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May 30, 2002

VIA OVERNIGHT MAIL

Ms. Magalie R. Salas  
Office of the Secretary  
Federal Energy Regulatory Commission  
Dockets Room, Room 1A, East  
888 First Street, N.E.  
Washington, D.C. 20426

FILED  
OFFICE OF THE SECRETARY  
02 MAY 31 AM 9:55  
FEDERAL ENERGY  
REGULATORY COMMISSION

Re: ExxonMobil Production Company OF Self-Certification  
Docket No. QF02-80-000

Dear Ms. Salas:

Enclosed for filing in the above referenced docket, please find the original and 15 copies of the Notice of Self-Certification of Qualifying Facility Status for a Cogeneration Facility.

Please date stamp the enclosed extra copy and return it to our offices in the enclosed self-addressed, stamped envelope.

Very truly yours,



Thorvald A. Nelson  
for Holland & Hart LLP

Enclosures

0206040371-1

AS  
DOCKETED

ORIGINAL

**NOTICE OF SELF-CERTIFICATION OF QUALIFYING FACILITY STATUS  
FOR A COGENERATION FACILITY**

**in accordance with**

**FERC Form 556, 18 CFR Section 131.80**

ExxonMobil Production Company, a division of Exxon Mobil Corporation, (hereinafter "ExxonMobil") hereby provides notice of self-certification as a qualifying cogeneration facility at the LaBarge Shute Creek Treating Facility in accordance with 18 CFR Section 292.207(a)(1). In support of this notice of self-certification, ExxonMobil states as follows:

OFFICE OF THE SECRETARY  
02 MAY 31 AM 9:55  
FEDERAL ENERGY  
REGULATORY COMMISSION

**Part A**

**General Information**

- 1a. Full Name: ExxonMobil Production Company  
LaBarge Shute Creek Treating Facility  
Purpose: Self certification of a cogeneration facility  
currently under development
- 1b. Address of Applicant: ExxonMobil Production Company  
Shute Creek Treating Facility (SCTF)  
33 Mi. N.E. of Kemmerer, WY 83101 off  
Hwy 340
- 1c. Facility Owner Operator:

The cogeneration facility (Facility) will be constructed and wholly owned by ExxonMobil Production Company. ExxonMobil Production Company is a division of and is owed 100% by the Exxon Mobil Corporation. ExxonMobil, as full owner and operator of the Facility, shall have (a) the full and exclusive authority to use, possess, and operate the Facility for the production of electricity and steam, (b) exclusive control over management of the Facility, and (c) full responsibility for furnishing all labor, supplies, fuel, materials, and other requirements necessary for the Facility's operation. As operator/owner, ExxonMobil will fully control the generation capacity of the Facility and shall be the sole owner of all electricity and steam produced by the Facility.

Neither ExxonMobil nor Exxon Mobil Corporation is an electric utility as defined in 16 U.S.C. § 79b(a)(3) or an electric utility holding company as defined in 16 U.S.C. § 79b(a)(7). Neither ExxonMobil nor Exxon Mobil Corporation are (i) directly or indirectly engaged in the generation or sale of electric energy other than as a Qualifying Facility (QF), exempt wholesale generator (EWG), foreign utility or self-generator; or (ii) owns or operates any electric generation facilities other than as a QF, EWG, foreign

utility or self-generator. Therefore, ExxonMobil meets the ownership criteria set forth in section 292.206 of the Commission's regulations and implementing precedent.

- 1d. Authorized individual evidencing accuracy and authenticity of the information provided by the applicant ExxonMobil Production Company.

I hereby certify that the information contained in herein is accurate and authentic.

