UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

4APT-ARB

Mr. Clair H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

SUBJ: PSD Permit Application from Santa Rosa Energy Center, Sterling Fibers Manufacturing Facility, Pace, Florida (PSD-FL-253)

Dear Mr. Fancy:

Thank you for your letter of July 9, 1998, submitting an application for a Prevention of Significant Deterioration (PSD) permit for the Santa Rosa Energy Center in Pace, Florida. The application is for the installation of a combustion turbine combined cycle cogeneration facility which will be located within the Sterling Fibers Inc. plant boundary. The facility will provide steam and electricity to Sterling Fibers and electricity to the electric utility grid. The proposed cogeneration facility will consist of a combustion turbine (CT) generator, a heat recovery steam generator (HRSG) equipped with a duct burner, a steam turbine generator, and associated auxiliary equipment. The combustion turbine and duct burner will only fire natural gas. The CT will be a General Electric (GE) Frame 7F design or equivalent with an electric generation capacity of approximately 168 MW. The duct burner will be rated at 585 mmBtu/hr. A fuel input limit is proposed for the duct burner of $3,280 \times 10^6$ scf/yr of natural gas. When additional electric generating capacity is needed for short periods of time, power augmentation will be used.

The proposed best available control technology (BACT) for NO_x control for the CT consist of the use of dry low NO_x (DLN) combustion to maintain emissions at no greater than 9 ppmvd during normal operation and no greater than 12 ppmvd during power augmentation. The duct burner will be equipped with a low NO_x burner to achieve an emission rate of 0.08 lb/mmBtu. The proposed BACT for PM/PM_{10}, volatile organic compounds (VOCs), and CO consists of the use of good combustion practices and clean burning fuels.

Based on our review of the application package, we have the following comments:

(1) The application indicates the CT will typically be operated at or near 100% of the design capacity, and the NO_x

emission rate from the CT will be 9 ppmvd during such conditions. Power augmentation will be used to operate the CT beyond normal operating mode design specifications for short periods of time when additional electric generating capacity is needed. During the power augmentation mode, the NO_x emissions may increase up to 12 ppmvd. As stated in the application, the CT manufacturer does not recommend operation in the power augmentation mode for extended periods of time.

Although operation in the power augmentation mode will apparently be limited, the worst case emissions from the Santa Rosa Energy project are based on operation of the facility 8,760 hours per year in the power augmentation mode with NO_x emissions of 12 ppmvd. The cost estimate of using selective catalytic reduction (SCR) for the control of NO_x emissions is also based on full time operation in the power augmentation mode, and the resulting control cost estimate is $5,247/ton, based on a 46% control efficiency to achieve 6 ppmvd. If the maximum amount of time that power augmentation can or will be used at the facility is known, this amount of time may be proposed as a permit restriction. A more accurate estimate of the worst case emissions for the project may then be based on NO_x emissions from the CT of 9 ppmvd during normal operation and 12 ppmvd during the maximum allowed operating time using power augmentation. This scenario of the worst case emissions should result in a more accurate estimate of the cost of using SCR at the facility.

(2) The lowest BACT NO_x emission limit recently proposed for facilities similar to the Santa Rosa Energy Center is an emission limit of 3.5 ppmvd achieved with the use of SCR. One of these projects is a major modification which has recently been proposed for the Alabama Power - Plant Barry facility in Bucks, Alabama, which consists of the construction of three new combined-cycle electric generating units, each of which will include a GE Model 7FA combustion turbine, or equivalent. The CTs and duct burners will only burn natural gas. The proposed BACT for NO_x emissions from each CT/HRSG at Plant Barry is the use of a dry low-NO_x combustor in the CT, a low-NO_x burner in the duct burner, and an SCR system installed within the HRSG to achieve a concentration of 3.5 ppmvd. Another facility, Mississippi Power - Plant Daniel, in Escatawpa, Mississippi, has recently submitted a PSD application for the construction of two new combined-cycle electric generating units, which will include two GE Model 7FA CTs. The CTs and duct burners will only fire natural gas. For each CT/HRSG at Plant Daniel, it is proposed that NO_x emissions will be controlled by the use of a DLN combustor in the CT, a low-NO_x burner in the duct burner, and a SCR system installed within the HRSG to achieve a concentration of 3.5 ppmvd. Since the BACT evaluation portion of a PSD application must include a consideration of the most stringent emission limit developed for similar facilities, the PSD application for the Santa Rosa Energy Center needs to include an

evaluation of the feasibility of achieving a NO_x emission concentration of 3.5 ppmvd with the use of SCR.

