



CITY OF

LAKE WORTH

DEPARTMENT OF
ENVIRONMENTAL PROTECTION

1900 2ND AVENUE NORTH
LAKE WORTH, FLORIDA 33461

FEB 16 1999

SITING COORDINATION

UTILITIES
DEPARTMENT

(561) 586-1666
FAX (561) 586-1702

February 12, 1999

Hamilton S. Oven, Administrator
Siting Coordination office
Department of Environmental protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: City of Lake Worth, Utilities Department;
Unit S-5; PA 74-05;
Clarification of Certified Site Boundaries;

Dear Mr. Oven:

Pursuant to Rule 62-17.205(2), F.A.C., the City of Lake Worth, Utilities Department, hereby submits to the Department its clarification of those portions of the City's Tom G. Smith generating facility that are subject to the Power Plant Siting Act, Chapter 403, Part II, Fla. Stat (PPSA).

As you are aware, in May, 1976, the Siting Board issued its final certification under the PPSA for the construction and operation of Lake Worth's Unit S-5. At that time and continuing today, Unit S-5 is co-located at a site containing several other electric generating units and other facilities operated by the City of Lake Worth. However, only Unit S-5, a 29.5 megawatt combined cycle unit, is subject to the certification. The other generating units and facilities, all of which were constructed prior to the enactment of the PPSA, operate under their separate permits and approvals. The purpose of this submittal is to clarify "those specific parts of the [Unit S-5] plant and site that are to be evaluated for compliance purposes under certification and those parts that will continue under the original permits." Rule 62-17.205(2), F.A.C.

Accordingly, the City is submitting the enclosed detailed site plan and survey that delineate those portions of the site that are subject to the Certification Order for Unit S-5, as well as those portions that will continue to be operated under their original permits. Included with the survey is a legal description of the site boundaries for Unit S-5.

Special Condition I.1. of the certification for Unit S-5 provides that "fuel consumed should contain not more than 2.25 % sulfur in Units S-3 and S-4 nor more than 0.35% sulfur in Unit S-5." The City has operated Units S-3, S-4 and S-5 in accordance with this condition, and will continue to do so in the future. No change to that condition is proposed or necessary as a result of this

Memorandum

Florida Department of
Environmental Protection

TO: Clair Fancy ✓
Izzy Goldman

FROM: Buck Oven HSO

DATE: February 18, 1999

SUBJECT: Lake Worth Unit S-5/Thomas G. Smith Station, City of Lake Worth
PA 74-05, Module 8015

You may wish to include copies of the attached correspondence in the files for the City of Lake Worth's Smith Generating Station. Lake Worth has clarified the certified site of the Unit S-5 at the Thomas G. Smith Station. The certified site boundaries have been reduced to encompass only the area immediately around Unit S-5 and its related facilities. Permitting of any new or modified, non-steam electric facilities outside the boundaries of the certified site need not be processed under provisions of the Florida Electrical Power Plant Siting Act.

cc: Scott Goorland

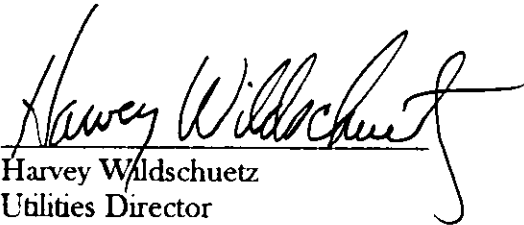
Attach:

Hamilton S. Oven, Administrator
February 12, 1999
Page 2

clarification. As you requested, attached to this submittal is a letter from Mr. Ken Kosky of Golder Associates explaining the basis for this special condition on fuel sulfur limits when it was promulgated in November, 1975.

Should you have any questions concerning this matter, please do not hesitate to contact either Margaret Johnstone at 561-533-7384 or myself.

Sincerely,
CITY OF LAKE WORTH



Harvey Wildschuetz
Utilities Director

Enclosures
cc: Parties to Certification, PA 74-05 (w/encls.)

