Secondary voltage (KV) limit - prevents the transformer-rectifier from operating above its secondary voltage rating.

Secondary current limit - prevents the transformer-rectifier from operating above its secondary current rating.

Peak secondary voltage limit - limits transformer peak secondary voltage, protecting the transformer-rectifier from damage due to excessive voltages with Intermittent Energization.

Peak secondary current limit - limits transformer peak secondary current, protecting the transformer-rectifier from damage due to excessive currents with Intermittent Energization.

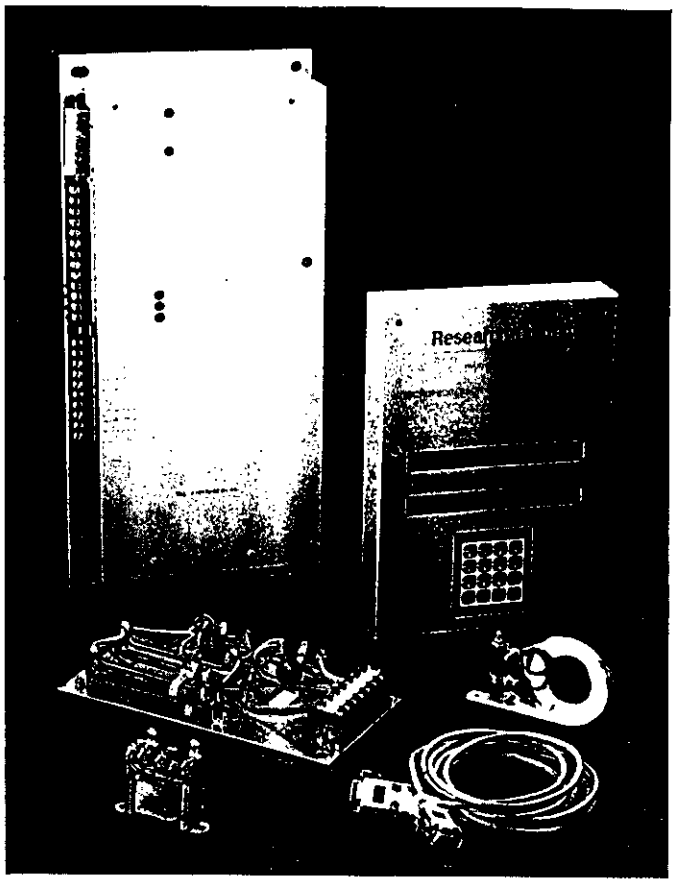
Undervoltage trip - de-energizes the control and transformer if the primary voltage drops below a programmed value and the current is greater than 20% of rated current. This protects precipitator internals from damage due to localized heating generated by high resistance grounds, reduces clinker formation, and reduces the chance of support insulator failure due to electrical tracking.

Phase back - controls the amount of power reduction after each spark. Since sparking is actually self-extinguishing, the power is reduced to ensure against repetitive sparking or bursting (and discharge electrode erosion).

Ramp rate - controls the rate of power recovery after a phase back. Power recovery starts at the phase back level and continues until either rated power or another spark or arc occurs.

Quench - interrupts power for a programmable time period after an arc occurrence. The control can be programmed to quench for sparks as well as arcs.

Pedestal rate - controls the rate of power recovery after each quench. This reduces the amount of arcing that occurs while maintaining a high level of useable precipitator power.



The two main components of the backfit package (for installing the MTC system into existing control cabinets) are the Interface Board (top left) and Microprocessor Module (top right). Also shown are the signal conditioning resistor panel, current transformer, potential transformer and interface cable.

Percent power - limits maximum operating power for manual energy management or special operating conditions. Once programmed for a power limit the control will not exceed the chosen limit. In the percent power mode all automatic features remain active.

Back corona detector (BCD) - displays the detection of back corona or changes operating parameter to optimize performance under back corona conditions. A choice of operating at the knee of the curve or automatically switching to Intermittent Energization when back corona is detected.

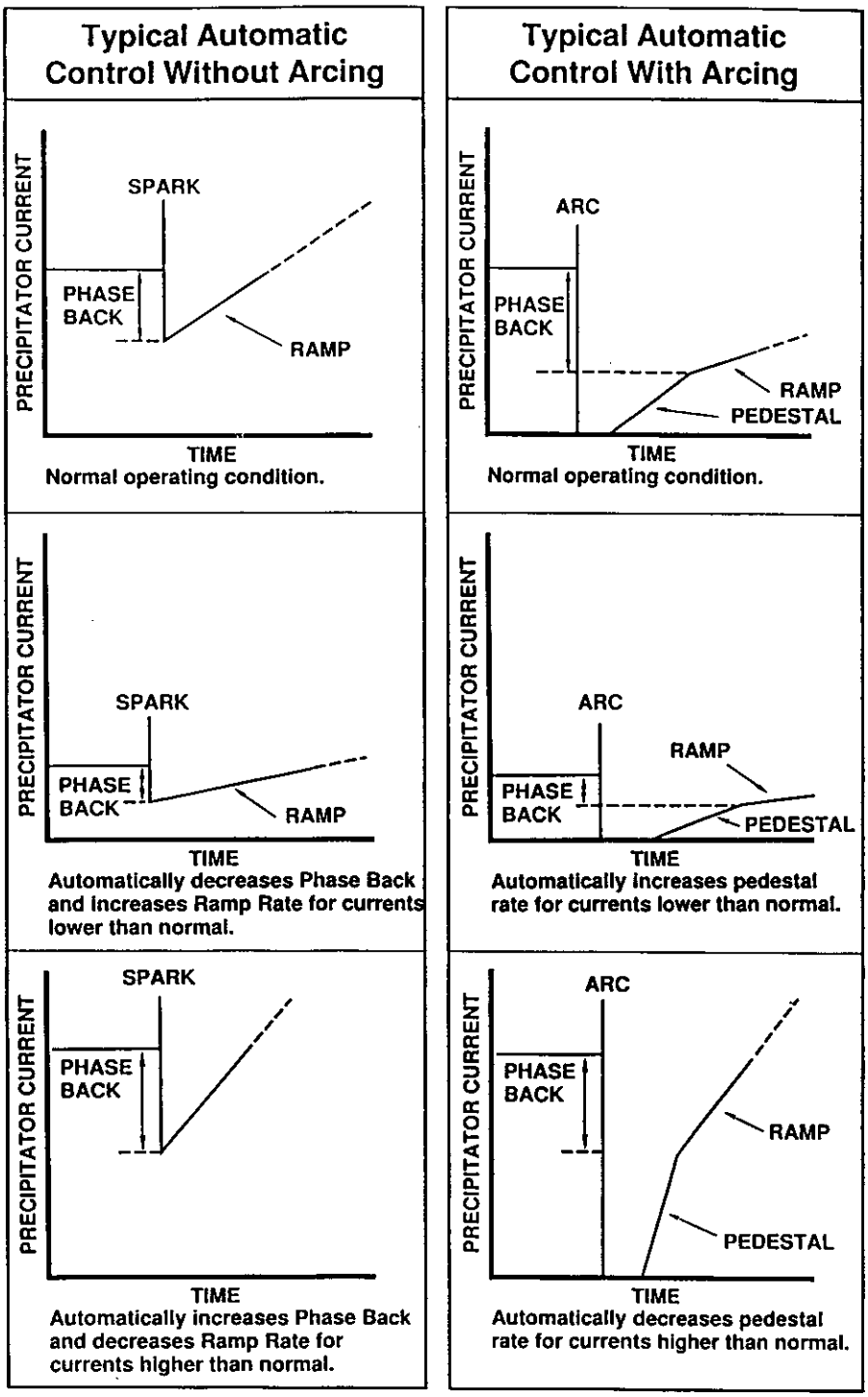
Intermittent energization (IE) - allows the duty cycle of the transformer-rectifier to be