The regulations at 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines will be applicable to the new combustion turbine. 40 CFR Part 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units will apply to the duct burner.

Thank you for the opportunity to review and comment on the application package. If you have any questions, please contact Keith Goff of my staff at (404)562-9137.

Sincerely yours,

Douglas Neeley

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides, and Toxics
Management Division

cc: NRS
NWD
M.E. Carnor, PE
C. Carson, SRE

Fold at line over top of envelope to the right of the return address

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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.

06 AUG 07

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:
Mr. James Shield, VP
Santa Rosa Energy LLC
650 Dundee Rd, Suite 150
Northbrook, IL 60062

4a. Article Number
P 265 659 399

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

7. Date of Delivery 8-6

5. Received By: *(Print Name)*

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

6. Signature: *(Addressee or Agent)*
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PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

P 265 659 399

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to James Shield
Street & Number Santa Rosa Energy
Post Office, State, & ZIP Code

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	8-3-98

PS Form **3800**, April 1995

13663-005 AC
POD-FI-253

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 3, 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James Shield
Vice-President
Santa Rosa Energy LLC
650 Dundee Road, Suite 150
Northbrook, Illinois 60062

Re: DEP File No. 1130003-005AC (PSD-FL-253)
Santa Rosa Energy Center-241 MW Cogeneration Plant

Dear Mr. Shields:

The Department has conducted a completeness review of the Santa Rosa Energy Center's application received on July 8, 1998 for installation of a 241 megawatt GE MS 70001FA (or equivalent) combined cycle combustion turbine to be located within the boundaries of the Sterling Fiber Inc. Plant. Please provide responses to our comments and questions as follows:

Your application states the steam electric turbine associated with the HSRG will be less than 75 MW, however an exact number was not provided. We need reasonable assurance that this new project is not an electrical power plant as defined in the Florida Electrical Power Plant Siting Act. We would forward a copy of your reasonable assurance statement to the Department's Office of Siting Coordination to confirm that this construction project does not constitutes a new project or modification with respect to the Act. Please contact Mr. Buck Oven, P.E., at 850/487-0472 if you have any questions about this issue.

1. Power augmentation will allow the firing of additional natural gas while injecting water/steam into the turbine, to produce more megawatts. Explain the overall operation in the power augmentation mode. What technology is used to generate extra power (i.e., steam or water injection)? How much more power output is due to operation in the power augmentation mode. Provide an schematic of the power augmentation operation mode. What is the maximum manufacturer's recommended period (hr/year, hr/month) for operation in the power augmentation mode.

2. Does Sterling Fibers Inc. have ownership on this project or simply a contract for steam? This information will allow us to determine if the facility requires a separate identification number in our database (ARMS system).

3. Submit General Electric performance data sheets for this turbine and the HRSG's manufacturer performance sheets.

4. Expand on the details (G.E. papers, etc.) of the G.E Dry Low NOx burner technology and the Mark V control system.

5. Provide emission calculations under the normal operating scenario (excluding the power augmentation operation mode). What is the heat rate of this project (Btu/kwh)?

6. What is the total megawatts generated from steam (only)? Is the total power output capacity of the cogeneration plant 241 MW?

7. The Department acknowledges your request for authorization in accordance with Rule 62.210.710 F.A.C., to allow for excess emissions beyond the regulatory limit during periods of startup/shutdown and power augmentation periods. As this is the case, submit specific details about the frequency of these periods. Attach manufacturer support data.

Please submit the application information on an ELSA disk. This will facilitate the input of the application data in the Department's ARMS system.

We will forward any comments from the Department of Interior and EPA Region IV as soon as they are received. If you have any questions regarding this matter, please contact Teresa Heron (review engineer) or Cleve Holladay (meteorologist) at 850/488-1344.

Sincerely,

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

AAL/th

cc: Brian Beals, EPA
John Bunyak, NPS
Ed Middleswart, NWD
Mark Eugene Cramer,PE, Roy F. Weston, Inc
Craig Carson, Santa Rosa Energy LLC

SANTA ROSA *ENERGY* LLC

650 Dundee Road, Suite 150
Northbrook, Illinois 60062
Telephone (847)559-9800
Facsimile (847)559-1805

July 6, 1998

Mr. A.A. Linero
Administrator, New Source Review Section
State of Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road., MS #5505
Tallahassee, Florida 32399-2400

1130003-005-AC
PSD-FL-253

Subject: Santa Rosa Energy Center
PSD Permit Application

Dear Mr. Linero:

Santa Rosa Energy LLC is pleased to submit a PSD Permit Application for a new combined cycle cogeneration facility to be constructed at Sterling Fiber's manufacturing facility in Pace, Florida. The Santa Rosa Energy Center will provide energy to Sterling Fiber's facility and will consist of a combustion turbine with a supplementary fired heat recovery steam generator and associated support facilities.