Copies furnished to the following by U.S. Mail:

Scott A. Goorland
Assistant General Counsel
Department of Environmental Protection
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000

Andrew Grayson
Assistant General Counsel
Department of Community Affairs
2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100

Robert V. Elias, Esquire
Florida Public Service Commission
Gerald Gunter Building
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



February 12, 1999

9839537A/1

Mr. Hamilton S. Oven, Jr., P.E., Administrator
Siting Coordination Office
Florida Department of Environmental Protection
2720-H Blair Stone Road
Tallahassee, FL 32399

RE: Site Certification PA-74-05
City of Lake Worth, Unit S-5
Conditions of Certification that Include Units S-3 and S-4

Dear Buck:

This correspondence is provided in connection with the Clarification, dated February 12, 1999, that the City of Lake Worth submitted to the DEP pursuant to Rule 62-17.205(2), F.A.C. I will provide a historical perspective for the basis of the Special Conditions of Certification I. Air, 1. that prescribe a maximum sulfur fuel limit for Units S-3, S-4 and S-5. The condition states:

1. Fuel consumed should contain no more than 2.25% sulfur in Units S-3 and S-4 nor more than 0.35% sulfur in Unit S-5.

During the certification for Unit S-5, I was the air pollution consultant for the City of Lake Worth who provided the air emissions and air quality impacts studies required by the predecessor of the FDEP (i.e., Florida Department of Environmental Regulation). During the course of this work, I directed air quality and emission studies specific to the existing Units S-1 through S-4 and the proposed Unit S-5 at the Tom G. Smith Municipal Power Plant. I also testified at the certification hearing. At the time, I was employed by Environmental Science and Engineering, Inc. (ESE) who was under contract to the City of Lake Worth to provide such services. During the same time frame, I was also involved as the Project Manager who provided all the technical studies for the change in the sulfur dioxide emission limits in Florida. This work was also conducted by ESE under contract to the Florida Electric Power Coordinating Group Inc. (FCG).

During the certification of Unit S-5, the air pollution regulations were undergoing a dramatic change that ultimately reflected the basis of the Condition of Certification I.1 that included Units S-3 and S-4. This included a change in the maximum allowable sulfur dioxide emission limit for fossil fuel steam generators from 1.1 lb/mmBtu (about 1 percent sulfur) to 2.75 lb/mmBtu (about 2.5 percent sulfur); the establishment of the predecessor of the Prevention of Significant Deterioration (PSD) regulations by EPA; and a change in a now-repealed non-degradation rule that was originally included in the Florida's State Implementation Plan (SIP) in 1972. The change in the sulfur dioxide emission limits was for existing fossil fuel steam generating units with a heat input greater than 250 mmBtu/hr, such as Lake Worth Units S-3 and S-4, and has remained the same since that time [refer to Rule 62-296.405 (1)(c)1.]. The permitted heat inputs for Units S-3 and S-4 are 325.1 and 419.1 mmBtu/hr, respectively.

Condition I. 1. reflects a "netting out" of emissions for the addition of Unit S-5. This was accomplished by establishing an enforceable emissions limit for Units S-3 and S-4 that was lower than the allowable sulfur dioxide emission limit that was applicable to those units (i.e., a reduction from 2.5 to 2.25 percent sulfur). In addition, the sulfur limit for Unit S-5 was reduced

slightly from the maximum sulfur limit for distillate oil (i.e., a reduction from 0.5 to 0.35 percent sulfur). This combination limited the facility to no net increase in allowable sulfur dioxide emissions from what would have been allowed for Units S-3 and S-4 only at the higher sulfur fuel limit. The sulfur dioxide emissions for Unit S-3 and S-4 using 2.5 percent sulfur oil, the maximum allowable for those units, would have been 2,000 lb/hr. With the Special Condition I.1., the combined sulfur dioxide emissions for Unit S-3 and S-4 using 2.25 percent sulfur oil and Unit S-5 using 0.35 percent sulfur is also about 2,000 lb/hr. Thus, the addition of Unit S-5 did not increase allowable sulfur dioxide emissions from the Tom G. Smith Municipal Power Plant. Since there was no permitting action required for Units S-3 and S-4 under the rule change for Florida's sulfur dioxide emission limits, the only effective mechanism at the time was to include an enforceable mechanism for this "netting out" process, i.e., a condition to the Site Certification for Unit S-5.

Since the approval of the Site Certification for Unit S-5, the air operating permits for Units S-3 and S-4 included the sulfur fuel limit as prescribed by the Conditions of Certification. These permits have been superseded by the issuance of the Title V Air Operation Permit for the facility (Final Permit No. 0990045-002-AV) which includes the same sulfur fuel limit. The Title V permit now makes the sulfur limit for Units S-3 and S-4 both state and federally enforceable. Thus, the issuance of the Title V permit provides a separate, independent basis for the sulfur limitations.

