

TOP 31-6

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STANDBY POWER USAGE

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STANDBY POWER USAGE

1.0 Purpose

To provide a guide for the use of specific power equipment while the north boiler is out of service.

2.0 Scope

2.1 Areas: Utility Room and Ventilation Exhaust Cell

2.2 Equipment

- a) Wickes boiler 31F-1
- b) York Shipley boiler
- c) Air compressors 31K-1, 1A, 4K-1
- d) Main exhaust fans 15K-10, 10A
- e) Boiler water feed water pumps 41036, 31G-2, 2A
- f) Plant water pumps 32G-2A, 2B
- g) Cooling water pumps 32G-4A, B, C

3.0 General

Under the present condition of having the north boiler out of service, operation of the steam and electric portions of the plant will be conducted in one of the following four modes:

- 3.1 (Normal) South boiler available and utility power available
- 3.2 South boiler available and emergency power available
- 3.3 York Shipley boiler available and utility power available
- 3.4 York Shipley boiler available and emergency power available

This procedure will indicate the equipment which will be operated in each mode plus the order of startup of the equipment under various circumstances.

#### 4.0 Cautionary Notes

[1]

- 4.1 Do not attempt to start the electric air compressor 31K-1A with emergency power.
- 4.2 Do not use water from the deaerator as feed water for the York Shipley boiler.
- 4.3 Open steam header valves slowly and thoroughly drain condensate to prevent water hammer damage.

#### 5.0 Operation

[1]

- 5.1 Mode 1: South boiler on line and utility power in use with the following equipment in use.
  - 5.1.1 Electric air compressor 31K-1A
  - 5.1.2 Electric ventilation fan 15K-10
  - 5.1.3 Cooling water pump 32G-4A(4C)
  - 5.1.4 Plant water pump 32K-2A(2B)
  - 5.1.5 Boiler feed water pump turbine 31G-2(2A)
  - 5.1.6 Boiler draft fan
  - 5.1.7 Electric HEV fan 15K-20(20A)
  - 5.1.8 Waste Tank Farm blower 8K-1(1A)
- 5.2 In the event an electrical outage occurs with the south boiler on line, operation will be in Mode 2.
  - 5.2.1 The emergency generator 30T-1 starts automatically.
  - 5.2.2 The turbine-driven exhaust fan 15K-10A starts automatically.
  - 5.2.3 The LPG-driven HEV ventilation fan 15K-21 starts automatically.
  - 5.2.4 Start the turbine-driven plant water pump 32G-2B.
  - 5.2.5 Valve plant water to the air compressor.

5.2.6 Check and start, if necessary, the WTF fan 8K-1 or 1A.

5.2.7 Place selected loads on the emergency electrical system per SOP 30-1.

5.3 If utility power is available and the south boiler is inoperable, operation will switch to Mode 3.

5.3.1 Place the York Shipley boiler 12,000#/hr on line per TOP 31-5.

[1]

5.3.2 Operate the electric air compressor 31K-1A, the electric exhaust fan 15K-10, cooling water pump 32G-4A or 4C, BFW pump 41036, electric HEV fans 15K-20, 20A, and plant water pump 32G-2A.

[1]

5.3.3 Close the 150# steam block valves on the inlet to the turbines 15K-10A, 31K-1, 31G-2, 2A and 32G-4B.

5.4 If the south boiler is inoperable and utility power is lost while using the York Shipley boiler, Mode 4 will be in effect.

5.4.1 HEV blowers 15K-20, 20A will shut down and 15K-21 will automatically start.

5.4.2 The York Shipley boiler will shut down as will the electric compressor 31K-1, plant water pump 32G-2A, electric exhaust fan 15K-10, and cooling water pump 32G-4A(C).

5.4.3 The emergency generator will start automatically.

5.4.4 Using the procedures in SOP 30-1, start the following equipment:

5.4.4.1 The pulser air compressor

5.4.4.2 The electric plant water pump 32G-2A

5.4.4.3 The York Shipley boiler

5.4.5 Check and start, if necessary, the WTF fan 8K-1 or 1A.

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PLANT 30 - ELECTRICAL DISTRIBUTION FACILITIES

<u>SOP #</u>	<u>REV. #</u>	<u>SOP TITLE</u>	<u>DATE</u>
30-1	11	Emergency Power Generation	March 1979

PLANT 31 - UTILITY ROOM

31-1	9	Plant Utility and Instrument Air	January 1980
31-2	10	Steam Generation	January 1980
31-3	5	4K-1 Pulser Air Compressor	January 1980
31-4	3	Operation of Zeolite Water Softeners	June 1979
TOP 31-5	0	Operation of the York Shipley Boiler	February 1980
TOP 31-6	1	Standby Power Usage	March 1980

PLANT 32 - COOLING AND SERVICE WATER EQUIPMENT

32-1	11	Plant Water System	December 1979
32-2	8	Demineralized Water System	March 1979
32-4	8	Potable Water System	January 1980
32-5	9	Fire Water System	March 1979
32-6	9	Cooling Water System	December 1979

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