

# PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9<sup>th</sup> Street, Kansas City 64105  
Tel (816) 527-1160 • Fax (816) 527-4160

October 20, 2003

Mr. Jeffery F. Koerner, PE  
Florida Department of Environmental Protection  
Division of Air Resource Management  
2600 Blair Stone Road, MS # 5505  
Tallahassee, FL 32399-2400

**RECEIVED**

OCT 22 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogen, Ltd., Project No. 1010071-002-AC (PSD-FL-177A),  
SPRINT Uprate Project, Response to Comments from the Department

Dear Mr. Koerner:

Pursuant to our telephone conversation of October 1, 2003 and your letter to Leo Rajter dated October 7, 2003, for Pasco Cogen, I am submitting the following information.

1. Documentation explaining why the existing combined cycle unit is not subject to the Acid Rain program and does not have a NOx Continuous emission monitoring system.
2. A copy of the 2002 Annual Operating Report that has calculations attached that are used to calculate the annual emissions. This demonstrates how the data for as past actual emissions was derived.
3. A set of performance curves for each of the two units, identifying the water injection rate and the NOx emission rate versus heat input rate (load).
4. A PSD-applicability analysis considering the impact of installation of the SPRINT Uprating.

## 1. Acid Rain Program Exemption:

With regard to item no. 1, the Pasco Cogen Ltd. facility, along with it's sister facility Lake Cogen, Ltd., had in place a reasonable intent for construction of these facilities and had in fact by definition, under 40 CFR part 72.2, commenced construction of these facilities prior to the November 15, 1990 initiation date of the Acid Rain Program. This information was provided to the USEPA. Attached as Attachment 1 are copies of correspondence previously provided to the EPA to support this claim. Please note, I have had personal conversations with Ms. Kathy Barylski of EPA's Acid Rain Program, in 1995, where she verbally confirmed the facilities were not subject to the program. We have submitted written requests for Acid Rain Program exemption twice (In 1995 and 1997), but EPA has not provided a written response. With the fact that we have had these earlier contacts with the agency and the fact that the agency has reviewed Pasco Cogen's current Title V permit and did not have issue with the site not being in the Acid Rain program nor having a functional NOx CEMs, it is our belief that Pasco Cogen is not subject to the provisions of the Acid Rain program.

## 2. Emission Calculations:

With regard to item no. 2, attached as Attachment 2 is the annual operating report for 2002 which includes a set of data use to demonstrate how the annual emissions were calculated for the

facility. The data is provided by CT/DB unit and as a total site quantity. The data also demonstrates how ozone day emissions are calculated. Rather than using annual source test data for the generation of the NOx emission rate and the 5-year CO source test data for the generation of the CO emission rate, the permitted emission rate for each pollutant is used to generate the annual data. The reason for this is that typical source testing data was generally 0.5 ppm or less than allowed by the permit. Use of the permitted emission rate provided a consistent, but slightly conservative means of generating the annual emission calculation.

### 3. Performance Curves:

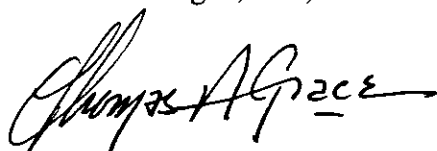
With regard to item no. 3, attached as Attachment 3 is a set of the performance curves that identify water injection rate and NOx emission rate versus heat input rate (and load). Individual curves for each of the two units are provided along with accompanying Water/Fuel Ratio matrices. The curves represent those used by the facility to maintain the 25 ppm rate for NOX and the 28 ppm rate for CO emissions.

### 4. PSD Applicability to the SPRINT Uprate Installation:

Thank-you for the determination that Pasco Cogen qualifies as an electric utility steam generated unit and as such can use the regulatory guidance already set in place under the WEPCO Rule. Based upon information previously submitted to the Department concerning the emission characteristics the project expects to see with the addition of the SPRINT Uprating to the 2 LM-6000 CTs, we believe the modification will have little impact with regard to actual annual emission increases and as such will not trigger the PSD preconstruction review process. It is my understanding, based upon our earlier discussions, that the Department would view the increased emissions proposed in the project's initial application as minor in nature.

If you have any questions or concerns with regard to the attached material, please feel free to contact me at 816 527-1160.

For Pasco Cogen, Ltd.,



Thomas A. Grace, CHMM  
Director, Environmental, Health and Safety

W/ Attachments

File 273-2010.3

Cc: L. Rajter, w/o  
R. Christmas, w/a  
A. Williams, w/o  
J. Brook, w/o

*G. Kinsal, SW D*  
*G. Winkley, EPA*  
*G. Bunnell, NPS*

L03084pasco.

ATTACHMENT 1

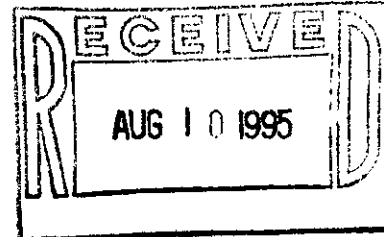
273-7030

**LAKE COGEN, LTD.**  
**NCP LAKE POWER, INC., GENERAL PARTNER**

c/o Energy Initiatives, Inc.  
One Upper Pond Road  
Parsippany, NJ 07054  
(201)263-6950  
Fax (201)-263-6977

August 10, 1995

Ms. Kathy Barylski  
USEPA (6204J)  
401 'M' Street, SW  
Washington, DC 20460



Dear Ms. Barylski:

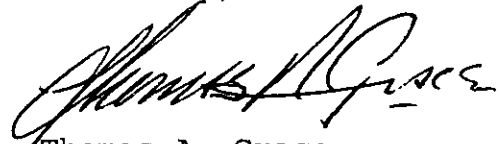
RE: Lake Cogeneration Facility,  
Pre-November, 1990 Letter of Intent  
to Proceed with Project

Attached is a clean copy of the letter from Florida Power Corp. to Golden Gem Growers that I faxed you earlier today. I believe this June 25, 1990 letter from Florida Power Corp. to Golden Gem Growers, Inc. is the document we were looking for in that it clearly demonstrates the intent between Peoples Gas Corporation, Florida Power Corporation and Golden Gem Growers, Inc. to develop the Lake Cogeneration Facility, prior to November 15, 1990.

I look forward to a favorable reply from the EPA, with regard to both the Lake Cogeneration facility and the Pasco Cogeneration facility, in establishing the fact that EPA accepts the attached letter and our earlier documentation as clear intent to proceed with both facilities prior to the November 15, 1990 deadline for Title IV of the CAAA of 1990.

If I can be of further assistance please let me know. My telephone number is (201) 263-6913.

Sincerely,



Thomas A. Grace  
Manager, Environmental and  
Regulatory Compliance

w/attach.  
l169tg.lak

cc:  
J. McTear  
R. Kokstein  
K. Tomblin  
B. Curatola  
K. Trostle





Maurice H. Phillips  
Executive Vice President

June 25, 1990

Mr. J. F. Nelson, Jr.  
Golden Gem Growers, Inc.  
P.O. Drawer 9  
Umatilla, FL 32784

Dear Mr. Nelson:

This letter is intended to set forth the understanding between Golden Gem Growers, Inc. (Golden Gem), Florida Power Corporation (FPC), and Peoples Cogeneration Company (Peoples) concerning the development of a proposal for a cogeneration facility to generate electricity and to supply process steam as appropriate for the operational needs of Golden Gem's Umatilla, Florida plant (The Plant).

1. Golden Gem hereby grants exclusive rights to FPC and Peoples for a period of three hundred and sixty (360) days, commencing July 1, 1990, to develop a proposal for a cogeneration facility at or in the vicinity of The Plant. Golden Gem shall not be responsible for any costs incurred by FPC and Peoples in the development of the proposal, but shall cooperate fully with FPC and Peoples in their efforts to perform this work and shall provide such access to The Plant and to information relating to The Plant as may be reasonably necessary for FPC and Peoples to perform this work.
2. If before the end of such three hundred and sixty (360) day period, a non-binding proposal which addresses all financial and operational requirements of Golden Gem has been developed by FPC and Peoples, and in the sole judgment of Golden Gem is acceptable to Golden Gem, the parties shall promptly enter into negotiations for the development of an agreement for the sale of steam from FPC and Peoples to Golden Gem, and the period of exclusivity contemplated by this letter agreement shall continue during the pendency of such negotiations.

June 25, 1990  
Page 2

3. If at the end of the initial three hundred and sixty (360) day period, a mutually satisfactory proposal has not been developed, then either party hereto may without liability and upon written notice to the other terminate this letter agreement.
4. Nothing in this letter agreement shall obligate either party hereto to enter into any further agreements with respect to a cogeneration project except as such party shall, in its sole judgment, deem advisable.
5. FPC and Peoples shall treat as confidential all production, operating, and technical information disclosed to them and identified as such by Golden Gem in connection with the development of said proposal. FPC and Peoples shall not disclose any such information to third parties without Golden Gem's express prior written permission and shall not use such information except for the purpose of developing such proposal.

Sincerely,

Maurice H. Phillips

MHP/emh

June 25, 1990  
Page 3

Agreed and Accepted:

GOLDEN GEM GROWERS, INC.

By: J. F. Nelson, Jr.

Title Executive Vice President

Date: 6-28-90

FLORIDA POWER CORPORATION

By: H. H. Phillips

Title: Executive Vice President

Date: 6/27/1990

PEOPLES COGENERATION CO.

By: E. L. Mize

Title: Vice President

Date: 6-27-90

**ENERGY INITIATIVES, INC.**  
1551 N. Tustin Avenue, Suite 48  
Santa Ana, CA 92701

(714) 547-9413  
Fax (714) 547-9512



TELECOPIER TRANSMITTAL

\*\*\*\*\*  
Telecopier Number (714) 547-9512

DATE: 10 Aug 95 SENT BY: \_\_\_\_\_  
MESSAGE TO: TOM GRACE  
COMPANY: \_\_\_\_\_  
TELECOPIER NUMBER: \_\_\_\_\_  
MESSAGE FROM: KEITH T.  
NUMBER OF PAGES INCLUDING COVER: 4  
REMARKS: \_\_\_\_\_

HERE IS THE ONLY THING I CAN  
FIND

IT SHOWS PEOPLES COGNITION CO  
PAID \$100,000 ON JUL 31 90 FOR  
4 LM 6000 GAS TURBINE GENERATORS  
AND THAT TWO OF THOSE PACKAGES  
ARE DESIGNATED TO LAKE

I HAVE NOT FOUND ANYTHING THAT SHOWS THE FORMAL TRANSITION  
OF THE PROJECT FROM PEOPLES COGN CO TO WHAT IS NOW  
LAKE COGEN. (MAYBE ACCOUNTING THERE IN N.J. WOULD HAVE  
A RECORD OF THAT.)

IF YOU DO NOT RECEIVE ALL OF THE ABOVE TRANSMISSION, PLEASE CALL:  
(714) 547-9413 x 10

PRIVILEGED AND CONFIDENTIAL -- All information transmitted hereby is intended only for the use of the addressee(s) named above. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient(s), please note that any distribution or copying of this communication in error should notify us immediately by telephone and return the original message to us at the address above via the U.S. Mail.