The PSD Permit Application package for the proposed cogeneration facility includes the necessary documentation for your review and analysis. The permit application includes the following sections:

Introduction
Project Description
Emissions Inventory
Regulatory Assessment
Best Available Control Technology Review
Air Quality Modeling Analysis
Application Forms
Sample Calculations
Vendor Information

We respectfully request that the construction permit for the proposed cogeneration facility described in this application be reviewed and processed in an expeditious manner. We would appreciate your efforts to issue the requested permit by October 1, 1998.

Should you have any questions concerning this application, please contact Mr. Craig Carson at (847) 559-9800 extension 325.

Sincerely,

SANTA ROSA ENERGY LLC,
By its Managing Member
Polsky Energy Corporation

James J. Shield
Vice President
Engineering and Project Management

Enclosure

CC: J. Neron
EPA
NPS
C. Holladay
NWD

POLSKY ENERGY CORPORATION
EDENS CORPORATE CENTER
650 DUNDEE ROAD, SUITE 150
NORTHBROOK, IL 60062-2753
PH. 708-559-9800

LA SALLE NATIONAL BANK
CHICAGO, ILLINOIS 60690
2-50-710

0869

DATE AMOUNT

Seven Thousand Five Hundred and 00/100

06/26/98 $**********7,500.00

PAY
TO THE
ORDER
OF

Dept. of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Rd.MS #5505
Tallahassee,FL 32399-2400

⑈006869⑈ ⑆071000505⑆ 22⑈9411⑈

Security features included. Details on back.

01/17/97-95

WESTON
MANAGERS DESIGNERS/CONSULTANTS
Roy F. Weston, Inc.
1 Weston Way
West Chester, Pennsylvania 19380-1499
® 610-701-3000 • Fax 610-701-3186

24 February 1998

Mr. Al Linero, PE
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Work Order No. 11596-001-001

Dear Mr. Linero:

Roy F. Weston, Inc. (WESTON®) is submitting the following air quality modeling protocol for review by the Florida Department of Environmental Protection (DEP). The air quality modeling protocol describes the technical approach and procedures that will be applied as part of an air quality impact demonstration for the Santa Rosa Energy Center at the Sterling Fibers facility in Milton Florida. The protocol is based on U.S. EPA guidance contained in 40 CFR Part 51 Appendix W, and additional DEP guidance provided by Mr. Tom Rogers.

PROJECT DESCRIPTION

Santa Rosa Energy LLC, a subsidiary of Polsky Energy Corporation of Northbrook, Illinois, is proposing to construct and operate a gas turbine combined cycle cogeneration facility to supply energy in the form of steam and electricity to Sterling Fibers, Inc. (Sterling Fibers) in Santa Rosa County, Florida. The Sterling Fibers plant is located near Milton, Florida. The location of the cogeneration facility which is adjacent to the Sterling Fibers plant is shown on Figure 1.

The primary components of the cogeneration train will be a combustion turbine, a heat recovery steam generator (HRSG) equipped with a duct burner, and a steam electric turbine. The combustion turbine will be a General Electric Frame 7F design or equivalent with an electric generation capacity of 178 MW at average ambient temperature and 60% humidity conditions. The combustion turbine will be fired with natural gas. The combustion turbine will be equipped with a Dry Low NO_X Combustor for natural gas firing to limit NO_X emissions to 9 ppmdv at 15% O_2 under normal operating conditions. The duct burner will be rated at 585 MMBtu/hr, however, Santa Rosa Energy LLC is taking a permit limit to restrict the average annual fuel input to 375 MMBtu/hr. The duct burner will be fired with natural gas and will be manufactured by Coen or equivalent and will be a low NO_X design. The HRSG will be a triple pressure unit providing most of its high pressure steam to the Sterling Fibers header for electric generation at the Sterling Fibers power plant and subsequent process use. The remainder of the high pressure steam, and all intermediate pressure steam will be diverted to the steam turbine. Low pressure steam will be used within the cogeneration facility primarily for the HRSG deaerator. The combustion turbine and duct burner will not operate independently.