Signature:



Name:

Keith E. Merkley

Title:

LaBarge Operations Superintendent

2. Person to whom communication regarding the filed information may be addressed:

Name:

Kip Plankinton

Title

Counsel

Mailing Address:

P.O. Box 2180; Houston, TX 77252-2180

Telephone Number

(713) 656-5284

CC:

Name:

Craig Donner

Title

Technical Coordinator

Mailing Address:

P.O. Box 1300; Kemmerer, WY 83101

Telephone Number

(307) 276-6236

- 3.a Location of Facility to be certified:

State:

Wyoming

County:

Lincoln

City or Town:

33 Mi. N.E of Kemmerer, WY off Hwy 340

Street Address:

N/A

Zip Code:

83101

- 3b. The electric utility transactions with Facility

The electric utility that will supply the following electrical services is PacifiCorp

Interconnection

ExxonMobil plans to interconnect the Facility with PacifiCorp facilities through a new cogeneration substation and approximately three (3) miles of existing ExxonMobil

owned 230 kV transmission lines to an existing PacifiCorp Sweetwater county substation. PacifiCorp is currently supplying electrical power to the existing SCTF through this Sweetwater substation

**Power Sales**

ExxonMobil may choose to sell either (i) 100% of the produced electrical power or (ii) only the excess power from the Facility to PacifiCorp per their avoided cost tariff, or wheel the power on PacifiCorp's transmission lines to a third party wholesale buyer.

**Power Supply**

PacifiCorp currently supplies 100% of the electrical power to ExxonMobil's SCTF and , in the future, will provide either (i) 100% of the required electrical power; or (ii) supplementary power and back-up power to SCTF in the event of a partial or total loss of generating capacity at the Facility.

**4a. Description of co-generation Facility**

The Facility is a 107.4 MW (gross) co-generation facility consisting of three identical GE Frame 6B Combustion Turbine Generators (CTG's). Each CTG is rated for 35.79 MW at the design ambient temperature of 59 degrees F. The 13.8 kV output from each generator will feed the following through its dedicated breaker:

- An individual 230 kV power transformer which in turn is connected to a three (3) mile existing ExxonMobil owned 230 kV transmission line to distribute power to the existing SCTF facilities and the Utility/PacifiCorp Sweetwater substation; and
- A new 13.8kV switchgear bus through separate breakers. The new switchgear will supply a grand total of approximately 15 MW for an acid gas injection (AGI) H2S system being built in conjunction with the co-generation Facility.

In addition to the three CGT's, the new Facility substation includes three outdoor, liquid-filled power transformers with a 2 stage fan cooling system, rated at 50/55 MVA at 130/150°F (55/65°C) ONAN. The 230 kV system utilizes SF6 outdoor dead tank circuit breakers with adequate fault rating. The breaker is fitted with bushing type current transformers and isolation switches on both sides of the breaker. SF6 breakers will be provided at each transformer as well as at Sweetwater to allow the either PacifiCorp or SCTF to disconnect from each other during an upset condition.

Each CGT is coupled with a Heat Recovery Steam Generator (HRSG) designed to produce a maximum of 166,000 lbs per hour of 450 psig steam at 510 degrees F. No supplemental firing capabilities (duct burners) are provided in these HRSG's. Typically, an average of 330,000 lbs per hour of steam will be exported from the Facility through a common distribution header to satisfy the process heat demands of the gas extraction/separation processes at SCTF.

The three GE Frame 6B CTG's are normally fueled by plant process gas that by its nature will limit the Nitrogen Oxide (Nox) emission levels to that required by State and Federal environmental levels without the use of either Dry Low Nox (DLN) combustion or selective catalytic reduction (SCR) control equipment. During startup and upset conditions, the CTG's may be fueled by methane gas normally produced and sold by SCTF.

The Facility's electrical output is intended to normally supply 100% of the SCTF and electrical and steam requirements with no more than 20% available for export. However, we may consider purchasing 100% of the SCTF electrical power requirements and exporting 100% of the generation capacity to a third party wholesale purchaser. The Facility also includes new interconnection equipment and upgrades to the existing Utility (PacifiCorp) and ExxonMobil substations to ensure safe and accurate electrical metering and protection systems.

4b. Electric power production of Facility

- a) Each CTG is rated to produce 35.79 MW at an ambient temperature of 59 degrees F, or a total of 107.4 MW for the three units.
- b) The existing SCTF load is approximately 68 MW.
- c) The existing CO2 sales compressor load, located next to the Sweetwater substation, ranges from 8 to 16 MW.
- d) The new AGI facilities being built in conjunction with the Facility will be approximately 12-18 MW depending on yet to be determined wellhead injection pressures and flow rates.