# STEWART & STEVENSON SERVICES, INC.

WORLD HEADQUARTERS

P.O. BOX 1637 HOUSTON, TEXAS 77281-1637 (713) 868-7700

TELEX: 794221 / 201448 CPW HOU FAX: (713) 868-7892

June 10, 1991

Mr. Elliott White  
Vice President  
Peoples Cogeneration Co.  
215 Madison Street  
Tampa, FL 33602

Subject: Current Status of Peoples  
Cogeneration Co. (PCC) Purchase  
Order for (4) LM6000 Combustion Turbine Generator Set (CTGS)

Dear Elliott:

Thank you for your June 5, 1991 letter and wire transfer of the \$250,000 payment. As requested, the following will serve as confirmation and as a status report of the PCC purchase order to date:

## 1.0 PRICE & SHIPMENT SCHEDULE

PCC has made deposit payments to Stewart & Stevenson (S&S) for purchase of quantity (4) LM6000 CTGS. To date, PCC has made three payments totaling \$500,000 or \$125,000/unit. The CTGS's from this date forward will be designated as units #1,2,3 & 4 with the following corresponding price and shipment schedule:

Unit #	Price \$ U.S.	Plant	Project Site	Shipment R.O.B.
LM6000 CTGS		Houston, Texas	Rochester, NY	Target Date Completion Date
1	\$10,550,000		Pasco Cogen, LTD Dade City, FL	Nov. 6, 1992 Dec. 7, 1992
2	\$10,550,000		Pasco Cogen, LTD Dade City, FL	Nov. 13, 1992 Dec. 14, 1992
3	\$10,550,000		Lake Cogen, LTD Umatilla, FL	Nov. 20, 1992 Dec. 21, 1992
4	\$10,550,000		Lake Cogen, LTD Umatilla, FL	Nov. 27, 1992 Dec. 28, 1992

### Notes:

- 1.1 S&S as agreed will make every effort possible to make the above target dates and possibly improve on these dates.
- 1.2 The LM6000 CTGS scope of supply is as defined in the Bechtel Specification developed with S&S dated 1-31-91 (55 pages).

Letter to Mr. Elliott White  
June 10, 1991  
Page 2 of 3

- 1.3 The aforementioned price does not include:
- 1.3.1 Inlet Chiller Coils
  - 1.3.2 On-jobsite erection reassembly labor
  - 1.3.3 Freight and insurance to jobsite
  - 1.3.4 Sales, use, or other taxes

2.0 PAYMENT SCHEDULE - (PER UNIT BASIS)

PCC payment schedule for each LM6000 CTGS (as modified on 4-25-91 to accommodate PCC) is as follows:

Payment	Date of Event	Amount
1 RECEIVED	07/31/90 - \$100,000 12/18/90 - \$150,000 06/05/91 - \$250,000 Total = \$500,000	\$125,000
2	July 31, 1991	\$103,000
3	October 31, 1991	\$616,000
4	Upon receipt of drawings for approval by date January 1, 1992	\$1,793,500
5	Upon completion of baseplate and super structure at factory but not before June 1, 1992	\$1,055,000
6	Upon receipt of gas turbine at factory, but not before July 1, 1992	\$1,582,500
7	Upon receipt of generator at factory but not before August 1, 1992	\$1,055,000
8	Upon placement of the GT set in the test line, but not before October 1, 1992	\$1,055,000
9	Upon Shipment at Plant, Houston, Texas	\$2,110,000
10	Upon receipt at job site	\$527,500
11	Upon official acceptance, but not later than "x" days after receipt at job site.	\$316,500
12	Upon receipt of as-built drawings, manuals, and completion of punch list items, but not before payment #11.	\$211,000
TOTAL AMOUNT =		\$10,550,000

Letter to Mr. Elliott White  
June 10, 1991  
Page 3 of 3

### 3.0 CONTRACT DOCUMENTS

The contract documents for this purchase order have not been finalized. However, several documents since July 1991 have been prepared and mutually agreed upon by S&S and PCC to be used as a basis for this order. These documents are listed below:

- 3.1 Stewart & Stevenson Terms and Conditions RO# ADH331 NOV 83.
- 3.2 Bechtel Corp. and S&S Scope Specifications for the LM6000 CTGS dated 1-31-91 (55 pages).
- 3.3 General Terms and Conditions "draft" dated 1-31-91 by FPC (Power Cogen), Peoples Cogen Co., and S&S.
- 3.4 S&S/PCC signed Letter of Intent for Operating and Maintenance (Pasco and Lake Cogen Projects) dated 4-24-91. S&S draft contract submitted to PCC for both projects dated 4-25-91.
- 3.5 Pasco Cogen, LTD and Lake Cogen, LTD - RFP bid documents dated June 1991.

Further, it is PCC's intention to assign the Stewart & Stevenson's LM6000 CTGS order to a Turnkey Constructor. S&S has agreed to work in good faith with PCC's designated Contractor to finalize contract terms acceptable for project financing utilizing the above documents as a basis for negotiations.

S&S will be providing contractors bidding the RFP with a proposal on or about June 12, 1991. We will forward you a copy as soon as it's available.

Elliott - thanks for your continued good cooperation and let us know if you have any further questions.

Sincerely,



Len Shapiro  
Manager, Business Development

LS/022/mv

cc: K. Smith - NCP  
R. Stewart - S&S  
M. Axford - S&S  
J. Prochaska - S&S



GPU International, Inc.  
 One Upper Pond Road  
 Parsippany, NJ 07054  
 Tel 201-263-6950  
 Fax 201-263-6977

October 8, 1997

Robert Miller  
 US EPA Acid Rain Division (6204J)  
 401 M Street SW  
 Washington, DC 20460

Dear Robert:

Per our phone conversation today, listed below is the information that you requested for Lake Cogen, Ltd. and Pasco Cogen, Ltd..

	<u>LAKE</u>	<u>PASCO</u>
Name Plate	GT1 - 42 MW	GT1 - 42 MW
Capacity	GT2 - 42 MW	GT2 - 42 MW
	ST - 26.5 MW	ST - 26.5 MW
ID No.'s	GT1 - 185-101	GT1 - 185-102
	GT2 - 185-104	GT2 - 185-103
	ST - 155339	ST - 155338
Service Date	July 1993	July 1993
Owner & Operator	GPUI	GPUI

It is my understanding that a determination is in the process of being finalized which will exclude Lake and Pasco from the Acid Rain Program. If I could get written confirmation of this, it would be greatly appreciated.

If you require any further information or assistance, please give me a call.

Sincerely,

A handwritten signature in cursive script that reads "Daniel J. Means".

Daniel J. Means  
 Regulatory, Safety & Training Coordinator

(202) 233-9077

cc: John McTear  
 Tom Grace  
 Bob Kokstein  
 Eric Williams

ATTACHMENT 2

# PASCO COGEN, LTD.

NCP DADE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9<sup>th</sup> Street, Kansas City, MO 64105  
Tel (816) 527-1160 • Fax (816) 527-4160

February 24, 2003

Florida Department of Environmental Protection  
Southwest District Office  
Air Resources Division  
3084 Coconut Palm Drive  
Tampa, FL 33619-8218

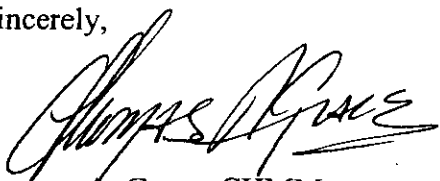
RE: Pasco Cogen, Ltd. Facility; ID No. 1010071  
Annual Operating Report for 2002

To whom this concerns:

Attached for your information and review is the 2002 Annual Operating Report for the Pasco Cogen, Ltd. Facility, located in Dade City, Pasco County, Florida.

Should you have any questions concerning the attached report, please feel free to contact me. My telephone number is (816) 527-1160.

Sincerely,

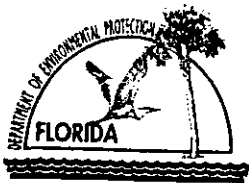


Thomas A. Grace, CHMM  
Director – Environmental, Health and Safety

W/ Attachment

Cc: L. Rajter, w/o  
R. Christmas, w/a  
C. Holden, w/o  
J. Brook, w/o  
A. Williams, w/o

File: 274 -2010.4



# Department of Environmental Protection

## Division of Air Resources Management

### ANNUAL OPERATING REPORT FOR AIR POLLUTANT EMITTING FACILITY

See Instructions for Form No. 62-210.900(5).

#### I. FACILITY REPORT

##### A. REPORT INFORMATION

1. Year of Report	2002	2. Number of Emissions Units in Report	4
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##### B. FACILITY INFORMATION

1. Facility ID 1010071	2. Facility Status ACTIVE	3. Date of Permanent Facility Shutdown
4. Facility Owner/Company Name PASCO COGEN LIMITED(PARENT CO: AQUILA)		
5. Site Name PASCO COGEN LIMITED		
6. Facility Location Street Address or Other Locator: 14850 OLD STATE ROAD 23 City: DADE CITY County: PASCO Zip Code: 33523-2845		
7. Facility Compliance Tracking Code A	8. Governmental Facility Code 0	9. Facility SIC(s) 4931
10. Facility Comment		

##### C. FACILITY HISTORY INFORMATION

1. Change in Facility Owner/ Company Name During Year?	Previous Name	2. Date of Change
--	---------------	-------------------

Facility ID : 1010071

Emissions Unit ID : 001

## II. EMISSIONS UNIT REPORT

### A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description <b>COMBUSTION TURBINE (CT) WITH HRSG AND DBS</b>		
2. Emissions Unit ID <b>001</b>	3. Emissions Unit Classification <b>Regulated Emissions Unit</b>	4. Operated During Year? <b>Yes</b>
5. DEP Permit or PPS Number <b>1010071001AV</b>	6. Emissions Unit Status <b>ACTIVE</b>	7. Ozone SIP Base Year Emissions Unit? <b>N</b>
8. Emissions Unit Startup Date <b>1995</b>	9. Long-term Reserve Shutdown Date <b>NA</b>	10. Permanent Shutdown Date <b>NA</b>

### B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type <b>SINGLE POINT SERVING A SINGLE EMISSIONS UNIT</b>
2a. Description of Control Equipment 'a' <b>STEAM OR WATER INJECTION</b>
2b. Description of Control Equipment 'b'

### C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation <b>18.4 hours/day 7 days/week</b>	2. Total Operation During Year (hours/year) <b>6708.39</b>
3. Percent Hours of Operation by Season <b>DJF : 26.0 MAM : 26.2 JJA : 24.4 SON : 23.4</b>	
4. Average Ozone Season Operation (June 1 to August 31) <b>17.8 hours/day 7 days/week</b>	5. Total Operation During Ozone Season (days/season) <b>92</b>



Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-004-05

## E. EMISSIONS INFORMATION BY PROCESS/FUEL

Duct Burner

## (1) PROCESS/FUEL INFORMATION

1. SCC <b>1-02-004-05</b>	2. Description of Process or Type of Fuel <b>External Combustion Boilers</b> <b>Industrial</b> <b>N/A nat gas only</b>		<b>Residual Oil</b> <b>Cogeneration</b>
3. Annual Process or Fuel Usage Rate NA	4. Ozone Season Daily Process or Fuel Usage Rate NA	5. SCC Unit <b>1000 Gallons Residual Oil Burn</b>	
6. Fuel Average % Sulfur NA	7. Fuel Average % Ash NA	8. Fuel Heat Content (mmBtu/SCC Unit) NA	

## (2) EMISSIONS INFORMATION

1. Pollutant * CO <b>Carbon Monoxide</b>		CAS No. <b>630-08-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant <b>H021</b> <b>Beryllium Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

Unit cannot fire fuel oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-004-05

1. Pollutant <b>PM10</b> <b>Particulate Matter - PM10</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>SAM</b> <b>Sulfuric Acid Mist</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>SO2</b> <b>Sulfur Dioxide</b>		CAS No. <b>7446-09-5</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>VOC</b> <b>Volatile Organic Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

Unit cannot fire on fuel oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 1-02-006-04

1. Pollutant <b>H114</b> <b>Mercury Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant <b>* NOX</b> <b>Nitrogen Oxides</b>		CAS No. <b>10102-44-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) <b>0.3</b>	3. Ozone Season Daily Emissions (lb/day) <b>2.03</b>	4. Emissions Method Code <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			
See attached			