FACILITY LOCATION

The cogeneration facility is located near Milton, Santa Rosa County, FL. The host facility is surrounded by undeveloped land. The proposed cogeneration facility will be located to the south of the Sterling Fiber facility. A plot plan showing the exact location of the proposed project relative to the Sterling Fibers facility and the surrounding area is provided as Figure 2. The base elevation at the proposed location is 100 feet (ft) above mean sea level (amsl). The Universal Transverse Mercator (UTM) coordinates for the proposed cogeneration facility are:

488,970 meters Easting
3,381,390 meters Northing
UTM Zone 16

Within 3 km of the site the area is relatively flat with terrain fluctuations of 50 ft or less. As a result, the air quality modeling analysis will not incorporate terrain elevations as part of the study.

EMISSION CHARACTERISTICS

The pollutant emission rates for oil firing and natural gas firing are shown in Table 1. The emission rates include both the turbine and duct burner at 100% load.

The physical stack characteristics and the anticipated emission rates for the cogeneration facility are provided in Table 2. The emission characteristics that are provided in Table 2 reflect the 100%, 75%, 65% and 50% load condition at three different ambient temperatures. In order to confirm that the 100% load condition is the "worst-case" operating scenario from the perspective of air quality impacts, alternate load conditions will need to be evaluated. The emission rates shown in Table 1 will be proportionally adjusted to reflect the operating condition.

Any air toxics emissions from the cogeneration facility would be extremely low and when combined with the 200 ft stack height will likely result in very low ambient concentrations. Therefore, it is proposed that no air toxics modeling be performed.

AIR QUALITY MODELING AND DATA INPUT

The intent of the air quality modeling analysis is to demonstrate that the proposed cogeneration facility will have an insignificant impact, as defined by U.S. EPA significance levels, on the surrounding air quality. In order to accomplish this demonstration, the Industrial Source

Complex Short-Term 3 (ISCST3 Version 96113) will be used to predict the short-term and long-term impacts from the cogeneration facility. In addition to the ISCST3 model, the SCREEN3 model (Version 96043) will be used to select the worst case operating load condition and confirm air quality impacts in building cavities (if applicable). A brief description of the input data for each model and how each model will be used is provided in the following discussion.

Auer Land Use Determination

A land use analysis will be performed for the 3 km radius surrounding the proposed cogeneration facility. The land use analysis will be performed following the procedures described by Auer. United States Geological Survey (USGS) 7.5 minute topographic maps will be used for the land use determination. Based upon the land use determination, the appropriate dispersion option in the ISCST3 and SCREEN3 models will be used.

Topography

The topography surrounding the facility is generally flat. The base elevation of 100 ft above man sea level (amsl) and the stack height of 200 ft means that complex terrain begins at an elevation of 300 ft. There are no area within 20 km of the proposed facility that exceed the 300 ft stack height elevation and thus a complex terrain evaluation will not be performed. Additionally, since the immediate area surrounding the proposed cogeneration facility consists of terrain with elevations well below the stack height elevation, it will not be necessary to include terrain elevations for any receptors.

Receptor Grid

Receptor grids for the ISCST3 and SCREEN3 models will be prepared. The receptor grids will be based on USGS topographic maps. For the SCREEN3 air quality modeling, receptors and receptor elevations will be selected using the following approach:

Receptors will be selected relative to the source. Circles will be plotted at 100 m intervals extending out to 1,000 m, 200 m intervals from 1,000 m out to 2,000 m, 500 m intervals from 2,000 m out to 5,000 m, and 1,000 m intervals from 5,000 m out to 10,000 m.

For the ISCST3 receptor grid, a Cartesian coordinate system will be used. The ISCST3 receptor grid will consist of a rectangular grid with 20 km by 20 km dimensions which will be approximately centered on the cogeneration facility stack. The inner portion of the grid will have grid cells that include 100 m spacing out to 1,000 m. A 200 m spacing will extend out to 3,000 m, and a 500 m spacing will extend out to 5,000 m. From 5,000 m to 10,000 m, a 1,000 meter spacing will be used to develop the grid cells.

The ISCST3 receptor grid will include a subset of on-site receptors that are located within the plant boundary of the host facility but outside the fenceline of the host facility. Also, the portion of the host facility property line that is fenced or constitutes restricted access will be represented with discrete property line receptors.

METEOROLOGICAL DATA

The meteorological data that will be used in the air quality modeling will consist of screening meteorological data and five years of National Weather Service data. The SCREEN3 model uses a matrix of meteorological conditions to predict the worst case air impacts. For the ISCST3 air quality modeling, five years of NWS data from the Pensocala Regional Airport (1985-1989) will be used. Upper air meteorological data from Apalachicola, FL will be used to create mixing height data files. The Pensacola airport is 30 km to the southwest of the host facility and considered is representative of the meteorological conditions at the Sterling Fiber facility.

