last sentence of the definition reads as follows:

Notwithstanding the provisions of section 409(a), for the purpose of this title, the term 'repowering' shall also include any oil and/or gas-fired unit which has been awarded clean-coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

Clearly, the Hopkins Repowering Project has met the statutory deadline in regards to funding by DOE. What is not so clear is the regulatory intent of this definition. Does the statute intend to mean that an oil and/or gas-fired unit which meets funding requirements may be repowered utilizing any clean coal technology, or is the intent that a specific technology such as coal gasification should apply?

Assuming that the unit may be repowered with any technology, the potential emissions calculations are correct, and the source otherwise meets all of the requirements to qualify for the statutory exemptions of §415(b)(3) of the Act, the question must be raised as to who has authority to grant these exemptions. The answer is found in §415(b)(4) - "EPA Regulations"

Not later than 12 months after the date of enactment, the Administrator shall promulgate regulations or interpretive rulings to revise requirements under section 111 and parts C and D, as appropriate, to facilitate projects consistent in this

-3-

subsection. With respect to parts C and D, such regulations and rulings shall apply to all areas in which EPA is the permitting authority. In those instances where the State is the permitting authority under part C or D, any State may adopt and submit to the Administrator for approval revisions to its implementation plan to apply the regulations or rulings promulgated for this subsection. (emphasis added)

Clearly the Clean Air Act Amendments grant flexibility to the State to decide whether or not to grant such exemptions in cases where the State is the permitting authority. Such is the case in Florida where the Florida Department of Environmental Regulation is the permitting authority for implementing the provisions of part C and D.

The Administrator of EPA has retained authority over the section 111 program; thus, it would lie within the purview of EPA to grant an exemption from the federal requirements of section 111 pursuant to §415(b)(3) of the CAAA of 1990. In fact, it would appear that EPA is statutorily bound to grant such an exemption. The authority to grant an exemption from the part C requirements, however, clearly lies with the State of Florida.

In closing, we would like to point out that although the proposed circulating fluidized bed boiler fits the statutory definition of "clean coal technology," this will not be the first CFB project permitted in Florida. A recent permit was issued to AES/Cedar Bay for three CFB's, each rated at 1063 MMBTU/hr. The permit limits for each of the three boilers as compared to the proposed Hopkins Unit 2 limits are as follows.

	<u>Unit 2</u>	<u>AES/Cedar Bay</u>
rating	2414 MMBTU/hr	3 @ 1063 MMBTU/hr
SO ₂	0.76 lb/MMBTU	0.31 lb/MMBTU
NO _x	0.28 lb/MMBTU	0.29 lb/MMBTU
PM	0.03 lb/MMBTU	0.02 lb/MMBTU

In addition, the recent Site Certification Application for Indiantown Cogeneration in Florida contained proposed emission limits of 0.17 lb/MMBTU for NO_x and 0.17 lb/MMBTU for SO₂ for a pulverized coal (PC) boiler. Other PC boilers have been permitted within Region IV with SO₂ emission levels of 0.21 lb/MMBTU.

-4-

Recommendation: Although EPA clearly must exempt any source qualifying under §415(b)(3) of the Act from the federal requirements of section 111, we must caveat any determination of applicability of part C exemptions to the effect that such determination is only binding in areas where EPA is the permitting authority. In areas in which the state is the permitting authority, such as Florida, the Act grants the flexibility for the state to make the determination. This flexibility allows the State to evaluate the individual merits of a project (such as comparative levels of pollutant emissions) when making a determination whether or not to exempt the project from PSD review.

If you have questions or comments on this memorandum, please contact me or Mr. Gregg Worley of my staff at FTS 257-2904.