Therefore, we expect the load to vary between 88 and 102 MW with approximately 5 to 19 MW being available for export at the Sweetwater substation. However, ExxonMobil may continue to purchase 100% of the electrical load requirements from PacifiCorp and sell 100% of the produced power to a third party power wholesaler.

4c. Installation and operation dates of the Facility

Construction of the Facility is scheduled to start May 2002 with an anticipated commissioning in the third quarter of 2003.

4d. Primary energy input of Facility

The primary source of energy input is process gas from the adjacent SCTF. The process gas consists of a mixture of carbon dioxide, methane, hydrogen, nitrogen, plus other trace gases. In case of an upset, the CTG's can burn 100% methane gas normally produced by SCTF for sales.

5. Average annual hourly energy input of fossil fuel to Facility

The energy input to the Facility for process gas is calculated as follows:

- CTG output = 35,790 kW (GE-design data)
- Heat Rate of CTG = 10,590 Btu/kWh (GE-design data)

- Average on-stream factor = 0.97
  - Number of CTG's = 3
  - Energy into Facility = 35,790 kW x 10,590 Btu/kWh x 0.97 x 3 = 1103 MBtu/hr
6. Particular characteristics of the Facility that bear on its QF status
- The Facility is designed to provide up to 120% of the electrical power demand of SCTF and adjacent CO2 sales and AGI disposal facilities with the excess available for sales. Excess power will normally be available when all three CGT's are on line. During scheduled or unscheduled CGT maintenance, SCTF can continue to operate with the steam required for the plant process produced by only two CGT's, but would then become a net importer of up to 20 MW of electrical power.

### **Part B**

#### **Description of the Small Power Production Facility**

Not Applicable

### **Part C**

#### **Description of the Cogeneration Facility**

9. Description of the cogeneration system
- The Facility is a topping cycle system consisting of three identical GE Frame 6B Combustion Turbine Generators (CTG's) each coupled with a Deltac Heat Recovery Steam Generator (HRSG) for the cogeneration of steam and electricity. The CTG's are each rated for 35.8 MW and are all fueled by a process gas produced by the adjacent SCTF. Under upset conditions, the CTG's can also operate with 100% methane at a reduced electrical and steam output. Each HRSG is designed to produce a maximum of 166,000 lbs per hour of 450 psig steam at 510 degrees F. No supplemental firing capabilities (duct burners) are provided in these HRSG's. The steam will be exported from the Facility to the SCTF to satisfy the process heat demands of the gas extraction/separation processes.
10. Cycle Diagram (See attached Exhibit 1)
11. Computation of operating efficiency values for the Facility
- $P_t$  = Average annual hourly useful thermal energy output @ 97% on-stream factor = 166,012 lb/hr steam x (1243.22 steam – 208.52 BFW) Btu/lb x 3 x 0.97 = 499.9 x 10<sup>6</sup> Btu/hr

- $P_e$  = Average annual hourly electrical output @ 97% on-stream factor = 35,790 kW x 3413 Btu/kWh x 3 x 0.97 =  $355.5 \times 10^6$  Btu/hr
- $P_m$  = No mechanical energy is extracted from steam
- $P_i$  = Average annual hourly energy input (natural gas and process gas) @ 97% on-stream factor =  $1102.9 \times 10^6$  Btu/hr (from item #5 above)
- $P_s$  = No supplemental firing is done
- Operating standard = 5% or more
- Operating value =  $P_t / (P_t + P_e + P_m) = 499.6 / (499.6 + 355.5 + 0) = 58.4\%$  which is greater than 5%
- Efficiency standard applicable to natural gas in a topping cycle facility = 45% or more when operating value is less than 15%, or 42.5% or more when operating value equal to or greater than 15%.
- Efficiency value =  $(P_e + P_m + 0.5P_t) / (P_i + P_s) = (355.5 + 0 + 0.5 \times 499.6) / (1102.9 + 0) = 54.9\%$  which is greater than 42.5%

12. Thermal hosts of the Facility

The thermal host for the Facility is the Shute Creek Treating Facility (SCTF) wholly owned by Exxon Mobil Corporation and the sole user of all of the produced thermal energy. There are no existing or planned provisions to either sell or purchase thermal energy to/from any other independent entity. The 450 psig steam exported from the facility flows into a common header and is distributed throughout the SCTF primarily to treat/separate out gas components from the well stream. Some examples of usage include steam reboilers, process heat exchangers, etc.

