TMI DOCUMENTS

DOCUMENT NO: TM-0554

COPY MADE ON 5-24-79 OF DOCUMENT PROVIDED BY

METROPOLITAN EDISON COMPANY.

MAP

Supervisor, Document Control, NRC

CONTROL MOD-1 OPERATORS LOG SHEET

MAR 28 1979 DATE

NOTE: RETURN DAILY TO OPS ENGINEER FOR REVIEW & FILING
(EXCLUDING SHIFT FOREMAN DESIRED)

	11 - 7	7 - 3	3 - 11
CHARTS: DATE, TIME & ADJUST CHARTS (✓ OK)	✓		
ASSURE MOD COMP TAPES ARE NOT RUN OUT (✓ OK)	✓	✓	✓
SEND FOLLOWING TO Ops. ENGR. @ 2400 HRS. (✓ OK)	SD		
1. COMPUTER GROUPS 20, 22, 32, 34, 36 @ 2400 HRS.			
2. PERIODIC TYPEWRITER LOG - DAILY SUMMARY			
3. STATION DAILY LOG SHEET			
4. RX. PWR, BORON CONC., CORE BURNUP RECORDED			
5. Unit Capacity Monitor (From Mod Comp)			3 - 11 SHIFT
Collect all loose computer utility, alarm and periodic typewriter sheets (other than daily summary and printouts above) and attach cover sheet to front and file (cover sheet attached). (✓OK)	✓		
Fill out Fire Brigade Log (Attached) then keep handy at console for each shift. (✓OK)	✓	N. T2	Note
Attach Fire Brigade Log for this day to this log for filing. (✓Attached)			✓

Item 2 & 4 provided 5/23/79

CONDENSATE STOR. TK. LEVEL (TECH. SPEC.)	A (> 11' - ft.)	16.3	14.3	11.7
	B (> 11' - ft.)	16.2	15.3	13.2
CIRCLE - MOIST. SEP. DRAIN PUMPS RUNNING		A B D E C F	A B D E C F	A B D E C F
MAKEUP TANK PRESSURE (MU-17 PI)	>0/<35 psig (PSIG)	18	14	12
MU FILTER (MU-F1A/B	ΔP (MU-18 DPI) - <25 PSID (PSID)	5	5	3.5
	CIRCLE FILTER IN SERVICE	(A) B	(A) B	(A) B
SEAL RETURN FILTER MU-F3 (MU-40 DPI)	< 5 PSID (PSID)	0	0	0
SEAL INJECTION FILTER MU-F4A/B (MU-41 DPI)	< 200 (PSID)	20	20	20
	CIRCLE FILTER IN SERVICE	A Note B	A Note B	A Note B

REMARKS: NOTE - NOT OBTAINED DUE TO RAD EMERGENCY

BORATED WATER STOR. TK. LEVEL (TECH. SPEC.)	LI-408 >54.1 ft. (ft.)	~~50.0~~ ~~49.6~~	51	51
	LI-487 >54.1 ft. (ft.)	~~49.6~~ ~~50.0~~	50	50
B.W.S.T. TEMPERATURE - TI-104	>40°F (°F)	76	80	79
SOD. HYDROXIDE TK. LEVEL - LT-472 (Posted Lev. per 1301-6.5) (ft)		28.6	28.6	28.8
SOD. THIO. TK. LEVEL - LT-471 (Posted Lev. per 1301-6.6) (ft)		37.0	37.2	37.2
SOD. HYDROXIDE TK. TEMPERATURE - BS-7TI (50°F to 120°F) (°F)		107	107	108
SOD. THIO. TK. TEMPERATURE - BS-8TI (50°F to 120°F) (°F)		87	87	87
INTERMEDIATE CLOSED COOLING SURGE TANK LEVEL 8"-24.5"		20	20	19.2
INTERMEDIATE COOLING SYST. FLOW ≥ 700 gpm (G PM)		~~1620~~ ~~1620~~	1390	1380
INTERMEDIATE COOLER OUTLET TEMP. 95°F ± 5°F (°F)		~~96~~ ~~96~~	97	92
CRD COOLING FLOW (IC-10 FI) > 138 GPM (G PM)		160	160	157
CRD COOLING OUTLET TEMP. (IC-9 TI) < 160°F (°F)		192,665	100	94
R.B. PRESSURE (RECORDER) > 1 psig Vac. < 2 psig (PSIG)		0	0	0