It should be noted that since the issuance of the Conditions of Certification for Unit S-5 the Department's air rules, including PSD have changed substantially. Under the current PSD rules, it would not have been necessary for Units S-3 and S-4 to effectively provide emission offsets. Nonetheless, the City of Lake Worth committed to such a condition in 1975 and the commitment continued through the acceptance of the Title V permit.

Please call if you have any questions.

Sincerely,



Kennard F. Kosky, P.E.
Principal

KFK/arz

cc: Margaret Johnstone (City of Lake Worth)

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CITY OF

LAKE WORTH

1900 2ND AVENUE NORTH

LAKE WORTH, FLORIDA 33461

DEPARTMENT OF
ENVIRONMENTAL PROTECTION

FEB 16 1999

SITING COORDINATION

UTILITIES
DEPARTMENT

(561) 586-1666
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February 12, 1999

Hamilton Oven, Siting Coordinator
Department of Environmental Protection
Siting Coordination Office
2720 Blair Stone Road, Mail Station 48
Tallahassee, Florida 32399

RE: City of Lake Worth, Utilities Department
Unit S-5; PA 74-05
Clarification of Certified Site Boundaries

Dear Mr. Oven:

Recently, we discussed with you the City of Lake Worth's (the City) and Lake Worth Generation, LLP's (LWG) electrical generation project. The purpose of this letter is to inform you of the project in more detail, and to request DEP confirmation that activities planned by LWG or the City do not require certification under the Electrical Power Plant Siting Act.

The project is designed to enable both parties to utilize an already developed site in a manner that will increase the efficiency of existing infrastructure while reducing overall environmental impacts. LWG will construct a new, approximately 170 MW nominally rated gas-fired combustion turbine and heat recovery equipment on property it will lease from the City. LWG will lease from the City an existing steam turbine, currently part of the City's S-4 unit, and have it receive steam from the new combustion turbine and heat recovery equipment in combined cycle operation. (LWG will also lease fuel tanks and other appurtenances from the City, and will share certain common non-generating facilities with the City.) LWG will operate the resulting combined cycle unit as an Exempt Wholesale Generator.

The City will also purchase steam from LWG's heat recovery equipment and utilize the steam in its operation of another existing City steam turbine, Unit S-3. The

steam purchased from LWG will displace the existing S-3 boiler, except on those occasions when steam is unavailable from LWG. On only those occasions, the City will operate the S-3 boiler to supply steam to the S-3 steam turbine.

The Siting Act requires certification of a new electrical power plant (defined as a steam or solar electrical generating facility having 75 MW or more of capacity) and of any expansion in steam capacity of an electrical power plant existing prior to 1973. Sections 403.503 (12); 403.506(1), F.S. Rule 62-17.031, F.A.C., which implements this requirement, states:

Pursuant to Section 403.506(1), F.S., certification is required for new steam or solar electrical power plants of 75 megawatts or greater, and for expansion of steam or solar generating capacity of power plants existing in 1973 whose steam generating capacity is, or will be, 75 megawatts or greater.

(emphasis added)

As designed, neither LWG's new combustion turbine nor the activities involving the City's existing steam turbines will require review under the Florida Electrical Power Plant Siting Act.

New Equipment. LWG's combustion turbine and heat recovery equipment will be situated on property that has never been part of a certified site. Accordingly, the new combustion turbine and heat recovery equipment has no Siting Act implications.

Existing Equipment. Prior to 1973, the City's Tom Smith plant consisted of Units S-1 (a steam turbine of 7.5 MW); S-2 (also a steam turbine of 7.5 MW); S-3 (a 26.5 MW steam turbine); and S-4 (32.5 MW steam turbine). In total, the pre-1973 steam capacity on the site amounts to 74 MW. During project development, certain existing pre-1973 units will be reconfigured and upgraded, but any increases associated with the reconfiguration will be offset by reductions in other pre-1973 capacity at the site. The total capacity associated with pre-1973 steam capacity at the plant will not change.