13. Description of thermal output uses:

The steam system consists of a high pressure system (450 psig), a medium pressure system (200 Psig) and a low pressure system (50 psig). All of the steam systems are interconnected. The facility also has power boilers to supply 200 psig steam during startup and in case of a GTG trip. A steam balance table giving steam flow to various users is attached for reference as Exhibit 2.

**CERTIFICATE OF SERVICE**

I certify that on May \_\_\_\_, 2002, I served a copy of the foregoing document to the following by first-class US Mail, postage prepaid, pursuant to 18 CFR § 292.207(a)(1)(ii):

David Mosier  
Wyoming Public Utilities Commission  
2515 Warren Avenue, Suite 300  
Cheyenne, WY 82002

Douglas Larson  
PacifiCorp  
Director, Regulation  
207 S. Main  
Salt Lake City, UT 84140

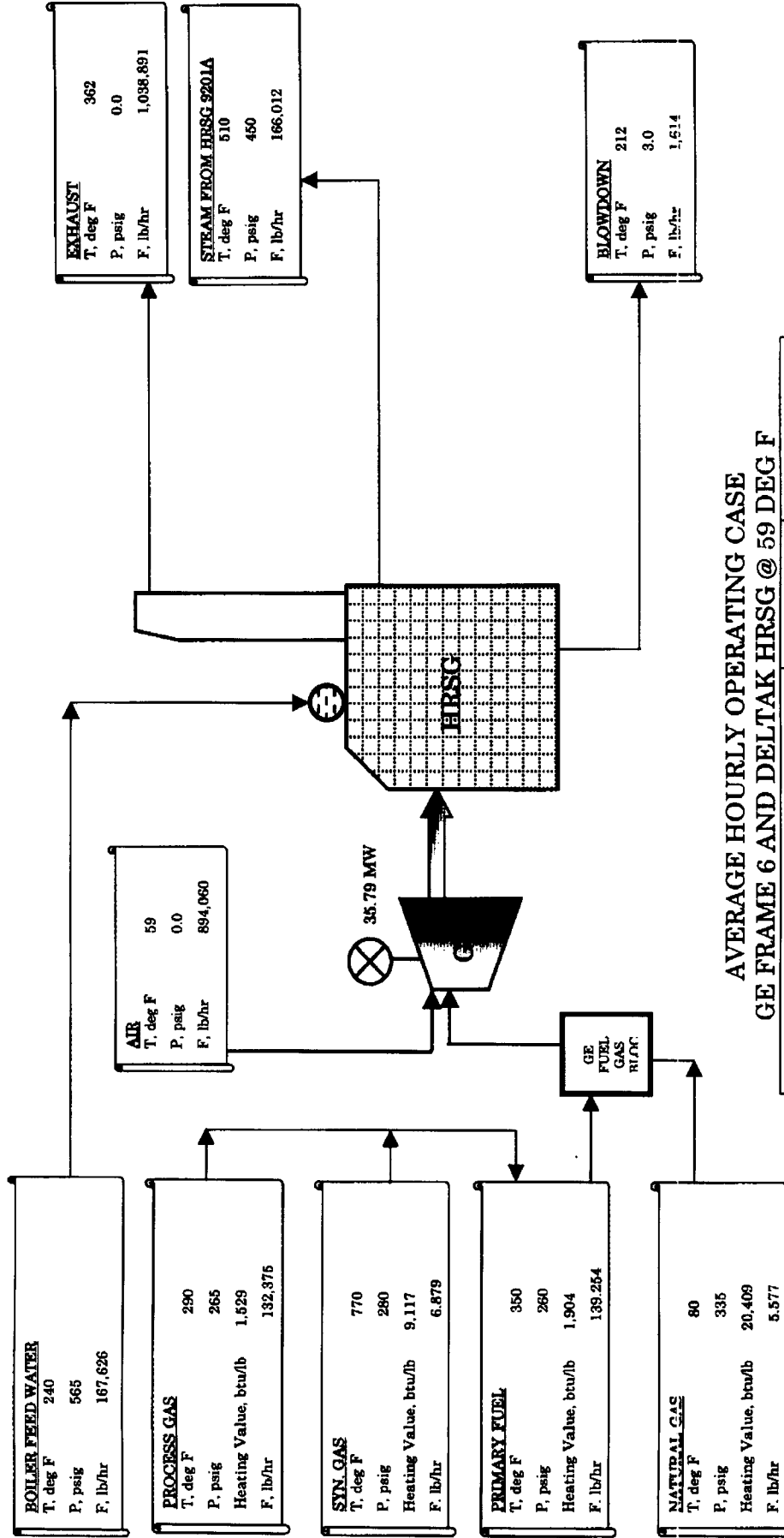
*Elena Davis*

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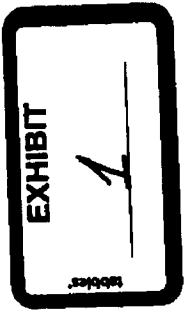
**AVERAGE ANNUAL OPERATING CONDITIONS  
CYCLE DIAGRAM  
(TYPICAL FOR 1 OF 3 UNITS)**



**AVERAGE HOURLY OPERATING CASE  
GE FRAME 6 AND DELTAK HRSG @ 59 DEG F**

ITEM	UNITS	AMOUNT (BASE CASE)
Power Produced (Gross)	MW	35.79
Heat Rate, LHV	Btu/Kw-Hr	10,590
Primary Fuel fired, LHV	MBtu/Hr	265.3
Natural Gas fired, LHV	MBtu/Hr	113.8
Steam Produced	Lbs/Hr	166,012
% Blowdown Relative to Boiler Feed water	%	1.0

Cycle diagram Rev 1.doc  
06/30/02



# STEAM BALANCE

## STEAM BALANCE

Summer Case (Normal Operating at 59 deg.F)

## STEAM BALANCE

Summer Case (Normal Operating at 59 deg.F)