BUILDING DOWNWASH ANALYSIS

A Good Engineering Practice (GEP) stack height analysis will be performed to evaluate the potential for building aerodynamic downwash as well as the presence of cavity zones. The GEP analysis will be performed using plot plans and information provided by personnel at the host facility. All structures associated with the cogeneration facility as well as all structures at the host facility will be included in the downwind analysis. The U.S. EPA Building Profile Input Program (BPIP Version 95086) will be used to evaluate the potential for building downwash.

The stack height of the proposed cogeneration facility is 200 ft. Therefore, a building would have to have a minimum height of 80 ft in order to influence the cogeneration stack (i.e. 2.5 x L where L is height and is less than the building width). All of the buildings or structures that are higher than 80 ft will be identified. The BPIP input, output and a plot plan of the host facility will be provided to DEP for review.

SUMMARY OF AIR QUALITY MODELING RESULTS

The results of the air quality modeling analysis will be summarized and a comparison will be made to the PSD significance levels. The maximum short-term and long-term off-site air quality impacts will be used for the comparison. The results of the significance analysis will determine the need to perform additional multi-source air quality modeling.

A summary report will be prepared that describes the air quality modeling and shows the level of air quality impacts. A floppy disk with all input files and output files will be included with the summary report.

WESTON is prepared to begin the air quality modeling for the proposed cogeneration facility immediately upon approval of the air quality modeling protocol. If you have any questions regarding the proposed modeling approach please call me at 610-701-7217 or Mr. Craig. Carson at Polsky Energy Corporation at 847-559-9800-Ext. 314.

Very truly yours,

ROY F. WESTON, INC.

Louis M. Militana, QEP
Project Manager

cc: T. Heron, BAR
C. Holladay, BAR

TABLE 1
SANTA ROSA COGENERATION CENTER
MAXIMUM HOURLY EMISSION RATES FROM THE COGENERATION SYSTEM
COMBUSTION TURBINE AND DUCT BURNER FIRING NATURAL GAS ONLY

POLLUTANT	COMBUSTION TURBINE EMISSIONS[a] (lb/hr)	DUCT BURNER EMISSIONS[b] (lb/hr)	TOTAL STACK EMISSIONS[c][d] (lb/hr)
Total Suspended Particulate[e]	9.0	4.7	13.7
Particulate Matter <10 microns[e]	9.0	4.7	13.7
Sulfur Dioxide	1.0	0.6	1.6
Nitrogen Oxides	82.0	46.8	128.8
Volatile Organic Compounds	15.0	11.1	26.1
Carbon Monoxide	30.0	46.8	76.8
Lead[f]	0	0	0
Sulfuric Acid Mist[e]	0	0	0
Beryllium[f]	0	0	0
Total HAPs[f]	0	0	0

[a] Emission rates for each pollutant are the highest hourly rates over the range of ambient air conditions and load levels for the combustion turbine as provided by the combustion turbine vendor. Refer to Table B-1.

[b] Based on full load conditions firing natural gas. Refer to Table B-1.

[c] Combustion turbine with duct burner will be exhausted through a single stack.

[d] Emissions from combustion turbine/duct burner systems operating simultaneously.

[e] Sulfuric acid mist emissions are not included with particulate matter emissions. There are no emission factors available for a combustion turbine or duct burner firing natural gas.

[f] No emissions factors for HAPs are available for natural gas firing for the combustion turbine and duct burner emissions. Natural gas emission factors for natural gas combustion in boilers are low quality and indicate trace quantities of HAPs. HAPs were assumed to be zero.

TABLE 2
POLSKY ENERGY CORPORATION
PROPOSED GAS TURBINE PROJECT
MILTON FACILITY
PHYSICAL STACK CHARACTERISTICS FOR MODELING
BASED ON THE FIRING OF NATURAL GAS