1. Pollutant <b>PB</b> <b>Lead - Total (elemental lead and lead compounds)</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant <b>* PM</b> <b>Particulate Matter - Total</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) <b>~ 0</b>	3. Ozone Season Daily Emissions (lb/day) <b>0.12</b>	4. Emissions Method Code <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			
See attached			

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-001-03

## E. EMISSIONS INFORMATION BY PROCESS/FUEL

CT Unit 1

## (1) PROCESS/FUEL INFORMATION

1. SCC <b>2-02-001-03</b>	2. Description of Process or Type of Fuel <b>Internal Combustion Engines      Distillate Oil (Diesel)</b> <b>Industrial                                  Turbine: Cogeneration</b>	
3. Annual Process or Fuel Usage Rate 1.375	4. Ozone Season Daily Process or Fuel Usage Rate 0	5. SCC Unit <b>1000 Gallons Distillate Oil (Dies</b>
6. Fuel Average % Sulfur ≤ 0.1%	7. Fuel Average % Ash 0	8. Fuel Heat Content (mmBtu/SCC Unit) 140.37

## (2) EMISSIONS INFORMATION

1. Pollutant * CO <b>Carbon Monoxide</b>		CAS No. <b>630-08-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>H021</b> <b>Beryllium Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  see attached			

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-001-03

1. Pollutant <b>PM10</b> <b>Particulate Matter - PM10</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See PM section (PM & PM <sub>10</sub> together) (See attached)			

1. Pollutant * <b>SAM</b> <b>Sulfuric Acid Mist</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant * <b>SO2</b> <b>Sulfur Dioxide</b>		CAS No. 7446-09-5	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant * <b>VOC</b> <b>Volatile Organic Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

Facility ID : 1010071

Emissions Unit ID : 001

SCC : 2-02-002-03

1. Pollutant <b>H114</b> <b>Mercury Compounds</b>		CAS No.	[ ] Below Threshold [X] Not Emitted
2. Annual Emissions (ton/year)  NA	3. Ozone Season Daily Emissions (lb/day)  NA	4. Emissions Method Code  NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>NOX</b> <b>Nitrogen Oxides</b>		CAS No. <b>10102-44-0</b>	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)  124.2	3. Ozone Season Daily Emissions (lb/day)  659.49	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>PB</b> <b>Lead - Total (elemental lead and lead compounds)</b>		CAS No.	[ ] Below Threshold [X] Not Emitted
2. Annual Emissions (ton/year)  NA	3. Ozone Season Daily Emissions (lb/day)  NA	4. Emissions Method Code  NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>PM</b> <b>Particulate Matter - Total</b>		CAS No.	[ ] Below Threshold [ ] Not Emitted
2. Annual Emissions (ton/year)  8.0	3. Ozone Season Daily Emissions (lb/day)  42.44	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

Facility ID : 1010071

Emissions Unit ID : 002

## II. EMISSIONS UNIT REPORT

### A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description <b>COMBUSTION TURBINE (CT) WITH HRSG AND DBS</b>		
2. Emissions Unit ID <b>002</b>	3. Emissions Unit Classification <b>Regulated Emissions Unit</b>	4. Operated During Year? <b>Yes</b>
5. DEP Permit or PPS Number <b>1010071001AV</b>	6. Emissions Unit Status <b>ACTIVE</b>	7. Ozone SIP Base Year Emissions Unit? <b>N</b>
8. Emissions Unit Startup Date <b>1995</b>	9. Long-term Reserve Shutdown Date <b>NA</b>	10. Permanent Shutdown Date <b>NA</b>

### B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type <b>SINGLE POINT SERVING A SINGLE EMISSIONS UNIT</b>
2a. Description of Control Equipment 'a' <b>STEAM OR WATER INJECTION</b>
2b. Description of Control Equipment 'b'

### C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation <b>18.1 hours/day 7 days/week</b>	2. Total Operation During Year (hours/year) <b>6601.91</b>
3. Percent Hours of Operation by Season <b>DJF : 26.9 MAM : 24.8 JJA : 24.7 SON : 23.6</b>	
4. Average Ozone Season Operation (June 1 to August 31) <b>17.7 hours/day 7 days/week</b>	5. Total Operation During Ozone Season (days/season) <b>92</b>

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-004-05

## E. EMISSIONS INFORMATION BY PROCESS/FUEL

## (1) PROCESS/FUEL INFORMATION

DB

1. SCC <b>1-02-004-05</b>	2. Description of Process or Type of Fuel <b>External Combustion Boilers      Residual Oil Industrial                                  Cogeneration nat gas only</b>	
3. Annual Process or Fuel Usage Rate NA	4. Ozone Season Daily Process or Fuel Usage Rate NA	5. SCC Unit <b>1000 Gallons Residual Oil Burn</b>
6. Fuel Average % Sulfur NA	7. Fuel Average % Ash NA	8. Fuel Heat Content (mmBtu/SCC Unit) NA

## (2) EMISSIONS INFORMATION

1. Pollutant * CO <b>Carbon Monoxide</b>	CAS No. <b>630-08-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

1. Pollutant <b>H021</b> <b>Beryllium Compounds</b>	CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Unit does not fire on oil. Page not applicable to site.



Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-004-05

1. Pollutant <b>PM10</b> <b>Particulate Matter - PM10</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>SAM</b> <b>Sulfuric Acid Mist</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>SO2</b> <b>Sulfur Dioxide</b>		CAS No. 7446-09-5	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>VOC</b> <b>Volatile Organic Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

Unit does not fire on oil. Page not applicable to site.

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 1-02-006-04

1. Pollutant <b>H114</b> <b>Mercury Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>NOX</b> <b>Nitrogen Oxides</b>		CAS No. <b>10102-44-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0.3	3. Ozone Season Daily Emissions (lb/day) 1.93	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>PB</b> <b>Lead - Total (elemental lead and lead compounds)</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>PM</b> <b>Particulate Matter - Total</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0.12	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-001-03

## E. EMISSIONS INFORMATION BY PROCESS/FUEL

CT

## (1) PROCESS/FUEL INFORMATION

1. SCC <b>2-02-001-03</b>	2. Description of Process or Type of Fuel <b>Internal Combustion Engines      Distillate Oil (Diesel) Industrial                                  Turbine: Cogeneration</b>	
3. Annual Process or Fuel Usage Rate 0	4. Ozone Season Daily Process or Fuel Usage Rate 0	5. SCC Unit <b>1000 Gallons Distillate Oil (Dies</b>
6. Fuel Average % Sulfur < 0.1%	7. Fuel Average % Ash 0	8. Fuel Heat Content (mmBtu/SCC Unit) 140.37

## (2) EMISSIONS INFORMATION

1. Pollutant * <b>CO</b> <b>Carbon Monoxide</b>		CAS No. <b>630-08-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>H021</b> <b>Beryllium Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0	3. Ozone Season Daily Emissions (lb/day) 0	4. Emissions Method Code  5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

\*: Pollutant subject to emissions limiting standard or emissions cap

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-001-03

1. Pollutant <b>PM10</b> <b>Particulate Matter - PM10</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code  <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  Assume same as PM total			

1. Pollutant * <b>SAM</b> <b>Sulfuric Acid Mist</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)  0	3. Ozone Season Daily Emissions (lb/day)  0	4. Emissions Method Code  <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant * <b>SO2</b> <b>Sulfur Dioxide</b>		CAS No. <b>7446-09-5</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)  0	3. Ozone Season Daily Emissions (lb/day)  0	4. Emissions Method Code  <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant * <b>VOC</b> <b>Volatile Organic Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)  0	3. Ozone Season Daily Emissions (lb/day)  0	4. Emissions Method Code  <b>5</b>	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

\*: Pollutant subject to emissions limiting standard or emissions cap

Facility ID : 1010071

Emissions Unit ID : 002

SCC : 2-02-002-03

1. Pollutant <b>H114</b> <b>Mercury Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>NOX</b> <b>Nitrogen Oxides</b>		CAS No. <b>10102-44-0</b>	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 124.9	3. Ozone Season Daily Emissions (lb/day) 670.18	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>PB</b> <b>Lead - Total (elemental lead and lead compounds)</b>		CAS No.	<input type="checkbox"/> Below Threshold <input checked="" type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) NA	3. Ozone Season Daily Emissions (lb/day) NA	4. Emissions Method Code NA	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

1. Pollutant * <b>PM</b> <b>Particulate Matter - Total</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 8	3. Ozone Season Daily Emissions (lb/day) 43.13	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

Facility ID : 1010071

Emissions Unit ID : 003

**II. EMISSIONS UNIT REPORT****A. EMISSIONS UNIT INFORMATION**

1. Emissions Unit Description <b>Fuel Oil Storage tank</b>		
2. Emissions Unit ID <b>003</b>	3. Emissions Unit Classification <b>Unregulated Emissions Unit</b>	4. Operated During Year? <b>Yes</b>
5. DEP Permit or PPS Number <b>1010071001AV</b>	6. Emissions Unit Status <b>ACTIVE</b>	7. Ozone SIP Base Year Emissions Unit? <b>N</b>
8. Emissions Unit Startup Date <b>1995</b>	9. Long-term Reserve Shutdown Date <b>NA</b>	10. Permanent Shutdown Date <b>NA</b>

**B. EMISSION POINT/CONTROL INFORMATION**

1. Emissions Point Type <b>NO TRUE EMISSION POINT (FUGITIVE EMISSION)</b>
2a. Description of Control Equipment 'a'
2b. Description of Control Equipment 'b'

**C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION**

1. Average Annual Operation <b>24 hours/day 7 days/week</b>	2. Total Operation During Year (hours/year) <b>8760</b>
3. Percent Hours of Operation by Season <b>DJF : 25 MAM : 25 JJA : 25 SON : 25</b>	
4. Average Ozone Season Operation (June 1 to August 31) <b>24 hours/day 7 days/week</b>	5. Total Operation During Ozone Season (days/season) <b>92</b>

\*: Pollutant subject to emissions limiting standard or emissions cap

DEP Form No. 62-210.900(5) - Form

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Effective: 2/11/99

Facility ID : 1010071

Emissions Unit ID : 003

SCC : 4-03-010-99

## E. EMISSIONS INFORMATION BY PROCESS/FUEL

## (1) PROCESS/FUEL INFORMATION

1. SCC <b>4-03-010-99</b>	2. Description of Process or Type of Fuel <b>Petroleum and Solvent Evaporati Fixed Roof Tanks (Varying Sizes)</b> <b>Petroleum Product Storage at Re Specify Liquid: Working Loss (Ta</b>	
3. Annual Process or Fuel Usage Rate  14.13	4. Ozone Season Daily Process or Fuel Usage Rate  0.15	5. SCC Unit <b>1000 Gallons Liquid Throughpu</b>
6. Fuel Average % Sulfur  < 0.1%	7. Fuel Average % Ash  0	8. Fuel Heat Content (mmBtu/SCC Unit) 140.37

## (2) EMISSIONS INFORMATION

1. Pollutant <b>VOC</b> <b>Volatile Organic Compounds</b>	CAS No.	<input checked="" type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		

Facility ID : 1010071

Emissions Unit ID : 004

) D. EMISSIONS UNIT COMMENT

\*) Pollutant subject to emissions limiting standard or emissions cap

DEP Form No. 62-210.900(5) - Form

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Effective: 2/11/99



Facility ID : 1010071

Emissions Unit ID : 004

SCC : 2-01-001-02

1. Pollutant <b>PM</b> <b>Particulate Matter - Total</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0.28	3. Ozone Season Daily Emissions (lb/day) 1.4	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>PM10</b> <b>Particulate Matter - PM10</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  Assume same as PM total			

1. Pollutant <b>SO2</b> <b>Sulfur Dioxide</b>		CAS No. 7446-09-5	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0.26	3. Ozone Season Daily Emissions (lb/day) 1.3	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

