

DISTRIBUTION

1. Draw a simple one line of the 14.4 KV system between Power I and Power 2.

Ans. Use electrical drawings in the control room for a reference.

2. Name the CL2 feeders and where they are feed from?

Ans. Rect. 1 - H-402 Pwr II Bus 2 GT 400
Rect. 2 - H-302 Pwr II Bus 2 GT 300
 H-11 Pwr I Bus 3
Rect. 3 - H-101 Superfeeder 100 East - Pwr II
 Bus 1 - GT 100
Rect. 4 - H-201 Superfeeder 200 East - Pwr II
 Bus 1 - GT 200
Rect. 5. - H-304 Pwr II Bus 2 - GT 300

3. Locate the ten (10) substation and tell how they work?

Ans. Sub #1 - Chlorine and Union Road
Sub #2 - Union and Caustic Road
Sub #3 - Chlorine and North Canal Road
Sub #4 - Union and Cellouse Road
Sub #5 - South Canal and Glycol Road
Sub #6 - Caustic and Power Road
Sub #7 - Power Road @ Poly B block
Sub #8 - Glycol Road and East of old Vinyl I
Sub #9 - Inside Glycol II Block
Sub #10 - South Canal Road @ Cellouse Road

Ans. 14.4 KV power is supplied from Power I to the substations by means of "H" feeders (perfered and stand-by). These "H" feeds have an automatic/manual tranfer selection. The 14.4 KV power is stepped down to 2400 volts by a transformer. This 2400 volt is fed into a bus, which feeds the low side (L-feeder) to area blocks. Each substation has a battery bank used for control power and substation alarm system. Information from the substation is transfered by a DIOC system. This DIOC system feeds the Load Shedder and the CRT monitoring screens in the control room at Power One.

4. If you lose a H-feeder to a substation what should happen?

Ans. If the Auto/Manual transfer switch is in the AUTO mode the standby feeder will closes on loss of the perfered feeder. If the Auto/Manual transfer switch is in MANUAL no transfer will occur.

5. What is an OCB and how does it work?

Ans. An OCB is an oil circuit breaker. It uses oil to prevent an arc upon breaker operation.

6. Where is the Air products 14.4 KV feeder and why no

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Ans. The Air Products 14.4KV feeders are located at Power II. No other plant is on this feeder because of the high load usage.

7. What is the purpose of having H-610 feeder?

Ans. The purpose of having the H-610 feeder is to maintain stability of frequency and a source of back-up power supply from GSU.

8. How do you put the Load Shedder on manual and shed load?

Ans. The computer Auto/Load disable button must first be press. This places the Load Shedder in manual. Than select desired load to be shedded press it's button AND HOLD at the same time press the manual shed enable button.

9. How would you check the Load Shedder for proper coverage?

Ans. This is done by scanning through the sources for proper coverage and ensuring enough load is being shedded.

10. Explain our usage of the 7.5 MW standby power?

Ans. We can take in 7.5 MW standby power from GSU when our electrical generation is shorten by an unexpected mechanical problem. GSU should be notified that this power is being used within the first 24 hours. We do not want to exceed 3 days of standby power usage, because of a penalty.

11. What's Avoided Cost?

Ans. Avoided Cost is the cost that GSU give us for them to produce a megawatt to be compared with the cost of producing a megawatt at Dow Chemical.

12. How do you warm-up a division steam line?

Ans. Warm up a division steam line by:

1. Open all drains.
2. Crack source and warm line slowly.
3. Check for live steam nearest source first.
4. Cut back on drains after live steam appears.
5. Allow line to come up to pressure before opening the source completely.
6. This is a slow process.

13. What effect does LGTI have on 235# steam?

Ans. NONE. LGTI exports effects the temperature of the 475# steam to LHC II. Also it lowers our 475# steam production.

14. Name all the 475# and 235# steam producers.

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Ans. 475# Steam Producers

235# Steam Producers

1. Power I
2. LHC II
3. LGTI

1. Power I
2. Power II
3. LHC III

Ans. The 70# fuel gas pressure is controlled by the block 28 intermediated gas station. This is controlled by Power I. Off gas from the LHC plants is tied in down stream of the block 28 gas station, which determines the amount of methane flow needed to maintain the fuel gass system at 70 psig.

16. What is the normal steam pressures produced at Power I and who do these pressure affect.

Ans.	475#	235#	150 - 60#	30#
	LHC II	Caustic	Caustic	Power II
	Glycol II	Power II		Glycol I
	Dowanols	LHC III		
	LGTI	LHC II		
	LHC III	Dowanols		

17. What is off gas and how does it affect Power I?

Ans. Off gas is the by-product from the LHC II & LHC III plants that is put in the division 70# fuel gas header. It affects Power I by changing the normal BTU valve of fuel gas. It also allows Power I to cut back on the amount of fuel gas being used. The amount of off gas being used ^{will} affect the 70# fuel gas header.

18. Explain the operations of Block 28 fuel gas station.

Ans. The Block 28 Fuel Gas Station reduces 280# ^(Power I) intermediate gas to 70# for the user plants. This is done by three different pressure regulator (4", 8" & 12"). These regulators are used for different flow conditions. All of the regulators can be in service at the same time if the flow demand warrants it.

19. What are the fuels used at Power I and Power II?

Ans. Power I uses Methane (fuel gas), Off Gas, Hydrogen and Syn. fuel.

Power II uses Methane (fuel gas) and Syn. fuel

20. Who are the division suppliers of N2 and O2 and who is responsible for monitoring it?

Ans. BIG THREE is the supplier and the Utilities Department is task with the responsibility of monitoring it.

21. Who is our main suppliers of condensate and Demin water? How is Power II condensate supplied?

Ans. Power I main supplier of condensate are Caustic, LHC II and CA II. Demin water is supply by Water Treating only. Power II is supplied from Power I by means of pumps.

22. What's the purpose of the make-up cross-tie?

Ans. The purpose of the make-up cross-tie is to back up the Power II condensate pressure by using Power I make-up pumps.

23. How many cooling water pumps do we have? What are their

Ans. We have six(6) cooling water pumps. These pumps provide cooling water to the plant Aux.iliary

24. Explain what happens when the cooling water pressure goes low.

Ans. The process water back-up supplies cooling water to the plant aux.

25. What is process water used for in Power I and what is the difference between cooling water and process water?

Ans. Process water is used for fire protection, wash down hose stations, some cooling and is the back-up to Power I cooling water system. The difference between cooling water and process water are cooling water is water drawn from the intake canal and strained. Process water has a higher pressure and is a product of the Water Treating Plant.

26. What are some of the problems that can be created from the loss of both cooling water and process water?

Ans. The overheating of aux equipments.