changed to take advantage of the capacitive nature of the electrostatic precipitator. This reduces power consumption and, in high resistivity cases, improves precipitator performance.

Process sense - allows rapid power recovery if sparking does not occur within a programmable time period.

Automatic Readjustment

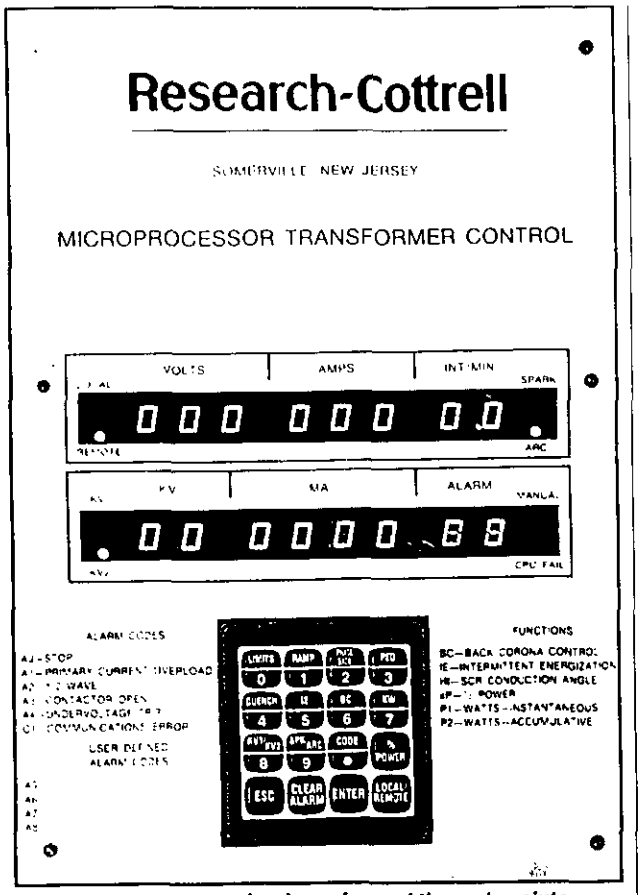
Once parameters are adjusted for normal operation, no further programming adjustments are necessary. As a control's power level decreases (due to increasing boiler load, boiler tube leaks, heavy carbon carry over, heavier ash loading, or other upset conditions) the programmable parameters automatically readjust to maintain optimum precipitator power. Conversely, as a control's power level increases, (due to decreasing boiler load or other improving conditions) the control again readjusts operating parameters to maintain optimum precipitator power.



The MTC automatically adjusts programmable parameters such as Phase Back, Ramp and Pedestal to optimize useable power levels based on actual precipitator operating conditions.

Programming

All programming of the control is performed through a sixteen key, double-function keypad. The keypad is a membrane, tactile feel, hermetically sealed unit, and each key is labeled by function. To prevent unauthorized programming of the control, a four digit code



All operator programming is performed through a sixteen key, double function keypad. Each key is labeled with its control function. All operating electrical values are digitally displayed.

must be entered before control parameter changes can be made.

Display of Operating Conditions and Programmed Parameters

All operating electrical values and programmed parameters are displayed on multiple, seven-segment light emitting diode (LED) digital displays. The digital display is divided into six sections for display of: primary voltage, primary current, secondary current, secondary voltage (KV1/KV2), sparks/arcs per minute and alarms. The electrical readings are displayed continuously while the programmed parameters are displayed only when requested during programming or parameter checks.

The primary volts and amps and secondary volts and amps displays also contain an LED that illuminates when a limit has been reached.

Alarm display - for ease of troubleshooting, the alarm display will indicate an alphanumeric code for the following alarm conditions ("A" alarms will de-energize the control):

- **AO - Stop**
- **A1 - Primary current overload**
- **A2 - SCR unbalance**
- **A3 - Open contactor**
- **A4 - Undervoltage**
- **A5 - SCR overtemp**
- **A6 - TR oil level**
- **A7 - TR overtemp**
- **A8 - Hopper level**
- **EE - Programmed memory loss**
- **CX - Communication error**
- **F1 - Communication error when used with central control**

Function display - the following codes are displayed when their corresponding function is activated:

- **IE - Intermittent energization**
- **H1 - SCR on-time**
- **XP - Percent power**
- **P1 - Wattmeter, instantaneous**
- **P2 - Wattmeter, accumulative**
- **BC - Back corona**
- **PL - Peak limits**

Additional Features

Overcurrent protection - an internal overcurrent protection circuit de-energizes the control at 125% of rated current in either auto or manual mode.