1. Pollutant <b>VOC</b> <b>Volatile Organic Compounds</b>		CAS No.	<input type="checkbox"/> Below Threshold <input type="checkbox"/> Not Emitted
2. Annual Emissions (ton/year) 0.31	3. Ozone Season Daily Emissions (lb/day) 1.6	4. Emissions Method Code 5	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)  See attached			

# Calculation of Actual Emissions for 2002, PASCO Cogen Ltd. - Uni

2/20/2003

Pollutant	Source	Fuel	Per Unit		Emission Rate (lb/MMBtu)^a	2002 Natural Gas Usage (KSCF)	2002 Fuel Oil Usage (gal)	Total Heat Input (MMBtu/yr)^b	Actual (lb/yr)	Emissions (TPY)
			Permitted Allowable Rate	Maximum Emissions Units						
NOx	CT	Natural Gas	42.75 lb/hr		0.101	2,365,432	NA	2,460,049.3	248,465.0	124.2
	CT	Fuel Oil	74.15 lb/hr		0.175	NA	1,375.0	193.0	33.8	0.0
	DB	Natural Gas	0.1 lb/MMBtu		0.100	5,161	NA	5,367.4	536.7	0.3
<b>TOTAL NOx</b>									<b>124.5</b>	
CO	CT	Natural Gas	28 lb/hr		0.066	2,365,432	NA	2,460,049.3	162,363.3	81.2
	CT	Fuel Oil	17.25 lb/hr		0.041	NA	1,375.0	193.0	7.9	0.0
	DB	Natural Gas	0.2 lb/MMBtu		0.200	5,161	NA	5,367.4	1,073.5	0.5
<b>TOTAL CO</b>									<b>81.7</b>	
PM	CT	Natural Gas	0.0065 lb/MMBtu		0.0065	2,365,432	NA	2,460,049.3	15,990.3	8.0
	CT	Fuel Oil	0.026 lb/MMBtu		0.026	NA	1,375.0	193.0	5.0	0.0
	DB	Natural Gas	0.006 lb/MMBtu		0.006	5,161	NA	5,367.4	32.2	0.0
<b>TOTAL PM/PM10</b>									<b>8.0</b>	
SO2	CT	Natural Gas	NA		0.003 c	2,365,432	NA	2,460,049.3	7,380.1	3.7
	CT	Fuel Oil	43.8 lb/hr		0.10	NA	1,375.0	193.0	19.3	0.0
	DB	Natural Gas	NA		0.003 c	5,161	NA	5,367.4	16.1	0.0
<b>TOTAL SO2</b>									<b>3.7</b>	
VOC	CT	Natural Gas	1.7 lb/hr		0.004	2,365,432	NA	2,460,049.3	9,840.2	4.9
	CT	Fuel Oil	4.35 lb/hr		0.010	NA	1,375.0	193.0	1.9	0.0
	DB	Natural Gas	2.7 lb/hr		0.030	5,161	NA	5,367.4	161.0	0.1
<b>TOTAL VOC</b>									<b>5.0</b>	
Hg	CT	Fuel Oil	0.0003 TPY		1.39E-05	NA	1,375.0	193.0	0.0	0.0
Pb	CT	Fuel Oil	0.0008 TPY		3.70E-05	NA	1,375.0	193.0	0.0	0.0
Be	CT	Fuel Oil	0.0002 TPY		9.26E-06	NA	1,375.0	193.0	0.0	0.0
H2SO4 Mist	CT	Fuel Oil	0.80 TPY		0.04	NA	1,375.0	193.0	7.1	0.0
<b>Total Comb. By-Prod.</b>									<b>0.0</b>	

Note: CT = combustion turbine  
DB = duct burner  
NG = natural gas  
DFO = distillate fuel oil

<sup>a</sup>a Based on maximum heat input rates of 423, 424 and 90 MMBtu/hr for the CT (gas), CT (oil) and DB (gas).

<sup>b</sup>b Based on a HHV BTU rate of 1040 Btu scf for natural gas and 140,368 Btu 1 gal fuel oil

<sup>c</sup>c Based on factor of 1 grain of SO2 per 100 cubic feet of natural gas.

# Calculation of Actual Emissions for 2002, PASCO Cogen Ltd. - Unit #2

7/20/2003

Pollutant	Source	Fuel	Per	Unit	Emission Rate (lb/MMBtu)^a	2002 Natural Gas Usage (KSCF)	2002 Fuel Oil Usage (gal)	Total Heat Input (MMBtu/yr)^b	Actual	Emissions
			Permitted Allowable Rate	Maximum Emissions Units						
NOx	CT	Natural Gas	42.75	lb/hr	0.101	2,377,740	NA	2,472,849.6	249,757.8	124.9
	CT	Fuel Oil	74.15	lb/hr	0.000	NA	0	126.3	22.0	0.0
	DB	Natural Gas	0.1	lb/MMBtu	0.100	4,824	NA	5,017.0	501.7	0.3
<b>TOTAL NOx</b>										<b>125.1</b>
CO	CT	Natural Gas	28	lb/hr	0.066	2,377,740	NA	2,472,849.6	163,208.1	81.6
	CT	Fuel Oil	17.25	lb/hr	0.041	NA	0	0.0	0.0	0.0
	DB	Natural Gas	0.2	lb/MMBtu	0.200	4,824	NA	5,017.0	1,003.4	0.5
<b>TOTAL CO</b>										<b>82.1</b>
PM	CT	Natural Gas	0.0065	lb/MMBtu	0.0065	2,377,740	NA	2,472,849.6	16,073.5	8.0
	CT	Fuel Oil	0.026	lb/MMBtu	0.026	NA	0	0.0	0.0	0.0
	DB	Natural Gas	0.006	lb/MMBtu	0.006	4,824	NA	5,017.0	30.1	0.0
<b>TOTAL PM/PM10</b>										<b>8.1</b>
SO2	CT	Natural Gas	NA		0.003 c	2,377,740	NA	2,472,849.6	7,418.5	3.7
	CT	Fuel Oil	43.8	lb/hr	0.10	NA	0	0.0	0.0	0.0
	DB	Natural Gas	NA		0.003 c	4,824	NA	5,017.0	15.1	0.0
<b>TOTAL SO2</b>										<b>3.7</b>
VOC	CT	Natural Gas	1.7	lb/hr	0.004	2,377,740	NA	2,472,849.6	9,891.4	4.9
	CT	Fuel Oil	4.35	lb/hr	0.010	NA	0	0.0	0.0	0.0
	DB	Natural Gas	2.7	lb/hr	0.030	4,824	NA	5,017.0	150.5	0.1
<b>TOTAL VOC</b>										<b>5.0</b>
Hg	CT	Fuel Oil	0.0003	TPY	1.39E-05	NA	0	0.0	0.0	0.0
Pb	CT	Fuel Oil	0.0008	TPY	3.70E-05	NA	0	0.0	0.0	0.0
Be	CT	Fuel Oil	0.0002	TPY	9.26E-06	NA	0	0.0	0.0	0.0
H2SO4 Mist	CT	Fuel Oil	0.8	TPY	0.04	NA	0	0.0	0.0	0.0
<b>Total Comb. By-Prod.</b>										<b>0.0</b>

Note: CT = combustion turbine  
DB = duct burner  
NG = natural gas  
DFO = distillate fuel oil

<sup>a</sup> Based on maximum heat input rates of 423, 424 and 90 MMBtu/hr for the CT (gas), CT (oil) and DB (gas).

<sup>b</sup> Based on a HHV BTU rate of 1040 Btu scf for natural gas and 140,368 Btu 1 gal fuel oil

<sup>c</sup> Based on factor of 1 grain of SO2 per 100 cubic feet of natural gas.

YEAR 2002		
Actual Emissions		
Pollutant	(lb/yr)	(TPY)
NOx	498,222.8	249.1
	55.8	0.0
	1,038.4	0.5
	<b>TOTAL NOx</b>	<b>249.7</b>
CO	325,571.3	162.8
	7.9	0.0
	2,076.9	1.0
	<b>TOTAL CO</b>	<b>163.8</b>
PM	32,063.8	16.0
	5.0	0.0
	62.3	0.0
	<b>TOTAL PM/PM10</b>	<b>16.1</b>
SO2	14,798.7	7.4
	19.3	0.0
	31.2	0.0
	<b>TOTAL SO2</b>	<b>7.4</b>
VOC	19,731.6	9.9
	1.9	0.0
	311.5	0.2
	<b>TOTAL VOC</b>	<b>10.0</b>
Hg	0.0	0.0
Pb	0.0	0.0
Be	0.0	0.0
H2SO4 Mist	4.7	0.0
	<b>Total Comb. By-Prod.</b>	

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Unit 1 Data

MONTH	GT 1 HOURS	GT 1 GAS (MCF)	GT 1 WATER INJECTION (GAL)	GT 1 F.O. (GAL)	# 1 DUCT BURNER (MCF)	# 1 DUCT BURNER HOURS
January	604.28	208447.01	1206145.00	0.00	555.19	25.15
February	566.55	196883.72	1198823.00	0.00	30.31	1.70
March	632.73	218072.33	1168137.00	0.00	440.84	23.39
April	546.27	198059.14	1057822.00	0.00	208.25	14.88
May	580.64	207753.46	1135635.00	0.00	1.03	0.08
June	544.19	196184.11	1130068.00	0.00	360.38	25.87
July	577.99	202626.70	1151520.00	0.00	1297.90	73.81
August	515.95	190393.24	1101283.00	0.00	176.85	4.35
September	497.76	180565.79	1001122.00	0.00	1507.65	93.75
October	607.03	209496.97	1152565.00	1375.00	577.00	35.40
November	460.28	159245.72	864309.00	0.00	0.00	0.00
December	574.74	197703.57	1036734.00	0.00	5.92	0.25
Total	6708.39	2,365,431.76	13,204,163.00	1375.00	5161.32	298.63

Ozone Season 1638.13  
24.4%

104.03

34.8%

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Unit 2 Data

MONTH	GT 2 HOURS	GT 2 GAS (MCF)	GT 2 WATER INJECTION (GAL)	GT 2 F.O. (GAL)	# 2 DUCT BURNER (MCF)	# 2 DUCT BURNER HOURS
January	626.21	217625.14	1317643.00	0.00	297.78	17.92
February	547.25	192845.00	1207327.00	0.00	28.76	1.77
March	611.35	215656.89	1290833.00	0.00	452.13	23.29
April	518.26	195148.74	1179895.00	0.00	29.79	2.20
May	505.52	190634.45	1147316.00	0.00	0.66	0.08
June	524.82	192760.34	1155084.00	0.00	320.01	24.68
July	517.76	192619.83	1162298.00	0.00	1242.78	68.70
August	587.22	203384.32	1228221.00	0.00	174.18	4.18
September	497.41	176508.00	1082449.00	0.00	1693.82	101.17
October	488.35	181823.76	1115231.00	0.00	580.86	32.74
November	572.34	203155.51	1201038.00	0.00	0.00	0.00
December	605.42	215577.54	1266678.00	0.00	3.36	0.00
Total	6601.91	2,377,739.52	14,354,013.00	0.00	4824.13	276.74

Ozone Season 1629.8  
~~24.7~~ 24.7%

97.56  
35.6%

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Emergency Diesel Generator and Diesel Fire Pump Data

MONTH	#1 EDG HOURS	# 2 EDG HOURS	DIESEL FIRE PUMP HOURS	EDG/DIESEL FIRE PUMP FUEL OIL USAGE (GAL)
January	3.20	4.10	.5	547.50
February	4.10	5.10	.4	690.00
March	1.90	3.20	1.0	382.50
April	6.20	11.00	4.5	1150.90
May	13.90	8.90	.7	1710.00
June	7.00	4.90	1.3	1530.00
July	4.20	4.30	.8	637.50
August	4.90	3.90	1.2	552.50
September	12.90	7.90	1.7	1700.00
October	8.80	3.20	.6	835.00
November	14.60	13.50	.4	2107.50
December	8.60	4.50	1.4	911.77
Total	90.30	74.50	14.5	12,755.18