### 450 Psig-Super Heated

	Production	Application	Consumption	Remarks
HRSG#1	166,012	GT-Nox Control	0	
HRSG#2	166,012	Syn gas unit	16,427	
HRSG#3	166,012			
		To Desuperheater (DS-5407)	481,609	
Total	498,036	Total	498,036	

### 450 psig-Saturated

	Production	Application	Consumption	Remarks
Fr. Desuperheater (DS-5407)	481,609	CO2 Vent Heater (E-4128)	40,120	
Desuperheating water	18,468	CO2 Vent Gas Heater (S-4102)	109,900	No CO2 sls
		Steam Turbine	115,000	
		Steam Let Down (450-200)	235,057	
Total	500,077	Total	500,077	

### 200 psig-Saturated

	Production	Application	Consumption	Remarks
Power Boiler-1	0	H2S Stripper Reboiler (E-4104)	172,000	
Power Boiler-2	0	Process gas steam htr.	35,495	
Steam Turbine	110,500	Steam Let Down (200-50)	139,381	
Steam Let Down (450-200)	235,057			
Let down desuperheater (Dsh-5401)	1,319			
Total	346,876	Total	346,876	

### 50 psig-Saturated

	Production	Application	Consumption	Remarks
Steam Let Down (200-50)	139,381	Glycol water heater (new)	0	
Let down desuperheater (Dsh-5403)	0	Syn gas unit	2,277	*Not used
Flashing steam (V-5402)	46,546	Trim Heater (E-4106)	10,000	
Steam turbine	4,500	Wet Selexol Heater (E-4111)	4,760	
		Alt. Str. Gas Heater (E-4129)	0	
		Glycol Water Heater(E-5801)	0	
		Inlet Glycol Heater (E-4126)	0	
		Unaccounted losses	10,000	
		Deaerator Steam	1,580	
		50 psi flash losses	10,000	
		Excess Steam Condenser	151,809	
Total	190,426	Total	190,426	

**NOTES:**

1. The steam balance is based on 450 # steam with 50 deg F superheat generated by the HRSG's.