SCR unbalance trip - the control will trip on an SCR unbalanced condition in either auto or manual mode. This protects against transformer-rectifier primary half wave operation.

SCR indicators - two LEDs are provided to indicate SCR gate operation. These LEDs aid in troubleshooting electrical problems.

SCR firing delay - a delay of 2 seconds between control energization and firing of the SCRs is provided. This delay eliminates false firing and increases SCR life.

Microprocessor Rapper/Vibrator Controls For Electrostatic Precipitators

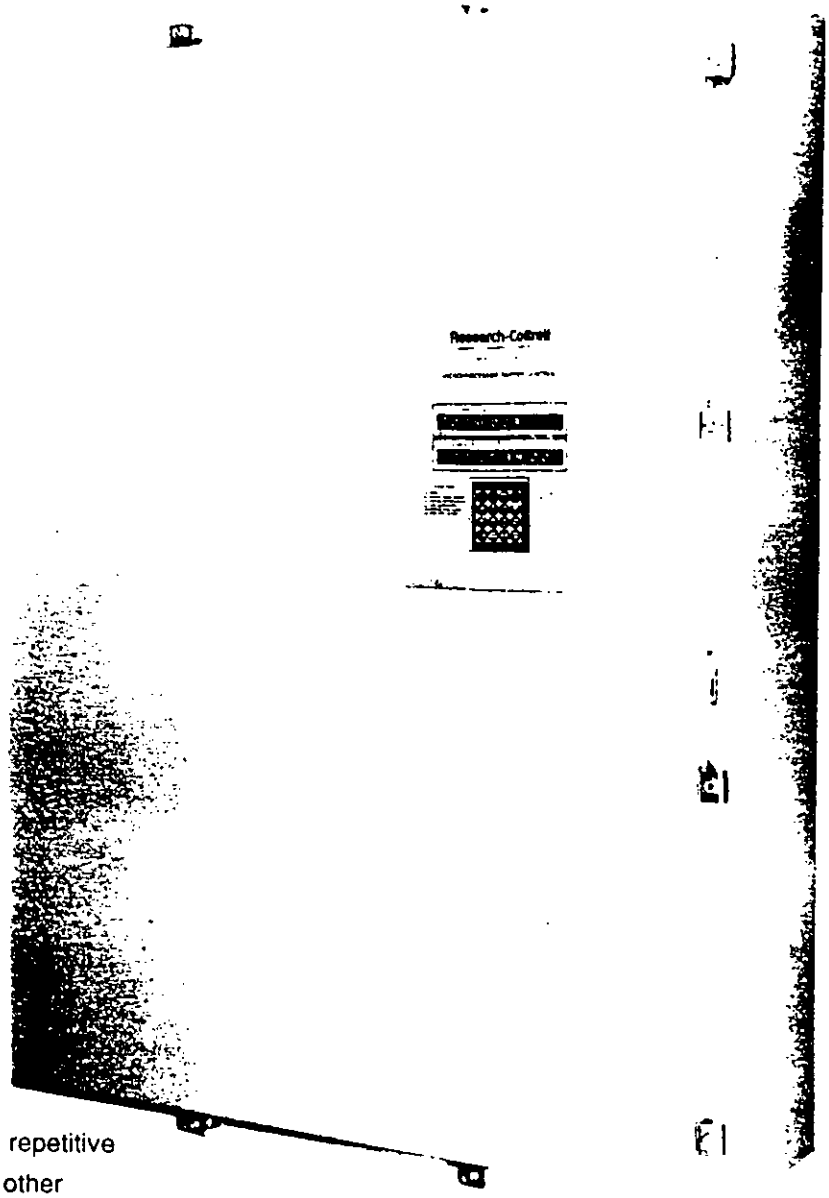
Maximum precipitator efficiency can only be achieved if discharge and collecting electrodes are kept operationally clean without unnecessary particulate reentrainment. Excessive particulate buildups on the collecting electrodes cause increased sparking and reduced precipitator operating power levels while buildups on the discharge electrodes limit corona current as well as cause excessive sparking.

Research-Cottrell's Microprocessor Rapper/Vibrator Control (MRC™) for electrostatic precipitators is designed to achieve maximum flexibility of electrode rapping and/or vibrating to ensure operationally clean electrodes with minimum reentrainment.

The central electronics are designed for compact size, long life, low power consumption and high reliability. Non-volatile EEPROM memory keeps all field programmed parameters active. Power outages of any duration have no effect on MRC operation.

The MRC offered by Research-Cottrell is an advanced microprocessor rapper/vibrator energization system designed specifically for electrostatic precipitators. The control is easily field programmed for rapper cycle time, vibrator ON/OFF time, intensity, repetitive "raps", master intensity and a host of other operating parameters. This results in an extremely high level of system flexibility with minimum user effort.

The MRC is designed for backfitting existing Research-Cottrell rapper/vibrator controls as well as backfitting controls by other manufacturers. The MRC will control low voltage, magnetic impact (solenoid



© Research-Cottrell, MRC Technical Bulletin

NO_x Control System

An ammonia injection system known as Thermal $DeNO_x$, or equivalent, will be provided as the method of NO_x control (manufacturer's literature attached). The Thermal $DeNO_x$ technology is a selective, non-catalytic reduction process (SNCR), which reduces NO_x emissions through chemical reaction with ammonia (NH_3). The process injects ammonia into the flue gas stream which reacts with nitrogen oxides to form nitrogen and water vapor.