Unit #1     **CO Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,638.13 hrs.</i>
<i>GT hours for the year</i>	<i>6,708.39 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.42%</i>
<i>GT emission in lb/yr</i>	<i>162,363.25 lb/yr</i>

**GT emissions**

<i>162363.3 lb/hr X 24.42%</i>	<i>39,647.68 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>430.95 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>104.03 hrs.</i>
<i>DB hours for the year</i>	<i>298.63 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>34.84%</i>
<i>DB emission in lb/yr</i>	<i>1,073.49 lb/yr</i>

**DB emissions**

<i>1073.49 lb/yr X 34.84%</i>	<i>373.96 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>4.06 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>435.02 lb/day</u></b>
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Unit #1     **NOx Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	1,638.13 <i>hrs.</i>
<i>GT hours for the year</i>	6,708.39 <i>hrs</i>
<i>Percent of hrs in Ozone Season</i>	24.42%
<i>GT emission in lb/yr</i>	248,464.98 <i>lb/yr</i>

**GT emissions**

<i>248464.98 lb/hr X 24.42%</i>	60,672.97 <i>lbs</i>
<i>Days in Ozone Season</i>	92 <i>days</i>
<b>Ozone Season Daily emission</b>	<b>659.49 lb/day</b>

<i>DB hours during Ozone Season</i>	104.03 <i>hrs.</i>
<i>DB hours for the year</i>	298.63 <i>hrs.</i>
<i>Percent of hrs in Ozone Season</i>	34.84%
<i>DB emission in lb/yr</i>	536.74 <i>lb/yr</i>

**DB emissions**

<i>536.74 lb/yr X 34.84%</i>	186.98 <i>lbs</i>
<i>Days in Ozone Season</i>	92 <i>days</i>
<b>Ozone Season Daily emission</b>	<b>2.03 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>661.52 lb/day</u></b>
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Unit #1     **Particulate Matter (PM) Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,638.13 hrs.</i>
<i>GT hours for the year</i>	<i>6,708.39 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.42%</i>
<i>GT emission in lb/yr</i>	<i>15,990.32 lb/yr</i>

**GT emissions**

<i>15990.32 x 24.42</i>	<i>3,904.84 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>42.44 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>104.03 hrs.</i>
<i>DB hours for the year</i>	<i>298.63 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>34.84%</i>
<i>DB emission in lb/yr</i>	<i>32.20 lb/yr</i>

**DB emissions**

<i>32.2 lb/yr X 34.84%</i>	<i>11.22 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>0.12 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>42.57 lb/day</u></b>
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Unit #1

**SO2 Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	1,638.13 <i>hrs.</i>
<i>GT hours for the year</i>	6,708.39 <i>hrs</i>
<i>Percent of hrs in Ozone Season</i>	24.42%
<i>GT emission in lb/yr</i>	7,380.15 <i>lb/yr</i>

**GT emissions**

<i>7380.15 lb/hr X 24.42%</i>	1,802.17 <i>lbs</i>
<i>Days in Ozone Season</i>	92 <i>days</i>
<b>Ozone Season Daily emission</b>	<b>19.59 lb/day</b>

<i>DB hours during Ozone Season</i>	104.03 <i>hrs.</i>
<i>DB hours for the year</i>	298.63 <i>hrs.</i>
<i>Percent of hrs in Ozone Season</i>	34.84%
<i>DB emission in lb/yr</i>	16.10 <i>lb/yr</i>

**DB emissions**

<i>16.1 lb/yr X 34.84%</i>	5.61 <i>lbs</i>
<i>Days in Ozone Season</i>	92 <i>days</i>
<b>Ozone Season Daily emission</b>	<b>0.06 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>19.65 lb/day</u></b>
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Unit #1    **VOC Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	1,638.13 hrs.
<i>GT hours for the year</i>	6,708.39 hrs
<i>Percent of hrs in Ozone Season</i>	24.42%
<i>GT emission in lb/yr</i>	9,840.20 lb/yr

**GT emissions**

<i>9840.2 lb/hr X 24.42%</i>	2,402.89 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>26.12 lb/day</b>

<i>DB hours during Ozone Season</i>	104.03 hrs.
<i>DB hours for the year</i>	298.63 hrs.
<i>Percent of hrs in Ozone Season</i>	34.84%
<i>DB emission in lb/yr</i>	161.02 lb/yr

**DB emissions**

<i>161.02 lb/yr X 34.84%</i>	56.09 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>0.61 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>26.73 lb/day</u></b>
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Unit #1     **Sulfuric Acid Mist Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	0.00 hrs.
<i>GT hours for the year</i>	6,708.39 hrs
<i>Percent of hrs in Ozone Season</i>	0.00%
<i>GT emission in lb/yr</i>	7.14 lb/yr

**GT emissions**

<i>5.3 lb/hr X 23.6%</i>	0.00 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>0.00 lb/day</b>

<i>DB hours during Ozone Season</i>	104.03 hrs.
<i>DB hours for the year</i>	298.63 hrs.
<i>Percent of hrs in Ozone Season</i>	34.84%
<i>DB emission in lb/yr</i>	0.00 lb/yr

**DB emissions**

<i>0lb/yr X 34.84%</i>	0.00 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>0.00 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>0.00 lb/day</u></b>
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Unit #2     **CO Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,629.80 hrs.</i>
<i>GT hours for the year</i>	<i>6,601.91 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.69%</i>
<i>GT emission in lb/yr</i>	<i>162,208.10 lb/yr</i>

**GT emissions**

<i>162208.1 lb/hr X 24.69%</i>	<i>40,043.98 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>435.26 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>97.60 hrs.</i>
<i>DB hours for the year</i>	<i>276.40 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>35.31%</i>
<i>DB emission in lb/yr</i>	<i>1,003.50 lb/yr</i>

**DB emissions**

<i>1003.5 lb/yr X 35.8%</i>	<i>359.25 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>3.90 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>439.17 lb/day</u></b>
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Unit #2     **NOx Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	1,629.80 hrs.
<i>GT hours for the year</i>	6,601.91 hrs
<i>Percent of hrs in Ozone Season</i>	24.69%
<i>GT emission in lb/yr</i>	249,757.00 lb/yr

**GT emissions**

<i>249757.0 lb/hr X 24.69%</i>	61,657.00 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>670.18 lb/day</b>

<i>DB hours during Ozone Season</i>	97.60 hrs.
<i>DB hours for the year</i>	276.40 hrs.
<i>Percent of hrs in Ozone Season</i>	35.31%
<i>DB emission in lb/yr</i>	501.70 lb/yr

**DB emissions**

<i>501.7 lb/yr X 35.31%</i>	177.15 lbs
<i>Days in Ozone Season</i>	92 days
<b>Ozone Season Daily emission</b>	<b>1.93 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>672.11 lb/day</u></b>
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Unit #2     **Particulate Matter (PM) Calculations - Ozone Season**

GT hours during Ozone Season	1,629.90 hrs.
GT hours for the year	6,601.91 hrs
Percent of hrs in Ozone Season	24.69%
GT emission in lb/yr	16,073.52 lb/yr

**GT emissions**

16073.52 lb/hr X 24.69%	3,968.28 lbs
Days in Ozone Season	92 days
Ozone Season Daily emission	43.13 lb/day

DB hours during Ozone Season	97.60 hrs.
DB hours for the year	276.40 hrs.
Percent of hrs in Ozone Season	35.31%
DB emission in lb/yr	30.10 lb/yr

**DB emissions**

30.1 lb/yr X 35.31%	10.63 lbs
Days in Ozone Season	92 days
Ozone Season Daily emission	0.12 lb/day

Total Ozone Season Daily Emission	<u>43.25 lb/day</u>
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Unit #2

**SO2 Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,629.80 hrs.</i>
<i>GT hours for the year</i>	<i>6,601.91 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.69%</i>
<i>GT emission in lb/yr</i>	<i>7,418.55 lb/yr</i>

**GT emissions**

<i>7418.55 lb/hr X 24.69%</i>	<i>1,831.40 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>19.91 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>97.60 hrs.</i>
<i>DB hours for the year</i>	<i>276.40 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>35.31%</i>
<i>DB emission in lb/yr</i>	<i>15.05 lb/yr</i>

**DB emissions**

<i>15.05 lb/yr X 35.31%</i>	<i>5.31 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>0.06 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>19.96 lb/day</u></b>
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Unit #2    **VOC Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,629.80 hrs.</i>
<i>GT hours for the year</i>	<i>6,601.91 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.69%</i>
<i>GT emission in lb/yr</i>	<i>9,891.40 lb/yr</i>

**GT emissions**

<i>9891.4 lb/hr X 24.69%</i>	<i>2,441.87 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>26.54 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>97.60 hrs.</i>
<i>DB hours for the year</i>	<i>276.40 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>35.31%</i>
<i>DB emission in lb/yr</i>	<i>150.51 lb/yr</i>

**DB emissions**

<i>150.51 lb/yr X 35.31%</i>	<i>53.15 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>0.58 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>27.12 lb/day</u></b>
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Unit #2     **Sulfuric Acid Mist Calculations - Ozone Season**

<i>GT hours during Ozone Season</i>	<i>1,629.80 hrs.</i>
<i>GT hours for the year</i>	<i>6,601.91 hrs</i>
<i>Percent of hrs in Ozone Season</i>	<i>24.69%</i>
<i>GT emission in lb/yr</i>	<i>0.00 lb/yr</i>

**GT emissions**

<i>0 lb/hr X 25.0%</i>	<i>0.00 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>0.00 lb/day</b>

<i>DB hours during Ozone Season</i>	<i>97.60 hrs.</i>
<i>DB hours for the year</i>	<i>276.40 hrs.</i>
<i>Percent of hrs in Ozone Season</i>	<i>35.31%</i>
<i>DB emission in lb/yr</i>	<i>0.00 lb/yr</i>

**DB emissions**

<i>0lb/yr X 24.77%</i>	<i>0.00 lbs</i>
<i>Days in Ozone Season</i>	<i>92 days</i>
<b>Ozone Season Daily emission</b>	<b>0.00 lb/day</b>

<b>Total Ozone Season Daily Emission</b>	<b><u>0.00 lb/day</u></b>
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Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES<sup>a</sup>

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO <sub>x</sub>	0.011	1.63	0.031	4.41	D
CO	0.439	62.7	6.68 E-03	0.95	D
SO <sub>x</sub>	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10 <sup>b</sup>	7.21 E-04	0.10	2.20 E-03	0.31	D
CO <sub>2</sub> <sup>c</sup>	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

<sup>a</sup> References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

<sup>b</sup> PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

<sup>c</sup> Assumes 99% conversion of carbon in fuel to CO<sub>2</sub> with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

For 004:

$12,755 \text{ gal. No 2 Fuel Oil} \times 140.36 \text{ MMBtu/1000 gal} = 1790 \text{ MMBtu}$	1b/day O <sub>3</sub> season
$\text{NO}_x = 4.41 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 3.95 \text{ tons/yr}$	18.3
$\text{CO} = 0.91 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.81 \text{ tons/yr}$	3.8
$\text{PM}_{10} = 0.31 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.28 \text{ tons/yr}$	1.4
$\text{SO}_2 = 0.29 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.26 \text{ tons/yr}$	1.3
$\text{VOC} = 0.35 \text{ lb/MMBtu} \times 1790 \text{ MMBtu} = 0.31 \text{ tons/yr}$	1.6