CONTROL ROOM OPERATORS LOG SHEET

MAR 28 1979 DATE

NOTE: RETURN DAILY TO OPS ENGINEER FOR REVIEW & FILING

		11 - 7	7 - 3	3 - 11
MECH. SP. C. OR LOCAL (PALOMINO FUEL FOREMAN LOCAL)				
P.C. DRAIN TANK TEMPERATURE	(°F)	117.5	120	100
P.C. DRAIN TANK PRESSURE	(PSIG)	2.5	2.5	2.5

RMS CHECK FOR ABNORMAL TRENDS (at end of shift)

1) Check recorder charts for previous 8 hrs. (✓ ok/ /)
2) If any increase above background is observed determine cause and mark charts (if not already marked).
3) Time and Date charts.
4) If increase is noted record background and peak reading on this sheet. (/ Avg./Peak CPM/ CPM)

Notify SS/SF and IP Dept. Red. Emergency

RM-R1	✓ /	N/A	N/A
RM-R2	✓ /	/	/
RM-R3	✓ /	/	/
RM-R4	✓ /	/	/
RM-R5	✓ /	/	/
RM-R6	✓ /	/	/
RM-R10	✓ /	✓ /	✓ /
RM-R11	✓ /	✓ /	✓ /

BACK PANELS

*RIVER WATER ΔT (RECORDER) (CORRESPONDING TO MDCT READING BELOW)	(± °F)	+2	Note	Note
* ΔT @ MDCT (CALLED IN BY AUX. OPERATOR ± °F)		+3	Note	Note
*RIVER WATER DISCH. MAX. CHLORINE PPM (PEAK ON CHART)		005	005	005
*CIRC. WATER BLOWDOWN MAX. CHLORINE PPM (PEAK ON CHART)		005	005	005
*EFFLUENT FLOW INTEGRATOR READING (11-7) @ 2400 HRS.		7510	8184	00000 GAL.
*MAX. EFFLUENT FLOW DURING SHIFT (FROM RECORDER)	(G PM)	>100,000	>100000	760,000
PENETRATION PRESS. AIR TANK PRESS. (85-100 psig) A	(PSIG)	87	87	87
PENETRATION PRESS. AIR TANK PRESS. (85-100 psig) B	(PSIG)	91	90	90

R.C. PUMP VIBRATION/ECCENTRICITY (3-11 SHIFT) – RECORD READINGS ON G-NEVADA

INDICATE ANY READINGS ON X 2 MULT. ALSO	RC-PIA V	RC-PIA E	RC-PIB V	RC-PIB E	RC-PIC V	RC-PIC E	RC-PID V	RC-PID E
	5	>15 N	5	>15 N	9	6 C	3.5 C	5	2.5 N	6	7.5 N	10	1.5 C	10	4.5 C

R.C. PUMP NO. 1 SEAL LEAKOFF FLOW (> 0.2 gpm < 5.0 gpm)

RC-PIA	(G PM)	1.40	1.5	1.5
RC-PIB	(G PM)	1.68	1.6	1.6
RC-PIC	(G PM)	2.08	2.2	2.2
RC-PID	(G PM)	1.20	1.2	1.2

Turbine Shaft Voltage (< 1.0 volt) N/A SD

CHECK IF R.C. EVAP. IS RUNNING (YES OR NO) No

CALL CHEMISTRY TO OBTAIN ⇒ FEED TANK / DISTILLATE SAMPLES (IF RUNNING) (TIME CALLED) N/A

CHECK IF MISC. EVAP. IS RUNNING (YES OR NO) No

CALL CHEMISTRY TO OBTAIN ⇒ FEED TANK / DISTILLATE SAMPLES (IF RUNNING) N/A

CHECK CONDUCTIVITY ALARM ON RECORDER (✓ OK) NOTE

CHECK CRD POSITIONS (AT PROGRAMMERS TYPEWRITER)
1 TYPE "ROD"; PRESS "RETURN" IN ABSOLUTE
2 TYPE "ROD"; PRESS "RETURN" IN RELATIVE
3 ASSURE NO ASSYMETRIC CONDITIONS (REF. EP 1202-8)
4 INDICATE DATE, SHIFT, SIGN AND RETURN TO OPS ENGINEER (✓ OK)