The proposed NO_x system includes the following major components:

- Carrier air compressors.
- Anhydrous ammonia tank package.
- Electric vaporizers.
- Ammonia flow controls.
- Control panel (on tank skid).
- Injection manifolds and injectors.
- Valves and instrumentation.

A single storage system will supply ammonia to all the boilers. A process flow diagram is attached.

Vaporous ammonia for injection into the boiler is drawn from the tank vapor space. On warm days, tank pressure can be maintained by ambient solar heat. On cold days, tank pressure is maintained by the vaporizer, which supplies the heat of vaporization for process demand and compensates for heat losses through the tank walls. The vaporizer receives liquid ammonia from the tank by gravity and supplies ammonia vapor to the tank vapor space (see flow diagram).

At least two injection zones will be used to provide injection at full and part load conditions. Each zone will have about 20 injectors. Zone switching valves will direct the ammonia/carrier mixture to the appropriate injection zone. A third injection zone will be added if final engineering demonstrates the necessity for a third zone.

Specifications for the ammonia injection system are provided below (on a per boiler basis):

Ammonia injection rate - 185 lb/hr

Compressed air - 3,900 scfm

Power Requirements - Vaporizer - 175 kW

- Air Compressor - 350 kW

Ammonia Slip - Biomass - 20 ppm (max)

- Coal - 65 ppm (max)

CARLTON, FIELDS, WARD, EMMANUEL, SMITH & CUTLER, P. A.

ATTORNEYS AT LAW

ONE HARBOUR PLACE	FIRSTATE TOWER	HARBOURVIEW BUILDING	FIRST FLORIDA BANK BUILDING	ESPERANTE	BARNETT TOWER
P.O. BOX 3239	P.O. BOX 1171	P.O. BOX 12426	P.O. DRAWER 190	P.O. BOX 150	P.O. BOX 2861
TAMPA, FLORIDA 33601	ORLANDO, FLORIDA 32802	PENSACOLA, FLORIDA 32582	TALLAHASSEE, FLORIDA 32302	WEST PALM BEACH, FLORIDA 33402	ST. PETERSBURG, FLORIDA 33731
(813) 223-7000	(407) 849-0300	(904) 434-0142	(904) 224-1585	(407) 659-7070	(813) 821-7000
FAX (813) 229-4133	FAX (407) 648-9099	FAX (904) 434-5366	FAX (904) 222-0398	FAX (407) 659-7368	FAX (813) 822-3768

PLEASE REPLY TO :

November 19, 1992 Tallahassee

Willard Hanks
Department of Environmental
Regulation
Division of Air Resources
Bureau of Air Regulation
2600 Blair Stone
Twin Towers Office Building
Tallahassee, Florida 32399-2400

Dear Mr. Hanks:

This law firm is assisting Flo-Sun Corporation with its efforts to obtain the necessary environmental permits for two proposed cogeneration facilities that will be located adjacent to the existing Okeelanta and Osceola sugar mills. On November 4, 1992, we met with representatives of the United States Environmental Protection Agency (Region IV) in Atlanta to discuss these proposed facilities. The meeting was attended by Gus Cepero, David Buff, Brian Beals, Greg Worley, Lew Nagler, Scott Davis, and myself. At your request, we have prepared this letter summarizing the pertinent issues that were discussed by Flo-Sun and EPA.

At the outset, we explained that we had requested a meeting with EPA so that we could describe the details of the projects directly to EPA and thereby minimize confusion and delays in the review process. In turn, the EPA representatives confirmed that this was an informational meeting only and they would give their comments to DER at the appropriate time.

We then provided EPA with a general description of the project and highlighted the facts that have been presented in the applications filed for Flo-Energy and Sol-Energy. We explained that the facilities normally will burn 100% biomass fuels, but must have the ability to use low sulphur oil or coal as a

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NOV 20 1992

Division of Air
Resources Management

supplemental fuel, if necessary. Since biomass fuels are not always available on the open market, the facilities need the flexibility to use an alternate fuel in the unlikely event that there is an insufficient supply of biomass fuel.

Much of the discussion at EPA focused on the determination of BACT for sulphur dioxide (SO_2). We believe the analyses in the two applications demonstrate that BACT for SO_2 is the use of low sulphur fuels. First, biomass is a very low sulphur fuel. Add-on SO_2 controls would not be necessary under normal conditions when the facilities are using biomass fuel. Consequently, add-on SO_2 control systems would rarely, if ever, be used.

Secondly, Palm Beach County imposed a long-term average SO_2 emission limitation of 1,000 tons per year on the two facilities, which would restrict future SO_2 emissions to the levels established by current operations (i.e., actual emissions). The BACT analysis based on average annual emissions of 1000 tons or less shows the cost of add-on SO_2 controls is unreasonably high--at least $6,880 per ton of SO_2 removed.

Since DER and EPA are concerned about the enforceability of the County's SO_2 limitation, we acknowledged that the PSD permits for the two facilities should impose joint and several liability on both facilities. This approach would give EPA and DER reasonable assurances that they can take appropriate enforcement action, if necessary. We also acknowledged that the facilities should be subject to other short and long-term SO_2 emission limitations that would help the agencies ensure that the facilities were consistently in compliance with applicable regulations.

The BACT regulations indicate that DER and EPA may consider the actual operating conditions at a facility when determining BACT. In this case, even if EPA and DER were to conclude that the County's long-term emission limitation is not appropriate for inclusion in the PSD permit, the agencies should recognize that the permit condition has been imposed by the County and thus will limit the actual operations at the facilities. The annual average SO_2 emissions will be limited to 1,000 tons and, therefore, this number should be used when calculating the cost effectiveness of add-on SO_2 controls. Additionally, the BACT analyses should recognize that the use of fossil fuels is a low probability event.

At EPA's request, we agreed to supplement the BACT analyses with information concerning two other add-on control systems for acid gases. We will contact Mr. Charlie Sedmon at the EPA research laboratory to obtain additional information about a dry sorbent injection system called "Advocate". We also will ask him about the "NO_x SO" system for NO_x and acid gas control.