BASE LOAD	AMBIENT CLIMATE CONDITIONS	COMPRESSOR INLET TEMP. (°F)	EXHAUST FLOW (lb/hr)	GAS MOLECULAR WEIGHT (lb/lb-mol)	EXHAUST TEMP.[a] (°F)	EXHAUST TEMP. (°R)	EXHAUST FLOW (acfm)	EXHAUST VELOCITY[b] (ft/sec)	STACK DIAMETER[c] (ft)	STACK HEIGHT[d] (ft)	GAS COMPOSITION				
											O_2	CO_2	H_2O	N_2	Ar
100%	Winter[e]	40	3,656,000	28.5	202	661	1,033,562	79.6	16.6	200.0	12.48%	3.97%	7.86%	74.80%	0.89%
	Average[f]	68	3,507,000	28.3	202	661	995,596	76.7	16.6	200.0	12.28%	3.96%	8.94%	73.94%	0.88%
	Summer[g]	92	3,335,000	28.2	202	661	952,772	73.4	16.6	200.0	12.02%	3.91%	10.53%	72.67%	0.87%
75%	Winter	40	2,964,000	28.5	202	661	837,749	64.5	16.6	200.0	12.58%	3.92%	7.77%	74.83%	0.90%
	Average	68	2,884,000	28.4	202	661	817,580	63.0	16.6	200.0	12.50%	3.88%	8.54%	74.20%	0.89%
	Summer	92	2,765,000	28.2	202	661	788,608	60.8	16.6	200.0	12.28%	3.82%	10.03%	72.99%	0.88%
65%	Winter	40	2,750,000	28.5	202	661	777,116	59.9	16.6	200.0	12.68%	3.88%	7.68%	74.87%	0.89%
	Average	68	2,685,000	28.4	202	661	761,101	58.6	16.6	200.0	12.61%	3.83%	8.44%	74.24%	0.88%
	Summer	92	2,587,000	28.2	202	661	737,694	56.8	16.6	200.0	12.40%	3.77%	9.93%	73.03%	0.87%
50%	Winter	40	2,442,000	28.5	202	661	689,803	53.1	16.6	200.0	12.90%	3.77%	7.49%	74.94%	0.90%
	Average	68	2,385,000	28.4	202	661	675,814	52.1	16.6	200.0	12.82%	3.73%	8.26%	74.31%	0.88%
	Summer	92	2,311,000	28.2	202	661	658,692	50.8	16.6	200.0	12.65%	3.65%	9.71%	73.12%	0.87%

[a] Provided by Polsky. Exhaust temperature assumed to be equal for all load conditions.

[b] Assumed exhaust velocity in order to "back-calculate" stack diameter for 100% baseload winter case while firing natural gas. Assume same diameter for all other cases.

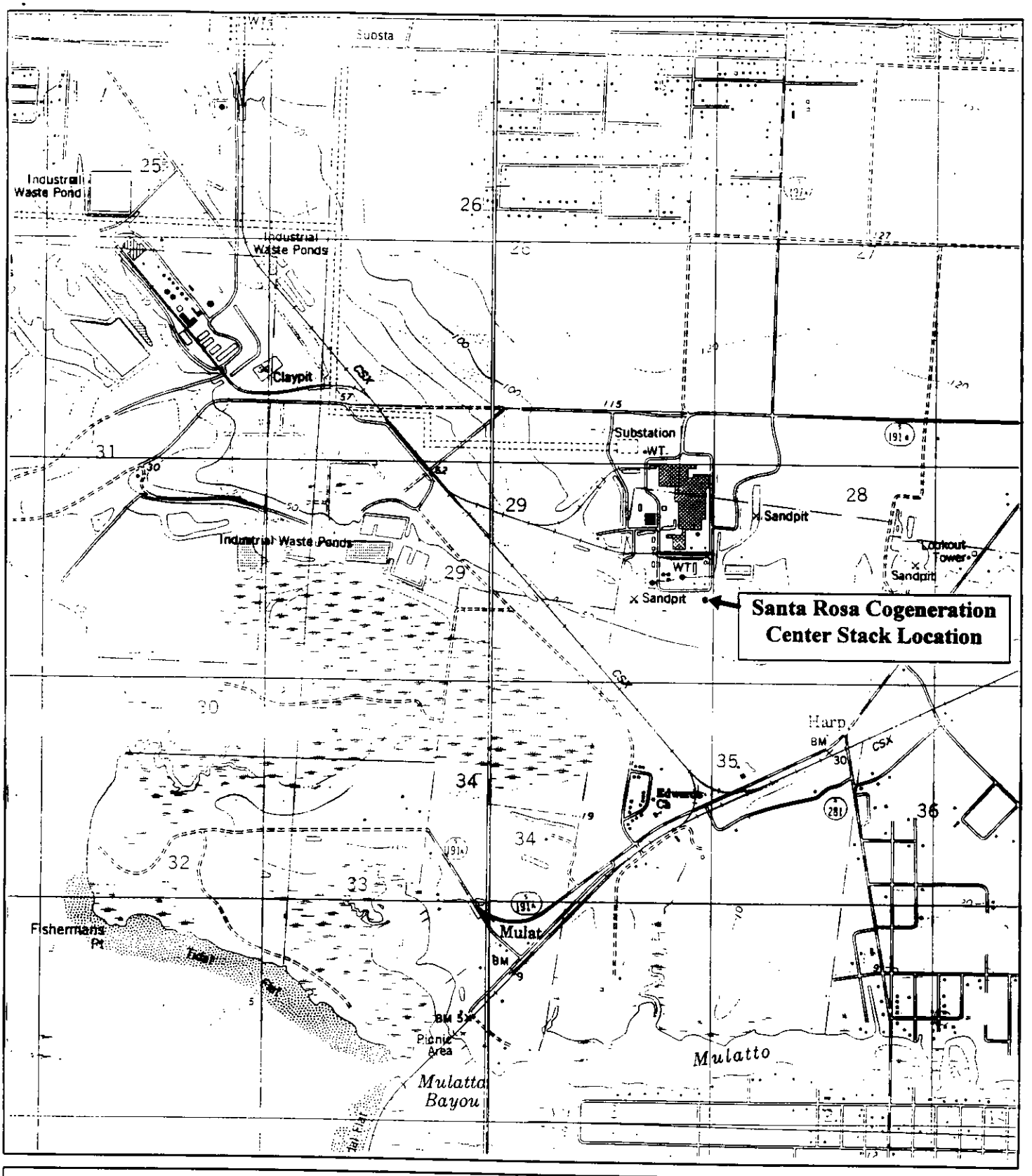
[c] Stack diameter "back-calculated" based on assumed exhaust velocity.