SD	S/D	N/A S/D

Calculate Generator Field Resistance (R_f)

$$R_f = \frac{\text{(Computer Pt. \#0231)} - 3.5}{\text{(Computer Pt. \#0230)}} \quad (< 0.117\ \Omega)$$

192 1 SD	4	

MAR 28 1979

	11-7	7-3	13-11
List stop valve and combined intercept valve test times.			
MS-1	N/A	N/A	STD N/A
MS-2			
MS-3			
MS-4			
CIV-1			
CIV-2			
CIV-3			
CIV-4			
CIV-5			
CIV-6			
Transferring Steam To/From (circle one) Unit 2. Yes/No; If yes, for what purpose?	STM FROM UNIT 2 FW HTG FW PUMP	NO	Stm. To Unit 2 for Glands
Transferring Demin. Water To/From (circle one) Unit 2. Yes/No; If yes, for what purpose?	WATER TO UNIT 2 CONDENSATE	NO	No

Check the following fire doors as being closed.	11-7	7-3	3-11
Control Building, Elev. 338'			
1. Elev. 338' - 2 doors, entrance to stairway from turbine bldg.		✓	✓
2. Elev. 338' - Entrance to patio from stairway.		✓	✓
3. Elev. 338' - Entrance to Control Bldg. from stairway.		✓	✓
4. Elev. 338' - Double Door between patio & E.S. cabinet Room		✓	✓
5. Elev. 338' - Double Door between patio & Relay Room.		✓	✓
6. Elev. 338' - Double Door between "E" 4160 Bus & E.S. Cabinet Room.		✓	✓
7. Elev. 338' - Double Door between 4160 Volt Bus "D" & "E".		✓	✓
8. Elev. 338' - Door between "D" 4160 Volt Bus & "E" 4160 Bus.		✓	✓
9. Elev. 338' - Door between "E" 4160V Bus & E.S. Cabinet Room.		✓	✓
10. Elev. 338' - Door between "D" 4160 Bus & Relay Room.		✓	✓
11. Elev. 338' - Door between E.S. Cabinet Room & Relay Room.		✓	✓
Control Building, Elev. 355'			
1. Elev. 355' - 2 doors, entrance to stairway from turbine bldg.		✓	✓
2. Elev. 355' - Entrance to patio from stairway.		✓	✓
3. Elev. 355' - Entrance to Control Bldg. from stairway.		✓	✓
4. Elev. 355' - Double door between control room & patio.		✓	✓
5. Elev. 355' - West hall door, entrance to control room.		✓	✓
6. Elev. 355' - East hall door, entrance to control room.		✓	✓
7. Elev. 355' - Entrance door to rad-comp door.		✓	✓

FIRE BRIGADE LOG

Instructions: For each shift fill in the names of the persons who are designated as the Fire Brigade. Those who are designated must be aware of that responsibility.

MAR 28 1979

	Position	Names of Those Designated 11-7	7-3	3-11
Unit 1	Aux. Operator #1	Buchtel	Note	Note
Unit 2	Aux. Operator #2	Forest	↓	↓
Unit 1	Aux. Operator #3	Bucher	↓	↓
Unit 2	Aux. Operator #4	Dougherty	↓	↓
	HP Tech #5	Davis	↓	↓
	Shift Supervisor	Bayard	↓	↓

SMALL BREAK LOCA RESPONSE TEAM

Names	11-7	7-3	3-11
Control Room	N/A	[illegible]	N/A S/D
Primary Plant Side	N/A	[illegible]	N/A S/D

NOTE: If you must leave your station, it is your responsibility to have a relief who is free to carry out the actions assigned to you.