We discussed a variety of other issues with EPA, but no significant concerns were identified. Among other things, no specific problems were identified with regard to the two applications and: (a) the use of the "net emissions" concept when evaluating the emissions from the proposed cogeneration facilities; (b) the evaluation of the facilities' potential impacts on Class I areas; (c) the use of the MESOPUFF model for the evaluation of Sol-Energy's impacts on the Class I areas; (d) the use of a 100 kilometer range for evaluating the potential impacts on Class I areas; and (e) the analysis and conclusions concerning the facilities' emissions of toxic air pollutants. Similarly, the issues raised by the Hadson Power case did not seem to significantly affect the analyses performed for Flo-Energy and Sol-Energy.

Please call us if you have any questions or need additional information about these issues.

Sincerely,

David S. Dee

cc: Gus Cepero
David Buff
Preston Lewis
Clair Fancy
Greg Worley
Scott Davis
Brian Beals
Lew Nagler
C. Holladay
D. Knowles, SWGI
J. Brooks, SE Dust
G. Stormer, PBCHD
G. Bunyak, NPS

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

November 6, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gus Cepero, Vice President
Flo-Energy, Inc.
Sol-Energy, Inc.
P. O. Box 86
South Bay, Florida 33493

Dear Mr. Cepero:

Applicants for permits to construct resource recovery facilities are required to publish a Notice of Application. Your Notice of Application is enclosed. You must publish the Notice in a newspaper having circulation in the county that the facility will be located and provide the Department with proof of publication. You will also be required to publish a Notice of Intent in the same newspaper after the Department has processed your applications. The public will have an opportunity to comment on or petition for an administrative hearing in response to any Notice of Intent.

If you have any questions on this matter, please write to me or call Willard Hanks at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulations

CHF/WH/plm

cc: David Knowles, SD
Isidore Goldman, SED
James Stormer, PBCHD
David Buff, P.E., KBN

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Notice of Application

The Department of Environmental Regulation announces receipt of two applications for permits to construct 74.9 megawatts cogeneration facilities in Palm Beach County. The facilities will burn bagasse, wood waste, No. 2 fuel oil, and coal. One facility, Flo-Energy, Inc., will be located 6 miles south of South Bay off U.S. Highway 27. The other facility, Sol-Energy, Inc., will be located near the intersection of U.S. Highway 98 and Hatton Highway, Pahokee.

The applications are available for public inspection at the following Department offices: Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, FL 32399-2400; South District, 2295 Victoria Avenue, Suite 364, Ft. Myers, FL 33901; Southeast District, 1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406; and at the Palm Beach County environmental office located at 901 E. Evernia Street, West Palm Beach, FL 33402.

Anyone may send written comments on these applications to Mr. Preston Lewis at the Department's office in Tallahassee.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

November 3, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gus Cepero, Vice President
Flo-Energy, Inc.
Sol-Energy, Inc.
P. O. Box 86
South Bay, Florida 33493

Dear Mr. Cepero:

Re: File No. AC50-219413/PSD-FL-196, Flo-Energy, Inc.
File No. AC50-219795/PSD-FL-197, Sol-Energy, Inc.

The Department has reviewed your applications for permits to construct the referenced cogeneration facilities in Palm Beach County, Florida. The additional information shown below will be needed before the review of these applications can continue:

1. Please provide the make, model, drawing, brochure, or general specifications for each steam generation unit. What is the generating capacity of each plant, 74.9 or 44 MW?

2. Will these boilers operate under negative pressure?

3. What is the range in temperature, pressure, and steam production for the 350 psig/650°F and 20 psig/280°F steam sources?

4. How will the heat input by the various fuels to the boilers be monitored? What parameters of the fuels will be monitored and at what frequency? What test methods will be used? Where will the samples be collected? How often will a sample be collected on each fuel used at the proposed facilities. How will this data be used to show compliance with the various sulfur dioxide standards?

5. Please provide plans, drawings, brochures, or specifications for all air pollution control equipment that will be used in these projects. Include base line operating parameters such as temperatures, feed rates, pressure drops, flow rates, voltages, etc., as well as an operation and maintenance plan for the recommended air pollution control equipment.

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6. Please provide drawings of all storage and material handling equipment (biomass, coal, bagasse, fly ash, carbon, etc.) with notations of how fugitive particulate matter emissions from hauling the material to the plant to disposing of any waste will be controlled. Include a table similar to Table 2-8 to show the fugitive emissions from these materials. Clarify how the ash for coal will be kept separate from the ash produced by the biomass.

7. Gypsum recovered from the lime/limestone injection FGD system may be of value to the sugar cane industry as a soil conditioner. FGD should also reduce fluoride and sulfuric acid emissions. Please revise your BACT determination by eliminating the cost of the disposal of the material captured by the ESP and calculate the cost per ton of air pollutant removed. Also address the use of other emerging sulfur dioxide control technologies for the BACT determination such as furnace sorbent or duct sorbent injection.

8. Please provide an operation and maintenance plan to minimize emissions during filling and storage of ammonia. What controls will be used to capture any ammonia escaping from the storage tank's pressure relief valve?

9. One application currently being processed by the Bureau is proposing 0.05% sulfur in No. 2 fuel oil. What is the lowest percent sulfur in No. 2 fuel oil available in your area?

10. What are the specifications for the wood waste and biomass? Will either contain asphalt shingles, tar paper, or plastics?

11. Will the existing boiler No. 16, designated for standby service at the Flo-Energy facility, be used when all 3 of the proposed boilers are in operation?

12. Please explain why only 30% of the mercury but 90% of the other metals will be removed from the emissions. Will the presence of ammonia in the flue gas effect the mercury removal?