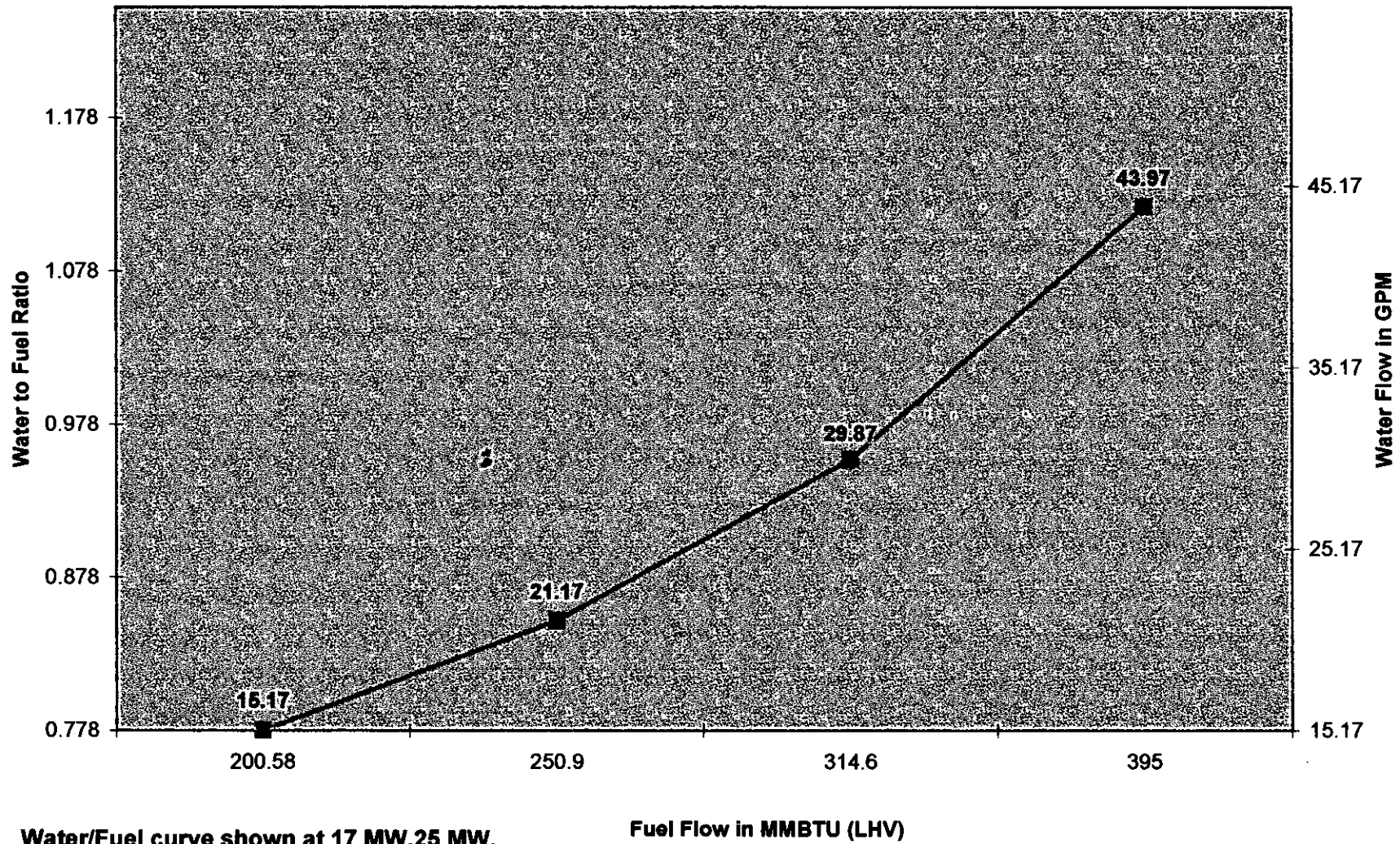
ATTACHMENT 3

**GT 1 Curves From Title V testing at low loads  
and latest source test 08/03**

<b>MW</b>	<b>W/F Ratio</b>	<b>Fuel in MMBTU</b>	<b>GPM</b>
17.3	0.778	200.58	15.17
25	0.85	250.9	21.17
33	0.955	314.6	29.87
Base	1.12	395	43.97

Curve shown with NOx corrected  
to 25 PPM @ 15% O2 and 28 PPM

### ESN 185-102 Water to Fuel Curve



Water/Fuel curve shown at 17 MW, 25 MW,  
33 MW, and Base Load on GT

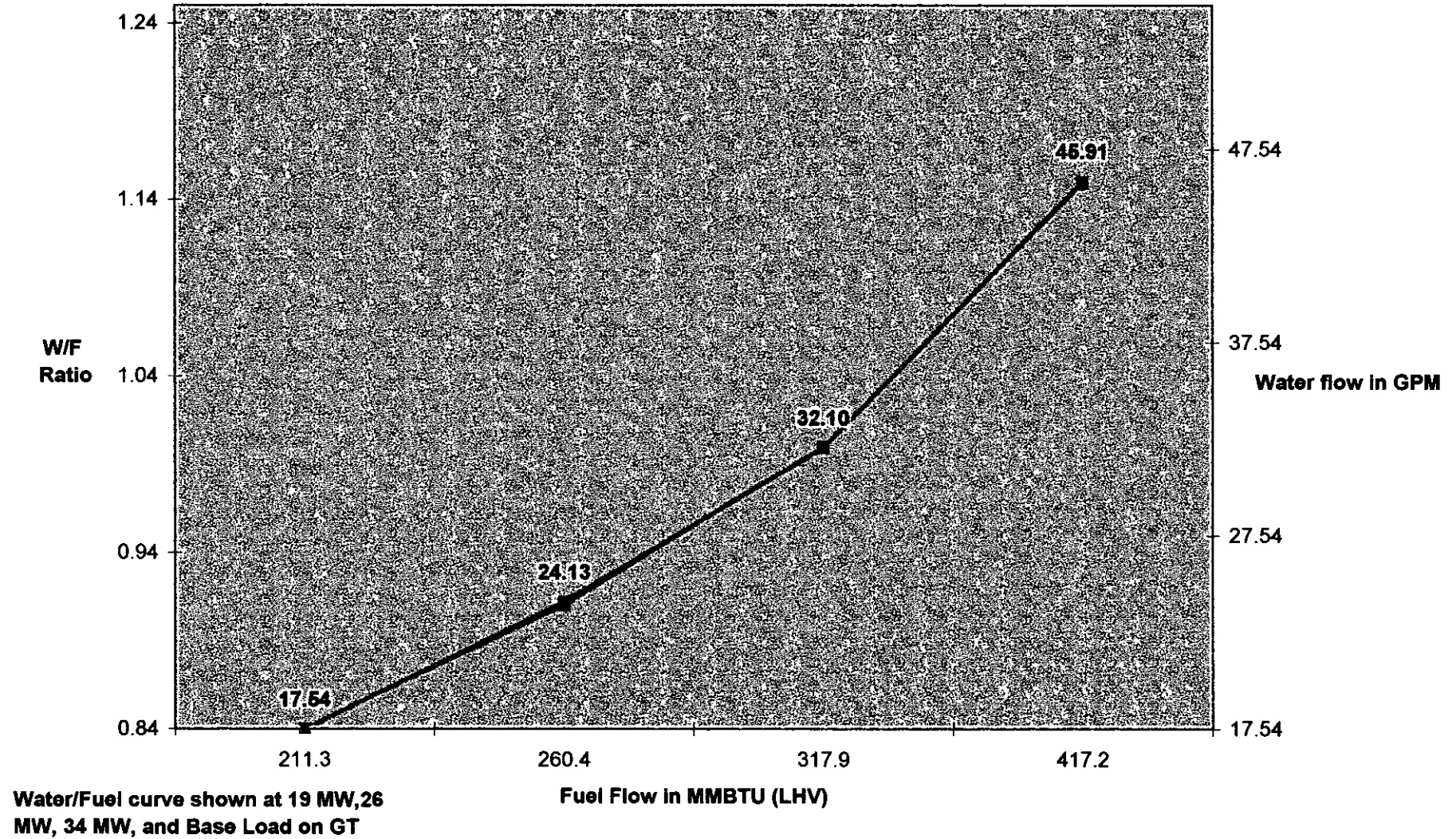
GT 2 Curves From Title V testing at low loads and latest source test 07/03			
MW	W/F Ratio	Fuel in MMBTU	GPM
19	0.84	211.3	17.54
26	0.91	260.4	24.13
34	1.00	317.9	32.10
Base	1.149	417.2	45.91

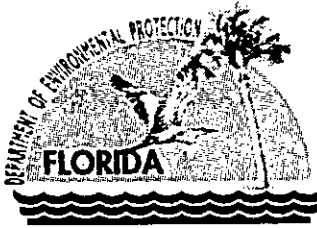


# GT2 Chart

Curve shown with NOx corrected  
to 25 PPM @ 15% O2 and 28 PPM

## ESN 185-103 Water to Fuel Curve





# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

October 7, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Leo Rajter, Vice President  
Pasco Cogen, Limited c/o Aquila  
20 West 9<sup>th</sup> Street  
Kansas City, MO 64105

Re: **Request for Additional Information No. 2**  
Project No. 1010071-002-AC (PSD-FL-177A)  
SPRINT Upgrade Project

Dear Mr. Rajter:

On June 10, 2003, the Department received your application and sufficient fee for an air construction permit to upgrade the two existing LM6000 gas turbines with the "SPRINT" spray inter-cooling system. The units are installed at the existing plant in Dade City located at 14850 Old State Road 23 in Pasco County, Florida. On June 20, 2003 letter, the Department requested additional information. On September 17, 2003, the Department received a response to the additional information request. On September 30, 2003, the Department discussed additional details of the current operation and expected operation after the proposed SPRINT project is complete with your consultant and plant engineer. The application remains incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Provide documentation explaining why the existing combined cycle unit is not subject to the Acid Rain program and does not have a NOx continuous emission monitoring system.
2. Provide a description or example of the methodology used to calculate past actual emissions identified in Attachment PC-B1-AC.
3. Provide a performance curve identifying the water injection rate and NOx emission rate versus heat input rate (or load).
4. The Department believes that the 2-on-1 combined cycle unit meets the following definition of an *electric utility steam generating unit*.

"Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the unit." [Rule 62-212.200(97), F.A.C.]

For units qualified as an *electric utility steam generating unit*, actual emissions are defined as follows.

"For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following a physical or operational change shall equal the representative actual annual emissions of the unit following the physical or operational change, provided the owner or operator maintains and submits to the Department on an annual basis, for a period of 5 years representative of normal post-change operations of the unit, within the period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in an emissions increase. The definition of "representative actual annual emissions" found in 40 CFR 52.21(b)(33) is adopted and incorporated by reference in Rule 62-204.800, F.A.C." [Rule 62-212.200(11)(d), F.A.C.]

40 CFR 52.21(b)(33) defines *representative actual annual emissions* as:

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"Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the Administrator determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Administrator shall:

- (i) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and
- (ii) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole."

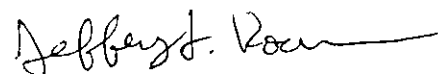
Note that PSD preconstruction review could apply later if the annual reports determine that the SPRINT project resulted in PSD-significant emissions increases (excluding emissions from any demand growth that could have been accommodated). Considering the 2-on-1 combined cycle unit to be an *electric utility steam generating unit*, Pasco Cogeneration may project *representative actual annual emissions* as indicated above. If Pasco Cogeneration believes that the SPRINT project will have little impact with regard to actual annual emissions increases, the project may not trigger PSD preconstruction review. If this is the case, it may be possible to authorize the addition of SPRINT in a minor source air construction permit and identify the appropriate testing and reporting requirements.