Vibration/Loose Parts Monitoring

a. Check each channel noise level once each hour and log any abnormable noises or noise trends in the space below:

MAR 28 1979

11-7 Shift (✓) OK		7-3 Shift (✓) OK		3-11 Shift (✓) OK	
2300	✓	0700	✓	1500	✓
2400	✓	0800	✓	1600	✓
0100	✓	0900	✓	1700	✓
0200	✓	1000	✓	1800	✓
0300	✓	1100	✓	1900	✓
0400	✓	1200	✓	2000	✓
0500	✓	1300	✓	2100	✓
0600	✓	1400	✓	2200	✓

11-7 Shift

Enter new boron number into the computer and here on log sheet.

1076 ppm

	11-7	7-3	3-11
CRO Signature			
Shift Foreman Signature			

192 117

PRIMARY AUX. OPERATORS LOG – LWDS PANELS

LOG DAILY AND RETURN TO OPS ENGINEER (FOLLOWING SHIFT FOREMAN REVIEW)

DATE

	11 - 7	7 - 3	3 - 11
AUX. BLDG. SUMP LEVEL (FT.)	5.7		
MISC. WASTE STORAGE TANK LEVEL (FT.) (≤ 7 ft.)	8.2		
MISC. WASTE STORAGE TANK TEMPERATURE (°F)(150°F MAX)	86		
A WASTE GAS DECAY TANK PRESSURE (PSIG) (0 – 80 PSIG)	81		
B WASTE GAS DECAY TANK PRESSURE (PSIG) (0 – 80 PSIG)	79		
C WASTE GAS DECAY TANK PRESSURE (PSIG) (0 – 80 PSIG)	26		
VENT HEADER PRESSURE Indicator (PSIA) (15.5 - 16.4)	17.5		
Vent Header Pressure Recorder (agrees with indicator (✓ OK) and signed and dated)	✓		
MISC. SUMP PUMP DISCHARGE VALVE (WDL - V500) POSITION (CIRCLE)	Open (Closed)	Open/Closed	Open/Closed
A R.C. BLEED TANK LEVEL (FT.) (.5 – 16')	8.25		
B R.C. BLEED TANK LEVEL (FT.) (.5 – 16')	4.75		
C R.C. BLEED TANK LEVEL (FT.) (.5 – 16')	3.0		
A R.C. BLEED TANK GAS TEMP. (°F) (150° MAX)	81		
A R.C. BLEED TANK WATER TEMP. (°F) (150° MAX)	64		
B R.C. BLEED TANK GAS TEMP. (°F) (150° MAX)	85		
B R.C. BLEED TANK WATER TEMP. (°F) (150° MAX)	108		
C R.C. BLEED TANK GAS TEMP. (°F) (150° MAX)	95		
C R.C. BLEED TANK WATER TEMP. (°F) (150° MAX)	105		
LAUNDRY WASTE STORAGE TANK LEVEL (FT.)	6.2		
NEUTRALIZING MIX TANK LEVEL (FT.)	6.0		
NEUTRALIZED WASTE FEED TANK (FT.)	>10		
NEUTRALIZED WASTE STORAGE TANK LEVEL (FT.)	11.7		
A PRECOAT FILTER ΔP (PSID – 20 PSID MAX) IF IN SERVICE	3.5		
FLOW (GPM – 150 GPM MAX) IF IN SERVICE	50		
A CATION DEMIN ΔP (PSID – 35 PSID MAX) IF IN SERVICE	N/S		
A CATION DEMIN TRAP ΔP (PSID – 20 PSID MAX) IF IN SERVICE	2.0		
B PRECOAT FILTER ΔP (PSID – 20 PSID MAX) IF IN SERVICE	137		
FLOW (GPM – 150 GPM MAX) IF IN SERVICE	N/S		
B CATION DEMIN ΔP (PSID – 35 PSID MAX) IF IN SERVICE			
B CATION DEMIN TRAP ΔP (PSID – 25 PSID MAX)	.5		
A RECLAIMED BORIC ACID STORAGE TANK LEVEL (FT.) (Min. lev. per 1301-2)	8.9		
B RECLAIMED BORIC ACID STORAGE TANK LEVEL (FT.) (Min. lev. per 1301-2)	>15		
A CONCENTRATED WASTE STORAGE TANK LEVEL (FT.) (0-10 ft.)	>15		
B CONCENTRATED WASTE STORAGE TANK LEVEL (FT.) (0-10 ft.)	122		
A RECLAIMED BORIC ACID STORAGE TANK TEMP. (°F) (> 100°F)	147		
B RECLAIMED BORIC ACID STORAGE TANK TEMP. (°F) (> 100°F)	155		
A CONCENTRATED WASTE STORAGE TANK TEMP. (°F) (≥ 140°F)	158		
B CONCENTRATED WASTE STORAGE TANK TEMP. (°F) (≥ 140°F)	8.6		
SPENT RESIN STORAGE TANK LEVEL (FT.)	7.8		
USED PRECOAT STORAGE TANK LEVEL (FT.)			