13. What is the basis of assuming that 20% of the chromium is Cr+6 in Appendix A?

14. What does the term "black start purposes" mean (page 2-5)?

15. What is "special waste" that was referred to in proposed Specific Condition No. 12?

16. Please respond to the National Park Service FAX dated October 8, 1992.

17. Please note which information for the following sources used for the modeling analysis is correct.

a. Source 50PMB500086 Glades Corr Institute:

	Qs	Hs	Ts	Vs	Ds	Xs	Ys
Table 6-4:	2.82	9.8	389	11.28	0.40	8400	15800
Model:	2.82	9.1	477	1.22	1.04	8400	15800

b. Source 50PMB500021 Pratt & Whitney:

Table 6-4:	34.2(km)	38.9(km)
Model:	35800(m)	-23100(m)

c. Source 52FTM500061 US Sugar-Bryant

	Unit 5 PSD (3hr)	Unit 1,2,3 (3hr)	Unit 5 PSD (24hr)	Unit 1,2,3 (24hr)
FOL: Table 6-4 & Model:	81.36	204.53	79.97	79.69
SOL: Table 6-4 & Model:	68.07	174.36	67.38	63.66

d. OKCOGEN Stack Height 60.66 in Maximum Impact Analysis, PSD Class I and II Analysis
65.2 in AAQS Analysis

18. What is the worst case total maximum hourly sulfur dioxide emission rate for all three boilers when they are running concurrently? Modeling for maximum short-term impacts is based on worst case maximum hourly emissions.

19. Please explain the last three footnotes (a, b, c in the Sol-Energy application and b, c, d in the Flo-Energy application) in Table 6-18 of both applications. The annual impact values due to arsenic, chromium VI and nickel emissions appear to exceed the annual no threat levels (NTL) when the impact values are computed by multiplying the hourly emissions in column 1 by the highest predicted annual concentration given in the information below the table.

Several matters make review of this application difficult. There is little information on specific equipment, drawings showing

equipment layout, or fugitive dust controls for the various materials that will be handled at these plants. We suspect that you have not completed final engineering and equipment selection for these projects. Should this be the case, try to provide the information requested for some of the equipment being considered and note that it or equivalent equipment will be installed at the plants.

Should the Department conclude that the complete applications for the proposed projects can be approved, your specific conditions, with some revisions and additions, will help the Department draft the proposed permits. Prior to drafting the proposed permits, the Bureau will consult with our Office of General Counsel to see how the County's conditions can be addressed in a Department permit.

If you have any questions on this matter, please write to me or call Willard Hanks, review engineer, or Cleve Holladay, meteorologist, at (904) 488-1344. We will resume processing these applications after receipt of the requested information.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JCB/WH/plm

Enclosure: NPS October 8 FAX

cc: David Knowles, SD
Isidore Goldman, SED
James Stormer, PBCHD
Jewell Harper, EPA
David Buff, P.E., KBN
Brian Mitchell, NPS

October 7, 1992

PROJECT: Flo-Energy Cogeneration Facility Air Permit Application
National Park Service Completeness Review

NPS PERSON ON CALL: Dee Morse

PERSON: Willard Hanks

ORGANIZATION: Florida Department of Environmental Regulation,
Bureau of Air Regulation

TELEPHONE NUMBER: (904) 488-1344, FAX 922-6979

BACKGROUND: We reviewed the Air Permit Application for the Flo-Energy Cogeneration facility and found the application to be complete. However, Flo-Energy states in the permit that "based on current actual emissions from the Okeelanta Sugar Mill and Refinery and worst-case maximum emissions from the proposed cogeneration facility, the proposed project will result in significant reductions in several air pollutants, including particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds, and lead". Therefore, they conclude that PSD review is not required for these pollutants. Netting of emission decreases and increases only applies if both the proposed Flo-Energy Cogeneration facility and the Okeelanta Sugar Mill are considered the same source, i.e., owned by the same company. If not, the Flo-Energy Cogeneration facility will have to apply BACT for these pollutant emissions, and perform an air quality analysis for the pollutants, since the proposed facility will cause a significant increase in emissions. In our detailed comments on the application we will assess the adequacy of the air quality analysis and proposed BACT. Also we will review the draft permit to ensure the proposed emission reductions at the Okeelanta Sugar Mill are enforceable.

SUBJECT DISCUSSED: I called Willard Hanks and informed him that we had reviewed the air application and found it to be complete. I also asked him if both Okeelanta Sugar Mill and the proposed Flo-Energy Cogeneration facility were owned by the same company. He was not sure, but asked if I would fax to him our concern and he would put it in the State's letter to the applicant.

ACTION REQUIRED: Fax to Willard Hanks a copy of this telephone record.

COPIES TO: Willard Hanks (FDER), Brian Mitchell (AQD), John Bunyak (AQD), John Notar (AQD), and Tom Schmidt (EVER)

P 062 921 916

Receipt for Certified Mail

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(See Reverse)

Sent to	Mr. Gus Cepero
Street and No.	P.O. Box 86
P.O., State and ZIP Code	South Bay, FL 33493
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Special Delivery Fee	
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Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, June 1991

PS Form 3811, July 1983 447-845

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1. ☑ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. Gus Cepero, VP
P.O. Box 86
South Bay, Fla 33493

4. Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail

Article Number

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery
11/9/92

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

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

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OCT 22 1992
Division of Air
Resources Management

October 16, 1992

Mr. Willard Hanks
Air Permitting Section
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

Re: File No. AC50-219413/PSD-FL-196, Flo-Energy, Inc.
File No. AC50-219795/PSD-FL-197, Sol-Energy, Inc.

Dear Mr. Hanks:

Our program has completed a preliminary review of the above referenced applications for air pollution permits in Palm Beach County. We request additional information from the applicant concerning the following items:

1. Were other emerging sulfur dioxide control technologies requiring less capital expenditures (such as furnace sorbent or duct sorbent injection) considered during the BACT determination?

2. The application provides little detail with regard to the controls for particulate, NOx and mercury. More detailed technical design specifications should be submitted. In particular, we would appreciate more information on baseline operating parameters for this equipment such as: temperatures, feed rates, pressure drops, flow rates, voltages, etc., as well as an operation/maintenance plan for this equipment.