The project entails these specific activities. Unit S-1 presently holds an active operating permit and is in service. Existing Unit S-2 is not in service and is the only unit without current operating permits. The Unit S-2 steam turbine generator is operational, and can be returned to service with the refurbishing of other system components. Unit S-3, in which the City will utilize steam purchased from LWG, will not be altered in

terms of existing physical capacity. However, a reconfiguration of the steam cycle will increase the expected output from 26.5 to 29 MW. This reconfiguration will simply utilize existing "steam capacity" more efficiently. Accordingly, this should not be viewed as an "expansion" activity in any event, but offsetting reductions described herein render this a moot point. Unit S-4 will be modified such that its reconfigured capacity will be 45 MW. In conjunction with the modifications of Units S-3 and S-4, the City will eliminate the capacity of Units S-1 and S-2. Specifically, the City will, if necessary, surrender the permit of S-1 and commit not to return S-1 or S-2 to service. The elimination of the 15 MW capacity of Units S-1 and S-2 from pre-1973 Tom Smith steam capacity will offset the modifications to S-3 and S-4, with the result that there will be no net expansion of steam turbine generation capacity; in addition, the total steam turbine electric output of 74 MW will remain below the 75 MW threshold of Section 403.506(1), F.S., and Rule 62-17.031(3), F.A.C.

If viewed from the perspective of individual units, each pre-1973 unit will remain well below the threshold of 75 MW. If viewed in terms of the aggregate steam capacity of pre-1973 generating facilities, there will be no net change in the present total of 74 MW (meaning there is no "expansion" within the meaning of the Act), and the total will remain below 75 MW for purposes of applicable rules. Either way, the activities described herein do not involve the requirement of certification under the Siting Act.

For these reasons, LWG intends to proceed with an application for an air permit to construct and operate its new combustion turbine, whereas the City will seek any modifications of existing permits needed to authorize the reconfiguration of Units S-3 and S-4. Please confirm by return letter that certification under the Act will not be required under the circumstances described herein. Also, if you need any additional information, please contact us.

Very Yours truly,

CITY OF LAKE WORTH

By: 
Harvey F. Wildschuetz,
Utilities Director

And

July 20, 1998

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Lake Worth Generation, LLP

By:

A handwritten signature in black ink, appearing to read "B. P. Chatlosh", written over a horizontal line.

Brian P. Chatlosh,
Manager

Memorandum

Florida Department of
Environmental Protection

RECEIVED

JAN 23 1996

BUREAU OF
AIR REGULATION

TO: Clair Fancy
Izzy Goldman

FROM: Buck Oven *9/30*

DATE: January 23, 1996

SUBJECT: Lake Worth, Tom Smith Power Plant, Unit S-5, PA 74-05

Please send me the appropriate language to modify the Conditions of Certification to implement RACT for NOx for the Unit S-5 at the Smith plant. I am attaching a copy of the existing conditions as well as a letter of request to modify.

Attach:

State of Florida Department of Environmental Regulation
Lake Worth Utilities Authority
Unit S-5
Case No. PA 74-05
CONDITIONS OF CERTIFICATION (Proposed 11-18-75)

SPECIAL

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RECEIVED

JAN 23 1996

**BUREAU OF
AIR REGULATION**

State of Florida Department of Environmental Regulation
Lake Worth Utilities Authority
Unit S-5
Case No. PA 74-05
CONDITIONS OF CERTIFICATION (Proposed 11-18-75)

SPECIAL

I. Air

The construction and operation of the Unit S-5 shall be in compliance with all applicable provisions of Chapters 17-2, 17-5 and 17-7, Florida Administrative Code, and the permittee shall comply with the following conditions of certification:

1. Fuel consumed should contain not more than 2.25% sulfur in Units S-3 and S-4 nor more than 0.35% sulfur in Unit S-5.
2. The boiler exhaust stack shall be not less than 75 feet above grade.
3. The permittee shall provide sampling ports into the stack and will provide access to the sampling ports by a ladder and platform or by temporary means as well as such temporary facilities as may be requested by the Department of Environmental Regulation in order that stack sampling may be accomplished.
4. The permittee shall install and operate continuous monitoring devices on the stack for sulfur dioxide, opacity and nitrogen oxides. Records of such monitoring shall be available for inspection. Calculation of SO₂ emissions in accordance with the procedures outlined in Section 60.45, of 40 CFR, Part 60, may be utilized instead of the continuous SO₂ monitor.
5. The permittee shall install and operate two ambient air monitoring devices for sulfur dioxide and two particulate samplers. The location of these ambient air samplers shall be as determined by the Palm Beach County Health Department, Division of Environmental Sciences and Engineering. The data collected will be reported to the County Health Department quarterly by the 20th of each subsequent month. The permittee shall institute the monitoring program one year prior to operation of Unit S-5.
6. The permittee shall maintain an hourly log of fuels used and copies of fuel analyses containing information of sulfur content and heating value to enable calculations of emissions.