[d] Stack height of 200 ft. determined based on engineering practice (GEP) stack height calculation.

[e] Represents January daily minimum temperature.

[f] Represents the annual average temperature.

[g] Represents average summer ambient climate conditions.



NORTH

0 1000 2000 4000

SCALE IN FEET

500 200 0 500

SCALE IN METERS

SOURCE:
Base map adapted from USGS 7.5 minute series quadrangles (1:24,000) Milton South and Pace, dated 1978, PR 1987.

Santa Rosa Cogeneration Center
Town of Milton, Santa Rosa County
Florida

FIGURE 1
FACILITY LOCATION MAP

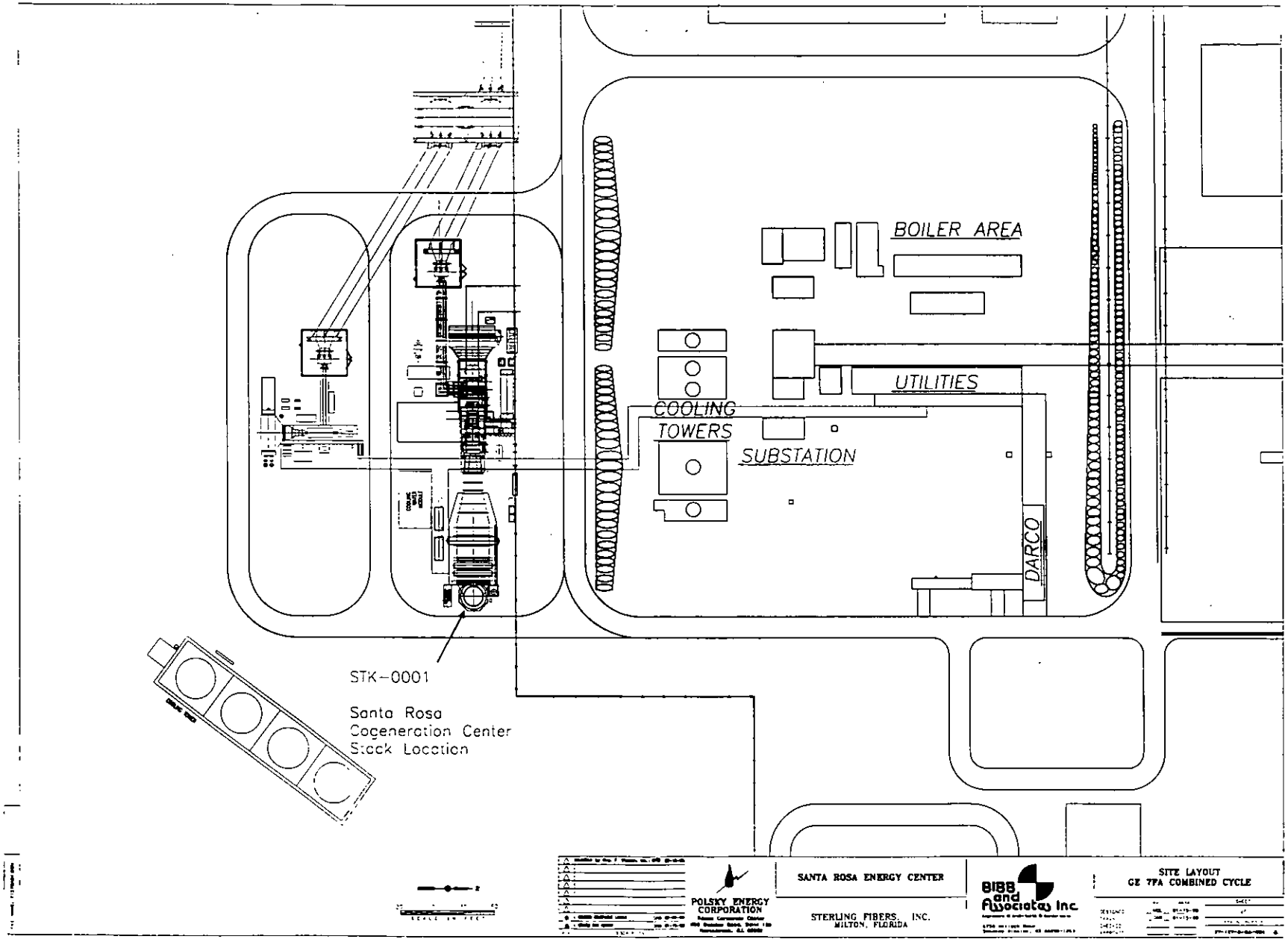

BOILER AREA
UTILITIES
COOLING
TOWERS
SUBSTATION
DARCO
STK-0001
Santa Rosa
Cogeneration Center
Stack Location
POLSKY ENERGY CORPORATION
SANTA ROSA ENERGY CENTER
STERLING FIBERS, INC.
MILTON, FLORIDA
BIBB and Associates Inc
SITE LAYOUT
GE 7FA COMBINED CYCLE

FIGURE 2

Determination Detail

Control Number: 9600034

Category: NSPS
EPA Office: Region 5
Date: 01/16/1996
Title: Custom Fuel Monitoring
Recipient: Wright, Amy
Author: Czerniak, George
Comments:

Abstract:

Q: Will EPA grant a request for a custom fuel monitoring schedule for (pipeline) natural gas fired turbines regulated by Subpart GG and Title IV (Acid Rain)?

A: Yes, this request is granted provided certain Acid Rain requirements are met.

Letter:

Amy Wright
Dayton Power and Light Company
O.H. Hutchings Station
9200 Chautauqua Road
Miamisburg, Ohio 45342

Dear Ms. Wright;

This is in response to your request for a custom fuel schedule, pursuant to the New Source Performance Standards (NSPS) Subpart GG, Section 60.334(b)(2), dated August 31, 1995. This request was originally sent to Donald Schregardus, Director, Ohio Environmental Protection Agency and later faxed to George Czerniak, United States Environmental Protection Agency (USEPA), Region 5, on September 9, 1995. In your request you proposed a custom fuel schedule under which no sampling of natural gas would be required for the combustion turbines installed, or to be installed under the Permit to Install application number 08-2507.