3. Please have the applicant submit a schedule for the frequency and types of the fuel analyses to be performed. It would also be helpful if the methodology for determining sulfur dioxide emissions from these analyses specifically stated.

4. The applicant states that ash resulting from coal firing will not be mixed with ash resulting from biomass burning. We request more information on the actual equipment necessary for dual ash handling.

5. Throughout the permit application for Sol-Energy, the applicant refers to the generating capacity as 74.9 MW. During the zoning approval for Palm Beach County, the applicant stated the generating capacity as about 44 MW. Please ask the applicant to verify this figure.

As shown in the requested permit conditions, Palm Beach County has already invested a great deal of time in this project. We ask to be kept informed of any future meetings FDER may have with the applicant in order to keep abreast of these projects. As always, thank you for the opportunity to comment on these applications.

Sincerely,

For the Division Director
Environmental Science & Engineering

James E. Stormer, Administrator
Air Pollution Control Section

FJG/JES/JFK/lh

cc: Southeast District, DER
Source File

United States Department of the Interior

NATIONAL PARK SERVICE
AIR QUALITY DIVISION
P.O. BOX 25287
DENVER, CO 80225

FACSIMILE

DATE: 10/8/92 TIME: 9:35 AM

FAX PHONE NO. (303) 969-2822

NUMBER OF PAGES TO FOLLOW: 1

TO: Willard Hawks - FDER

PHONE: (904) 488-1344

FROM: Dee Morse - NPS - Air Quality Division

PHONE: (303) 969-2071

SUBJECT: Flo-Energy Cogeneration Facility Air Permit Application
National Park Service Completeness Review

REMARKS: Willard Attached is our concern w/ the application which you asked me to Fax to you. If you have any questions please give me a call. (303) 969-2071

October 7, 1992

PROJECT: Flo-Energy Cogeneration Facility Air Permit Application
National Park Service Completeness Review

NPS PERSON ON CALL: Dee Morse

PERSON: Willard Hanks

ORGANIZATION: Florida Department of Environmental Regulation,
Bureau of Air Regulation

TELEPHONE NUMBER: (904) 488-1344, FAX 922-6979

BACKGROUND: We reviewed the Air Permit Application for the Flo-Energy Cogeneration facility and found the application to be complete. However, Flo-Energy states in the permit that "based on current actual emissions from the Okeelanta Sugar Mill and Refinery and worst-case maximum emissions from the proposed cogeneration facility, the proposed project will result in significant reductions in several air pollutants, including particulate matter, nitrogen oxides, carbon monoxide, volatile organic compounds, and lead". Therefore, they conclude that PSD review is not required for these pollutants. Netting of emission decreases and increases only applies if both the proposed Flo-Energy Cogeneration facility and the Okeelanta Sugar Mill are considered the same source, i.e., owned by the same company. If not, the Flo-Energy Cogeneration facility will have to apply BACT for these pollutant emissions, and perform an air quality analysis for the pollutants, since the proposed facility will cause a significant increase in emissions. In our detailed comments on the application we will assess the adequacy of the air quality analysis and proposed BACT. Also we will review the draft permit to ensure the proposed emission reductions at the Okeelanta Sugar Mill are enforceable.

SUBJECT DISCUSSED: I called Willard Hanks and informed him that we had reviewed the air application and found it to be complete. I also asked him if both Okeelanta Sugar Mill and the proposed Flo-Energy Cogeneration facility were owned by the same company. He was not sure, but asked if I would fax to him our concern and he would put it in the State's letter to the applicant.

ACTION REQUIRED: Fax to Willard Hanks a copy of this telephone record.

COPIES TO: Willard Hanks (FDER), Brian Mitchell (AQD), John Bunyak (AQD), John Notar (AQD), and Tom Schmidt (EVER)

KBN

RECEIVED
OCT 5 1992
Bureau of
Air Regulation

October 2, 1992

Mr. Clair H. Fancy, P.E.
Bureau of Air Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Computer Printouts for the Flo-Energy Cogeneration Facility Prevention of Significant Deterioration Application

Dear Mr. Fancy:

Please find enclosed one hard and two floppy disk copies of all computer output files performed for the Flo-Energy Cogeneration Facility PSD application. The files on the disk are compressed by similar model run type with the utility PKZIP. A directory of ZIPPED files names is provided. If you need further information or have any questions, please call.

Sincerely,

Steven R. Marks
Senior Meteorologist

SRM/dmpm

cc: Gus Cepero
David Dee
David Buff
File (2)

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER

KBN

RECEIVED

SEP 30 1992

Bureau of
Air Regulation

September 28, 1992

Mr. Clair Fancy
Bureau of Air Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: PSD Class I 3-Hour Refinements for the Flo-Energy Cogeneration Facility

Dear Mr. Fancy:

I have enclosed a revised Table 6-17 (Page 6-31) of the Air Permit Application for the Flo-Energy Cogeneration Facility, which was delivered to FDER on September 17, 1992. The 3-hour PSD Class I refined concentrations in that table have been corrected. Printed and disk copies of all the modeled output files for this project will be sent to FDER as soon as possible.