Please provide a PSD-applicability analysis based on the discussion of "representative actual annual emissions" or recommend a restriction on the hours of operation that will ensure the SPRINT project does not trigger PSD Preconstruction review.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,



Jeffery F. Koerner  
New Source Review Section

cc: Mr. John L. McKelvey, Case Engineering, Inc.  
Mr. Tom Grace, Pasco Cogen, Ltd. c/o Aquila  
Mr. Richard Christmas, Pasco Cogen, Ltd.  
Mr. Gerry Kissel, SWD  
Mr. Gregg Worley, EPA Region 4  
Mr. John Bunyak, NPS

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

## 1. Article Addressed to:

Mr. Leo Rajter  
Vice President  
Pasco Cogen, Ltd.  
c/o Aquila  
20 W. 9th Street  
Kansas City, MO 64105

2. 7001 0320 0001 3692 6037

PS Form 3811, July 1999

Domestic Return Receipt

102595-99-M-1789

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

B. Date of Delivery

10-14-03

C. Signature

X *Michael Palmer*☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

## 3. Service Type

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## 4. Restricted Delivery? (Extra Fee)

☐ Yes**U.S. Postal Service****CERTIFIED MAIL RECEIPT**

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7001 0320 0001 3692 6037

Postage

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Certified Fee

Return Receipt Fee  
(Endorsement Required)Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees

\$

Postmark  
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Sent To

Leo Rajter

Street, Apt. No.,

or P.O. No. 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, January 2001

See Reverse for Instructions

**PASCO COGEN, LTD.**

**NCP DADE POWER, INC., GENERAL PARTNER**

c/o Aquila • 20 West 9<sup>th</sup> Street • Kansas City, MO 64105  
Tel (816) 527-1160 • Fax (816) 527-4160

September 15, 2003

**RECEIVED**

SEP 17 2003

BUREAU OF AIR REGULATION

Mr. Jeffery F. Koerner, PE  
Florida Department of Environmental Protection  
Division of Air Resource Management  
2600 Blair Stone Road, MS 5505  
Tallahassee, FL 32399-2400

(850) 921-9536

RE: Pasco Cogeneration LP; Facility ID No. 1010071; Pasco County, Florida;  
Air Construction Permit Application to Modify Two GE LM-6000  
Combustion Turbine Units, Response to the FLDEP's letter of June 20, 2003

Dear Mr. Koerner:

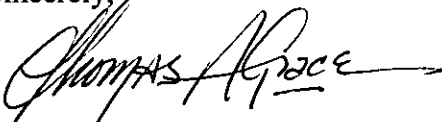
The purpose for this letter is to respond to the questions you raised in your letter of June 20, 2003, concerning Pasco's request to uprate the two existing CTs currently operating at the Pasco Cogen facility

Our response consists of direct answers to the five questions you posed, as well as to provide you with supporting data. The project has had one significant reconsideration since the original modification application was submitted. This has been to modify the option for a total replacement of one of the existing CTs with a "comparable" unit from GE's existing stock. This option has been replaced with one that would have both existing CTs remain at Pasco and have both units uprated, rather than have one replaced. In this way PSD control can be more easily managed by Pasco Cogen.

At the Department's convenience, Pasco Cogen is prepared to meet with you and discuss this proposal further and go over the permit application. We believe that in performing this work we not only enhance the ability of Pasco Cogen to perform better, we will also be able to produce electricity with reduced emissions per MMBtu fired at the facility.

I will look forward to hearing back from you soon. My telephone number is (816) 527-1160 and my e-mail is [thomas.grace@aquila.com](mailto:thomas.grace@aquila.com)

For Pasco Cogen,  
Sincerely,



Thomas A. Grace, CHMM  
Director – Environmental Health and Safety

W/ attachments

Cc: R. Christmas, w/a  
L. Rajter, w/a  
B. Miles, w/o  
*J. Kinnel, SWP*

File: 274-2010.3

Responses to questions from the FLDEP's letter of June 20, 2003

1. Which of the gas turbines will be replaced with an "equivalent reconditioned unit" upgraded with SPRINT technology? Identify the make/model of the replacement unit and provide maximum emission rates from the vendor.

Response: The period to exercise this option is gone. Hot section maintenance will be completed this fall which makes using an "equivalent reconditioned unit" uneconomical. The project has decided that if this uprating is to be accomplished in the most expedient and practical manner possible it would recondition both existing engines into the upgraded SPRINT technology, rather than bring in a "an equivalent reconditioned unit". In this manner the delta increase in emissions remains the same as was originally proposed in the Table shown originally as attachment PC-B1-AC.

2. Please provide vendor performance curves for the modified LM6000 gas turbine comparing maximum heat input rate (MMBtu/hour) and generating capacity (MW) to the turbine inlet temperature (° F).

Response: Representative curves from the vendor (GE), providing the data requested, are attached. See Attachment I to this letter.

3. Please provide a PSD netting analysis similar to the information provided in Attachment PC-B1-AC. Note that the replacement should be treated as the permanent shutdown of the old unit and the addition of a new unit. The shutdown unit will result in permanent emission decreases and the new unit will result in emission increases. Based upon your initial request to avoid PSD review, the netting analysis must show that net emissions increases do not exceed the PSD significant emissions rates. Please note that the net emissions increases for the project are the difference between past actual annual emissions before the modification and future potential annual emissions after modification. It is not the difference between the potential emissions before and after the project as suggested in Attachment PC-B1-AC.

Response: A revision of the Table provided originally as Attachment PC-B1-AC is attached to better explain this point. See Attachment II to this letter.

4. Please describe the general method for calculating the past emissions in Attachment PC-B1-AC. Past actual emissions should be based upon emission factors that reflect actual emission rates and the average actual production rate for the representative two-year period. An emissions summary report from the Department's ARMs database is attached for your review. It is based upon the Annual Operating Reports that Pasco Cogen, Limited filed with the Department as required by permit. The CO and NOx emissions data for 2000 – 2002 are generally the same as reported on Attachment PC-B1-AC. However the CO and

NOx emissions data for 1998 – 1999 in this report are slightly lower than reported in Attachment PC-B1-AC. Please explain the discrepancies.

Response: For the years 1998 and 1999, the NOx, SOx, CO, PM and VOC emissions data provided in the AOR submittals for the Duct burners associated with each of the two Combustion Turbines was not carried over into the ARMs data base. The table provided in Attachment III to this letter compares the ARMs information against data submitted in the 5 AOR's and explains where the differences occurred as well as the quantity of the difference. If the Department deems it necessary we can provide copies of the reports previously submitted.

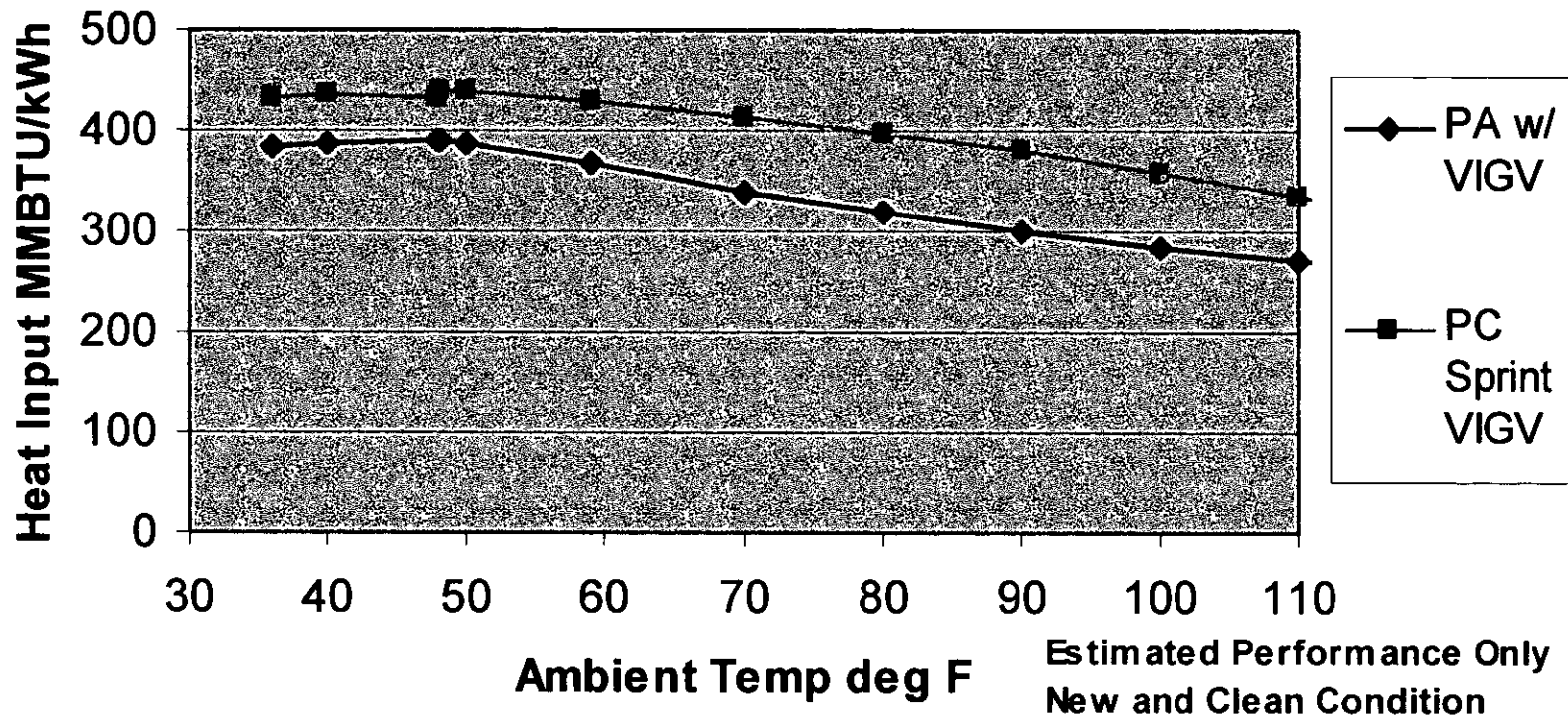
5. Based on estimated past actual emissions, test data, and requested emissions caps, the Department will likely require monitoring systems to continuously monitor and record CO and NOx emissions. The data will be used to demonstrate compliance with the permits standards and requested caps. The Department believes that the level of monitoring is necessary to ensure that the project does not trigger PSD review. This equipment is routinely required for new combined cycle gas turbine projects with much lower emission profiles than that of Pasco Cogen Limited. Previous NOx stack tests indicate that the gas turbines operate near the permit standard, but previous CO stack tests indicate that actual CO emissions may be about half of the permit standard. It may be possible to request a lower CO standard combined with a limitation on hours of operation to avoid a CO monitor. However, such a restriction may not provide the desired level of flexibility for this plant. Please comment.

Response: If the Department, as a result of this modification, determines it necessary the Pasco facility can prepare to install continuous monitoring for NOx and CO emissions on each stack. If this were to be the case, the facility would request that a compliance schedule be developed between the project and the FLDEP. The compliance schedule would allow the project sufficient time to install the CT uprate and have them tested to ensure each will meet and maintain the level of emissions described in the construction application. If the uprates meets the proposed emission limits then a decision between the Department and Pasco must be made as to whether or not a continuous monitoring system is necessary. If the uprate fails to meet its proposed emission limits, then time as determined with the compliance schedule, must be provided for to allow Pasco to either remove the upgrade and restore the units to their pre-uprate condition or to have a sufficient period of time to negotiate and install a sufficient emission monitoring and emission control systems. At present, the project does not want to choose the option of a lower CO limit.