II. Water

A. Pretreatment Standards

Wastewater discharged from Unit S-5 to the Lake Worth municipal sewerage system shall comply with Annex III of the Sewer Service Agreement between the Lake Worth Utilities Authority and the City of West Palm Beach and the pretreatment standards for new sources as contained in 40 CFR, Part 423.16 and amendments. The latter is set forth as follows:

EPA Pretreatment Standards and Standards of Performance for New Sources

<u>Parameter</u>	<u>Avg. 30-Day, Daily Value</u>
a) <u>Low Volume Waste</u> (40 CFR, Part 423.15(c))	
(ion exchange water treatment systems, floor drainage, sample drains, cooling tower basin cleaning wastes, and similar wastes)	
TSS	30 mg/l
Oil and Grease	15 mg/l
b) <u>Metal Cleaning Wastes</u> (40 CFR, Part 423.15(f))	
TSS	30 mg/l
Oil and Grease	15 mg/l
Copper, Total	1.0 mg/l
Iron, Total	1.0 mg/l
c) <u>Boiler Blowdown</u> (40 CFR, Part 423.15(g))	
Same limits as for b) Metal Cleaning Wastes.	
d) <u>Cooling Tower Blowdown</u> (40 CFR, Part 423.15(i))	
Zinc	no detectable amount
Chromium	no detectable amount
Materials for corrosion inhibition	no detectable amount
e) The pH of all discharges shall be within the range of 6.0 - 9.0.	
f) There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid, or other toxic substances.	

B. In-Plant Water Monitoring Program

A monitoring program shall be undertaken by the Lake Worth Utilities Authority on the effluent streams within the facility to determine compliance by Unit S-5 with the applicable pretreatment standards.

III. Stormwater Runoff

During construction and operation, necessary measures shall be employed to settle, filter or absorb silt so that the runoff shall not exceed 50 mg/l of suspended solids. Such measures may include sediment traps, barriers and the use of berms or vegetation. Exposed or disturbed soil shall be sodded as soon as possible to minimize silt and sediment runoff into waters of the State.

IV. Solid Wastes

Solid wastes generated by the construction or operation of the facility shall be handled and disposed of in conformance with Chapter 17-7, FAC. Open burning will not be allowed.

V. Special Study

The Lake Worth Utilities Authority shall conduct a special study and furnish to the Department by January 31, 1977; a contingency plan to increase the intertie capability with Florida Power and Light Company in order to produce a source of electricity in the event that gaseous or liquid fuels become uneconomical or unavailable for continued operation of Unit S-5 in compliance with the conditions of certification.



CITY OF **LAKE WORTH**

1900 2ND AVENUE NORTH
LAKE WORTH, FLORIDA 33461-4298

UTILITIES
DEPARTMENT

(407) 586-1668
FAX (407) 586-1702

January 17, 1996

Mr. Buck Oven
Florida Department of Environmental Protection
2600 Blairstone Road, Mail Station
Tallahassee, Florida 32399

RECEIVED

JUL 23 1996

STATION

**SUBJECT: Tom G. Smith Power Plant Permit PA-74-05
Request for Permit Modification Under F.A.C. 62-296
Reasonably Available Control Technology for Nitrogen Oxides**

Dear Mr. Oven:

Per our conversation last week regarding a modification to the site certification permit for Tom G. Smith Power Plant, this letter is sent per your instruction. We request that site certification permit PA-74-05 be modified to reflect the requirements in Chapter 62-296, relating to Reasonably Available Control Technology for Nitrogen Oxides. The local DEP Southeast District office will be issuing the modifications to our nonsite certification operating permits. It is our understanding the F.S. 403.511 (5) (a) of the Power Plant Siting Act provides for automatic inclusion of applicable Department Rules.

If you have any questions, please contact me at (407) 533-3784. Thank you for your assistance with this request.

Sincerely,
LAKE WORTH UTILITIES

Margaret Johnstone
Environmental Compliance Officer

Attachment

- c: Harvey Wildschuetz, Utilities Director
Anatole Bezugly, Assistant Utilities Director
Lloyd Gibb, Power Resources Superintendent
Bill Michael, Mechanical Systems Engineer
Joe Kahn, DEP Southeast District