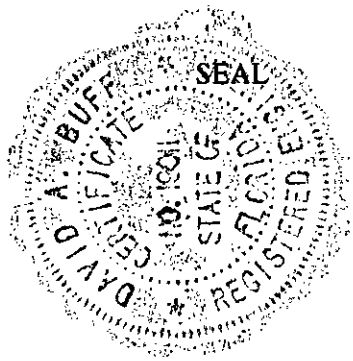
Sincerely,

David A. Buff

David A. Buff, M.E., P.E.
Principal Engineer

SRM/dmpm

cc: Gus Cepero
David Dee
Steven Marks
File (2)
K. Hanks
C. Holladay
D. Knowles, SD ist
S. Brooks, SE Dist
J. Stormer, PBCHD
J. Harper, EPA
B. Mitchell, NPS



KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

EQUAL EMPLOYMENT OPPORTUNITY / AN AFFIRMATIVE ACTION EMPLOYER

Table 6-17. Maximum Predicted SO_2 Concentrations as Compared with PSD Class I Increments - Refined Analysis

Averaging Time	Concentration ($\mu g/m^3$)	Receptor Location[a] UTM-E (m)	Receptor Location[a] UTM-N (m)	Period Ending (YYMMDDHH)	Allowable Increment ($\mu g/m^3$)
Annual	0.6	550300.	2848600.	82-----	2
24-Hour[b]	5.42[c]	550300.	2839000.	83081724	5
3-Hour[b]	22.8	497000.	2830500.	82071621	25
	21.4	547000.	2848600.	83081603	
	19.9	546000.	2845000.	85041721	

Note: YY=Year, MM=Month, DD=Day, HH=Hour

[a] All receptor coordinates are reported in Universal Transverse Mercator (UTM) coordinates.
[b] All short-term concentrations are highest, second-highest concentrations.
[c] The proposed Flo-Energy cogeneration facility contributes only 0.04 $\mu g/m^3$ to this concentration. The facility's contribution is less than the National Park Service's recommended 24-hour SO_2 Class I significance level of 0.07 $\mu g/m^3$.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

September 17, 1992

Mr. Brian Mitchell, Acting Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
12795 West Alameda Parkway, Room 215
Denver, Colorado 80228

Dear Mr. Mitchell:

RE: Flo-Energy Cogeneration Facility
Palm Beach County, PSD-FL-196

The Department has received the above referenced PSD application. Please review this package for completeness and forward your comments to the Bureau of Air Regulation by October 9, 1992. The Bureau's FAX number is (904)922-6979.

If you have any questions, please call Willard Hanks or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia G. Adams

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

Recycled Paper
Printed with Soy Based Inks

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

September 23, 1992

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Harper:

RE: Flo-Energy Cogeneration Facility
Palm Beach County, PSD-FL-196

The Department has received the above referenced PSD application. Please review this package for completeness and forward your comments to the Bureau of Air Regulation by October 9, 1992. The Bureau's FAX number is (904)922-6979.

If you have any questions, please call Willard Hanks or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patricia B. Adams

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

Recycled Paper

OKEELANTA CORPORATION
316 ROYAL POINCIANA PLAZA
POST OFFICE BOX 1059
PALM BEACH, FLORIDA 33480

TELEPHONE (407) 655-6303

TELEX: 803444 FAI PABH

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DER - MAIL ROOM
1992 SEP 18 AM 11: 06

September 17, 1992

Mr. Clair Fancy
Bureau Chief
Bureau of Air Regulation
Department of Environmental Regulation
2600 Blair Stone Road
Twin Towers
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Enclosed please find check # 74821 in the amount of $7,500 in payment for Flo-Energy Cogen application.

Sincerely,

Gus Cepero /reg.

Gus Cepero
Vice President

GRC/reg

RECEIVED
DER - MAIL ROOM
1992 SEP 18 AM 11:06

OKEELANTA CORPORATION

316 ROYAL POINCIANA PLAZA
POST OFFICE BOX 1059
PALM BEACH, FLORIDA 33480

TELEX: 803444 FAI PABH

FEDERAL EXPRESS [redacted] QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL
PACKAGE TRACKING NUMBER 3399777500

3399777500

1 [redacted] Date 9/17/92

RECIPIENT'S COPY

From (Your Name) Please Print: Gus Cepero
Your Phone Number (Very Important): (407) 655 6303
Company: Okeelanta Corporation
Department/Floor No
Street Address: 316 Royal Poinciana Plaza
City: Palm Beach, State: FL, ZIP Required: 33480

2 To (Recipient's Name) Please Print: Mr. Clair Fancy
Recipient's Phone Number (Very Important): (904) 488 1344
Company: Department of Environmental Regua
Bureau of Air Reguàation
Department/Floor No
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2600 Blair Stone Road - Twin Towers
City: Tallahassee, State: FL, ZIP Required: 32399-2400

YOUR INTERNAL BILLING REFERENCE INFORMATION (First 24 characters will appear on invoice.)

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
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3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct No 3 [ ] Bill 3rd Party FedEx Acct No 4 [ ] Bill Credit Card 5 [ ] Cash/Check [redacted]

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [ ] YOUR PACKAGING
- 16 [X] FEDEX LETTER *
- 12 [ ] FEDEX PAK *
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER *
- 52 [ ] FEDEX PAK *
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day†)
- 30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
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- 41 [ ] GOVT PACKAGE

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- 70 [ ] OVERNIGHT FREIGHT ** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT **

† Delivery commitment may be later in some areas
*Declared Value Limit $100
**Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [X] DELIVER WEEKDAY
- 3 [ ] DELIVER SATURDAY (Extra charge) (Not available to all locations)
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE ______ Lbs
- 7 [ ] OTHER SPECIAL SERVICE ______
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 11 [ ] DESCRIPTION
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6 PACKAGES / WEIGHT In Pounds Only / Total / Total [redacted]

DIM SHIPMENT (Chargeable Weight) ____ lbs

Received At: 1 [ ] Regular Stop 2 [ ] On-Call Stop 3 [X] Drop Box 4 [ ] BSC 5 [ ] Station

Emp No / Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg To Del [ ] Chg To Hold
Street Address
City / State / Zip
Received By X
Date/Time Received / FedEx Employee Number

7 Release Signature
FedEx Emp No / Date/Time

Federal Express Use
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Declared Value Charge
Other 1
Other 2
Total Charges

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SUGARMILL DIVISION

173354
63-617/670

SOUTHEAST BANK, N.A.
MIAMI, FLORIDA

NUMBER	DATE	AMOUNT
74821	9/17/92	$7,500.00

PAY Seven thousand five hundred and 00/100----------------------------

VOID AFTER NINETY DAYS FROM DATE OF CHECK

TO THE ORDER OF
Florida Department of
Environmental Regulation

⑈173354⑈ ⑆067006173⑆ 303 170559⑈