## Heat Input vs. Ambient Temp

60 % RH, 0 fast, 4"/6" Inlet/Exhaust Losses, Water Injection to 25ppm Nox, Standard Natural Gas



# ATTACHMENT PC-B1-AC<sup>1</sup>

## FIVE YEAR SITE EMISSIONS DATA AND PROPOSED EMISSIONS CAP

<u>Pollutant</u>	<u>1998</u>			<u>1999</u>			<u>2000</u>			<u>2001</u>			<u>2002</u>		
	U1	U2	Total	U1	U2	Total	U1	U2	Total	U1	U2	Total	U1	U2	Total
<u>NOx</u>	173.1 <sup>2</sup>	173.5	<b>346.5</b>	160.2	159.1	<b>310.3</b>	147.0	147.0	<b>294.0</b>	126.0	127.2	<b>253.2</b>	124.2	125.2	<b>249.4</b>
<u>CO</u>	125.5	127.9	<b>253.4</b>	114.4	107.4	<b>221.8</b>	97.1	97.8	<b>194.8</b>	83.8	84.9	<b>168.6</b>	81.7	82.1	<b>163.8</b>
<u>PM/PM10</u>	11.1	11.2	<b>22.3</b>	10.3	9.6	<b>19.9</b>	9.5	9.5	<b>18.9</b>	8.1	8.2	<b>16.3</b>	8.0	8.0	<b>16.0</b>
<u>SO2</u>	5.3	5.4	<b>10.8</b>	4.8	4.5	<b>9.2</b>	4.4	4.4	<b>8.7</b>	3.7	3.8	<b>7.5</b>	3.7	3.7	<b>7.4</b>
<u>VOC</u>	9.3	9.7	<b>19.0</b>	8.2	7.8	<b>16.0</b>	6.0	6.2	<b>12.2</b>	5.2	5.4	<b>10.8</b>	5.0	5.0	<b>10.0</b>

<u>Pollutant<sup>3</sup></u>	<u>Past Actual 1998/1999 Mean Ave.</u>	<u>PSD Significant Emission Rate</u>	<u>Proposed Emissions Cap</u>
<u>NOx</u>	328.4	40	368.0
<u>CO</u>	237.6	100	337.0
<u>PM/PM10</u>	21.1	15	27.0
<u>SO2</u>	10.0	40	21.0
<u>VOC</u>	17.5	40	30.8

<sup>1</sup> Table revised September 2003

<sup>2</sup> All calculations are in tons per year (tpy).

<sup>3</sup> Numbers represent total emissions from both site CTs

**Annual Emissions for Pasco Cogen  
State Listed Data vs. Submitted Data**

Unit no.	Pollutant	State Listed	Plant Submitted	Difference (TPY)
<b><u>1998:</u></b>				
1	CO	107	125.5	18.6 <sup>1</sup>
1	NOx	163.7	173.1	9.3
1	PM	10.5	11.1	0.6
1	SO2	5.0	5.3	0.3
1	VOC	6.5	9.3	2.8
2	CO	105.9	127.9	22.0
2	NOx	162.5	173.5	11.0
2	PM	10.5	11.2	0.7
2	SO2	5.1	5.5	0.4
2	VOC	6.4	9.7	3.3
<b><u>1999:</u></b>				
1	CO	100	114.4	14.4 <sup>2</sup>
1	NOx	153	160.2	7.2
1	PM	9.8	10.3	0.5
1	SO2	4.5	4.8	0.3
1	VOC	6.1	8.2	2.2
2	CO	93.6	107.4	13.9
2	NOx	143.2	150.1	6.9
2	PM	9.2	9.6	0.4
2	SO2	4.3	4.5	0.2
2	VOC	5.7	7.8	2.1
<b><u>2000:</u></b>				
1	CO	97.1	97.1	-
1	NOx	147	147	-
1	PM	9.5	9.5	-
1	SO2	4.4	4.4	-
1	VOC	6.0	6.0	-
2	CO	97.8	97.8	-
2	NOx	147	147	-
2	PM	9.5	9.5	-
2	SO2	4.4	4.4	-
2	VOC	6.2	6.2	-
<b><u>2001:</u></b>				
1	CO	83.7	83.8	0.1 (neg.) <sup>3</sup>
1	NOx	126	126	-
1	PM	8.1	8.1	-

1998 – 2002 FLDEP vs. submitted AEP data

1	SO2	3.7	3.7	-
1	VOC	5.2	5.2	-
2	CO	84.9	84.9	-
2	NOx	127.2	127.2	-
2	PM	8.2	8.2	-
2	SO2	3.8	3.8	-
2	VOC	5.4	5.4	-

**2002:**

1	CO	81.7	81.7	-
1	NOx	124.3	124.5	0.2 (neg.)
1	PM	8.0	8.0	-
1	SO2	3.7	3.7	-
1	VOC	5.0	5.0	-
2	CO	82.1	82.1	-
2	NOx	125.2	125.1	0.1 (neg.)
2	PM	8.0	8.1	0.1 (neg.)
2	SO2	3.7	3.7	-
2	VOC	5.0	5.0	-

---

<sup>1</sup> FLDEP did not add DB contribution shown on submitted Table for the 1998 report.

<sup>2</sup> FLDEP did not add DB contribution shown on submitted Table for the 1999 report.

<sup>3</sup> (neg.) – negligible difference.

# LAKE COGEN, LTD.

NCP LAKE POWER, INC., GENERAL PARTNER

c/o Aquila • 20 West 9<sup>th</sup> Street • Kansas City, MO 64105  
Tel (816) 527-1160 • Fax (816) 527-4160

July 14, 2003

Mr. Jeffery F. Koerner  
Florida Department of Environmental Protection  
Bureau of Air Quality  
New Source Review Section  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RECEIVED

JUL 18 2003

BUREAU OF AIR REGULATION

RE: Pasco Cogeneration L.P. (Pasco Cogen); Project No. 1010071-002-AC  
(PSD-FL-177A); SPRINT Upgrade Project

Dear Mr. Koerner:

Thank-you for your letter dated June 20, 2003, in response to our proposed project. We are in the process of developing responses to those questions asked in that letter. As noted, the project has 90 days (until September 18, 2003) to either provide the Department with a response to the requested information, or to request an additional period of time to respond back to the Department, if necessary.

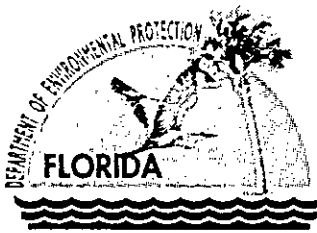
We are planning to have this additional information to you as quickly as possible. If there are any further questions or concerns, please feel free to contact me. My telephone no. is 816 527-1160.

For Pasco Cogen  
Sincerely,



Thomas A. Grace, CHMM  
Director - Environmental, Health and Safety

Cc: R. Christmas  
A. Williams  
L. Rajter  
B. Miles



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

June 20, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Leo Rajter, Vice President  
Pasco Cogen, Limited c/o Aquila  
20 West 9<sup>th</sup> Street  
Kansas City, MO 64105

Re: **Request for Additional Information**  
Project No. 1010071-002-AC (PSD-FL-177A)  
SPRINT Upgrade Project

Dear Mr. Rajter:

On June 10, 2003, the Department received your application and sufficient fee for an air construction permit to upgrade the two existing LM6000 gas turbines with the "SPRINT" spray inter-cooling system. The units are installed at the existing plant in Dade City located at 14850 Old State Road 23 in Pasco County, Florida. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Which of the gas turbines will be replaced with an "equivalent reconditioned unit" upgraded with SPRINT technology? Identify the make/model of the replacement unit and provide maximum expected emission rates from the vendor.
2. Please provide vendor performance curves for the modified LM6000 gas turbines comparing the maximum heat input rate (MMBtu/hour) and generating capacity (MW) to the turbine inlet temperature (° F).
3. Please provide a PSD netting analysis similar to the information provided in Attachment PC-B1-AC. Note that the replacement should be treated as the permanent shutdown of the old unit and the addition of a new unit. The shutdown unit will result in permanent emissions decreases and the new unit will result in emissions increases. Based on your initial request to avoid PSD review, the netting analysis must show that net emissions increases do not exceed the PSD significant emission rates. Please note that net emissions increases for the project are the difference between past actual annual emissions before modification and future potential annual emissions after modification. It is not the difference between the potential emissions before and after the project as suggested in Attachment PC-B1-AC.
4. Please describe the general method of calculating the past actual emissions in Attachment PC-B1-AC. Past actual emissions should be based on emission factors that reflect actual emission rates and the average actual production rate for the representative two year period. An emissions summary report from the Department's ARMS database is attached for your review. It is based upon the Annual Operating Reports that Pasco Cogen, Limited filed with the Department as required by permit. The CO and NOx emissions data for 2000 - 2002 are generally the same as reported in Attachment PC-B1-AC. However, the CO and NOx emissions data for 1998 - 1999 in this report are slightly lower than that reported in Attachment PC-B1-AC. Please explain the discrepancies.

*"More Protection, Less Process"*

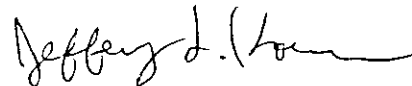
*Printed on recycled paper.*

5. Based on the estimated past actual emissions, test data, and requested emission caps, the Department will likely require monitoring systems to continuously monitor and record CO and NOx emissions. The data will be used to demonstrate compliance with the permits standards and requested caps. The Department believes that this level of monitoring is necessary to ensure that the project does not trigger PSD review. This equipment is routinely required for new combined cycle gas turbine projects with much lower emission profiles than that of Pasco Cogen, Limited. Previous NOx stack tests indicate that the gas turbines operate near the permit standard, but previous CO stack tests indicate that actual CO emissions may be about half of the permit standard. It may be possible to request a lower CO standard combined with a limitation on hours of operation to avoid the requirement of a CO monitor. However, such a restriction may be not provide the desired level of flexibility for this plant. Please comment.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,



Jeffery F. Koerner  
New Source Review Section

cc: Mr. John L. McKelvey, Case Engineering, Inc.  
Mr. Tom Grace, Pasco Cogen, Ltd. c/o Aquila  
Mr. Richard Christmas, Pasco Cogen, Ltd.  
Mr. Gerry Kissel, SWD  
Mr. Gregg Worley, EPA Region 4  
Mr. John Bunyak, NPS

**Annual Emissions for Pasco Cogen, Ltd.  
Based on AORs Submitted to DEP**

AIRS ID	OWNER/COMPANY NAME	ID	EU DESCRIPTION	POLLUTANT	TPY
<b>YEAR 1998</b>					
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	107
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	163.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	10.536
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	5
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	6.534
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	105.9
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	162.5
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	10.5
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	5.1
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	6.414
<b>YEAR 1999</b>					
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	100.0033
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	153.0141
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	9.8021
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	4.508
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	6.1008
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	93.6
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	143.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	9.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	4.3
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	5.7
<b>YEAR 2000</b>					
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	97.1
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	147
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	9.5
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	4.4
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	6
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	97.8026
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	147.011
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	9.50165
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	4.4063
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	6.20065
<b>YEAR 2001</b>					
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	83.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	126
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	8.1
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	3.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	5.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	84.9
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	127.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	8.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	3.8
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	5.4
<b>YEAR 2002</b>					
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	81.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	124.3
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	8
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	3.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	1	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	5
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	CO	82.1
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	NOX	125.2
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	PM	8
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	SO2	3.7
1010071	PASCO COGEN LIMITED(PARENT CO: AQUILA)	2	COMBUSTION TURBINE (CT) WITH HRSG AND DBS	VOC	5



**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Leo Rajter  
 Vice President  
 Pasco Cogen, Limited c/o Aquila  
 20 West 9th Street  
 Kansas City, MO 64105

2. 7001 0320 0001 3692 5726

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

Michael R. K.

6-25-03

C. Signature

X

☐ Agent☐ AddresseeD. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes**U.S. Postal Service****CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

06 JUN 2004

Postage

\$

Certified Fee

Return Receipt Fee  
(Endorsement Required)Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees

\$

Postmark  
Here

Sent To

Leo Rajter

Street, Apt. No.

20 West 9th St.

City, State, ZIP+4

Kansas City, MO 64105

PS Form 3800, January 2001

See Reverse for Instructions

7001 0320 0001 3692 5726