92 118

PRIMARY AUX. OPERATORS LOG – LWDS PANELS

3/25/79 DATE SHEET

LOG DAILY AND RETURN TO OPS ENGINEER (FOLLOWING SHIFT FOREMAN REVIEW)

	11 - 7	7 - 3	3 -
A WASTE EVAP. DEMINERALIZER ΔP (PSID) IF IN SERVICE	NIS		
B WASTE EVAP. DEMINERALIZER ΔP (PSID) IF IN SERVICE	NIS		
A WASTE EVAP. COND. STORAGE TANK LEVEL (FT.) (≥ .5 ft. ≤ 11 ft.)	1.0		
B WASTE EVAP. COND. STORAGE TANK LEVEL (FT.) (≥ .5 ft. ≤ 11 ft.	11.8		
R.C. EVAPORATOR VACUUM (IN. HG.) (>15") IF IN SERVICE	19		
" Feed Tank Level (in.)	1.23		
" Feed Tank Temp. (Degrees F)	155.2		
" Concentrator Temp. (Degrees F) if in service	170		
" Concentrator Cooling Water Inlet Temp. (Degrees F) if in service	57		
" Concentrator Cooling Water Outlet Temp. (Degrees F) if in service	65		
" Distillate Conductivity (nmhos.)	0		
" Temp. of Feed Water to Feed Tank (Degrees F)	N/A		
MISC. WASTE EVAPORATOR VACUUM (IN. HG.) (>15") IF IN SERVICE	NIS		
" Feed Tank Level (in.)			
" Feed Tank Temp. (Degrees F)			
" Concentrator Temp. (Degrees F) if in service			
" Concentrator Cooling Water Inlet Temp. (Degrees F) if in service			
" Concentrator Cooling Water Outlet Temp. (Degrees F) if in service			
" Distillate Conductivity (u mhos.) if in service			
" Temp. of Feed Water to Feed Tank (Degrees F) if in service			
	✓		

CHECK & LOG EVERY 2 HRS. WHEN EVAPORATORS ARE RUNNING
(Fill if required)

	2300 0100	0100 0300	0300 0500	0500 0700	0700 0900	0900 1100	1100 1300	1300 1500	1500 1700	1700 1900	1900 2100
R.C. EVAP. SEAL WATER LEVEL (in., ½" to 1"	1½	1½	1½	1½							
RC EVAP. FOAMING (N-None A-Average S-Serious)	A	A	A	A							
MISC. EVAP. SEAL WATER LEVEL (in. 1" - 1½")	N/S	N/S	N/S	N/S							
MISC. EVAP. FOAMING N, A, S											

RM-A4	V1, V2, V3, V4 in #B Position	(✓OK)	✓
	Flow (1 CFM)	(CFM)	1.3
	Vacuum (2-5)	(in Hg)	3.5
RM-A5	V1, V2, V3, V4 in #B Position	(✓OK)	✓
	Flow (1 CFM)	(CFM)	1.5
	Vacuum (2-5)	(in Hg)	5