The three combustion turbines for which this custom schedule would apply are affected units under the "Acid Rain Program", Title IV of the Clean Air Act Amendments. Emissions from a Title IV effected unit are required to be monitored according to 40 CFR Part 75 "Continuous Emission Monitoring" for sulfur dioxide (SO2). Under Part 75, appendix D, a gas fired turbine that is using pipeline quality natural gas as it's primary fuel can use the default value of 0.0006 lb/mmBtu to account for the units SO2 emissions. With this the USEPA has recognized that the sulfur content of pipeline quality natural gas is low enough to warrant the use of a default value for SO2 emissions.

Therefore, the Regional office of the USEPA approves the custom fuel schedule of no fuel sampling for these three units provided the following requirements are met.

☐ Each unit has been issued and is in possession of an approved Phase II Acid Rain Permit.

☐ Each unit has submitted a Monitoring Plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas.

☐ Each unit is monitoring SO2 emissions using methods consistent with the requirements of Part 75 and certified by the USEPA.

This custom schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to anything other than this, SO2 emissions must be accounted for by using daily fuel sampling and analysis.

If you have any questions regarding this determination please contact Allan Batka of my staff at (312) 353-3716.

Sincerely yours,

George Czerniak, Chief
Air Enforcement and Compliance Assurance Branch