192 119

DATE 3/28/79 SHEET 3

CHEMICAL ADDITION ROOM – PANEL				
RECLAIMED WATER STORAGE TANK LEVEL (FT.) (3-9 ft.)		7.1		
RECLAIMED WATER PRESSURE TANK LEVEL (FT.) (Approx. 4 to 6 ft.)		5.6		
PRESSURE (PSIG) (60-80 psig)		70		
BORIC ACID MIX TANK LEVEL (inches)		40		
BORIC ACID MIX TANK TEMP. (°F)		140		
N_2 HEADER PRESSURE - FROM TUBE TRAILER (600 – 2000 PSIG)		1150		
H_2 HEADER PRESSURE - FROM BOTTLES (50 - 2000 PSIG)		0		
NUC. SERV. SURGE TANK PRESS (PSIG) (≥ 38 ≤ 42 psig)		37		

Gate Seal Pressure (Between 30-35 psig) Inflate if necessary (psig)		34	
Spent Fuel Pool A Surface Water Clean	(✓)	✓	
Spent Fuel Pool A Level (inches below skimmer level)	(inches)	+4	
Spent Fuel Pool A/B Underwater Lights Turned Off (unless handling fuel)	(✓)	✓	
Spent Fuel Pool B Surface Water Clean	(✓)	✓	
Spent Fuel Pool B Level (inches below skimmer level)	(inches)	+4	
RH-AT3 V1, V2, V3, V4 in #B Position	(✓OK)	✓	
RH-AT3 Flow (1 CFM)	(CFM)	1	
RH-AT3 Vacuum (2-5)	(in Hg)	5.5	

NOTE: Circle all out of spec. readings.

	11 - 7	7 - 3	3 - 11
AUX. OPERATOR SIGNATURE	BUCHEL	1921	20
SHIFT FOREMAN SIGNATURE			

DATE_____

OPERATIONAL FUNCTIONS DATA SHEET

List All Noteworthy Functions As Performed During Shift.

2300-0700

1.

2.

3.

4.

5.

6.

7. Signature_____

0700-1500

1.

2.

3.

4.

5.

6.

7. Signature_____

1500-2300

1.

2.

3.

4.

5.

6.

7. Signature_____

192 121

OPERATING LOG — FOUR READINGS

LOG DAILY AND RETURN TO OPS ENGINEER (FOLLOWING SHIFT FOREMAN REVIEW)

3/28/79 DATE

SHEET 1

	11 - 7	7 - 3	3 - 11
Aux. Bldg. Concrete Door Inflatable Seal Press. (psig) (Inflate if necessary)	22		
Fuel Handling Concrete Door Inflatable Seal Press. (psig) (Inflate if necessary)	20		
Spent Fuel Cooling Pump Check (A and/or B running)	B		
SF-P1A/B Motor-Pump Vibration & Noise OK (running) (✓)	✓		
SF-P-1A/B Pump Bearing Oil Level - Leakage OK (✓)	✓		
Spent Fuel Pump running Discharge Pressure (psig)	54		
Spent Fuel Cooler A Outlet Temperature (TI-535) (°F)	63		
Spent Fuel Cooler B Outlet Temperature (TI-536) (°F)	64		
CHECK NUCLEAR SERVICES CLOSED COOLING PUMPS (✓OK)	✓		
CHECK DECAY HEAT CLOSED COOLING PUMPS (✓OK)	✓		
CHECK INTERMEDIATE CLOSED COOLING PUMPS (✓OK)	✓		
ICCW/CRDM COOLING FILTER ΔP (PSID – 10 PSID MAX)	A 39 B —	A B	A B
CHECK VALVE LEAKOFF FUNNELS FOR VALVE LEAKAGE (✓OK)	✓		

REMARKS: (INDICATE ABNORMALITIES, SUBMIT WORK REQUEST IF APPLICABLE)

Seal Inj. Filter ΔP MU-F4A/B (200 psid max.) (psid)		B	E	
(log twice/shift) (Read OP 1104-2.2.2.8) (Filter in serv.) ✓		10	10	
Log all times of filter changes:				
HAY'S GAS ANALYZER				
	% O_2 (3% MAX)	N/S		
CHECK FOR NO WATER IN FLOW INDICATORS, VERIFY SCANNER LOG IS CORRECT, GENERAL CONDITION →	% H_2 (3% MAX)	↓		
	(✓OK)	✓		
REMARKS: (INDICATE POINTS IN SCAN→ 1 2 3 4 5 6 7 8 9 10) Circle				
RM-A8 V1, V2, V3, V4 in #B Position	(✓OK)	✓		
Flow (1 CFM)	(CFM)	1.0		
Vacuum (2-5)	(in Hg)	2.4		
RM-A9 V1, V2, V3, V4 in #B Position	(✓OK)	✓		
Flow (1 CFM)	(CFM)	1.0		
Vacuum (2-5)	(in Hg)	2.5		

HEAT EXCHANGER VAULT

11 - 7 Shift Reading →

HEAT EXCHANGER RIVER WATER SIDE ΔP's (ON IN-SERVICE COOLERS)

(3 N.S. Hx. Max. ΔP is 15)
(2 N.S. Hx. Max. ΔP is 20)
(Interm. Hx. Max. ΔP is 12)
(D.H. Hx. Max. ΔP is 12)

	✓ IF IN SERVICE	PRESS IN	PRESS OUT
NUC SERVICES A	✓	40.5	38
NUC SERVICES B	✓	40.5	37.5
NUC SERVICES C		41.5	35.5
NUC SERVICES D		41	41
INTERMEDIATE SERVICES A	✓	40.5	35.5
INTERMEDIATE SERVICES B		40.5	40.5
DECAY HEAT SERVICES A		8	9
DECAY HEAT SERVICES B	✓	20	10

LOOP SEAL CHECK (ASSURE LOOPS ARE FULL) Once/Shift
(EVERY 8 HRS.)

	11 - 7	7 - 3	3 - 11
VENT. HEADER (ABOVE RM-L8)	✓		
RCBT OVERFLOW	✓		
A RECLAIMED BORIC ACID TANK	✓	192 122	
B RECLAIMED BORIC ACID TANK			
A WASTE EVAP. COND. ST. TANK	✓		
B WASTE EVAP. COND. ST. TANK	✓		

PRIMARY AUX. OPERATORS LOG — TOUR READINGS

3/28/79 DATE

LOG DAILY AND RETURN TO OPS ENGINEER (FOLLOWING SHIFT FOREMAN REVIEW)

		11 - 7	7 - 3	3 - 11
DRAIN POT CHECK (MAINTAIN LEVEL between yellow marks. Notify Cont. Rm. prior to draining. DRAIN WASTE GAS DECAY TANK ONLY AFTER FILLING IT)	(INDICATE "AS FOUND" LEVEL IN INCHES)			
	WASTE GAS DELAY TANK DRAIN POT (IN.)	+2		
	VENT. HEADER DRAIN POT (IN.)	-1.5		
→	WASTE GAS DECAY TANKS POT (IN.)	MT		

		11 - 7	7 - 3	3 - 11
A MAKEUP & PURIFICATION PUMP CHECK (✓ OK)		✓		
	AUX. LUBE PUMP OIL PRESSURE PI AT COOLER DISCH. (8 – 15 PSIG)	12.5		
(IF MU PUMP RUNNING)	SPEED INCREASER LUBE OIL PRESS. PI AT SPEED INCREASER (12 – 18 PSIG)	STBY		
	OIL LEVEL IN PUMP LUBE OIL SUMP (✓ 1/2 FULL)	✓		
	OIL LEVEL IN SPEED INCREASER (✓ 1/2 FULL)	✓		
	CHECK BEARING OIL FLOW, NO LEAKS, ETC. (✓ OK)	✓		
B MAKEUP & PURIFICATION PUMP CHECK (✓ OK)		✓		
	AUX. LUBE PUMP OIL PRESSURE (8 – 15 PSIG)	9.2		
(IF MU PUMP RUNNING)	SPEED INCREASER LUBE OIL PRESS. (12 – 18 PSIG)	13		
	OIL LEVEL IN PUMP LUBE OIL SUMP (✓ 1/2 FULL)	✓		
	OIL LEVEL IN SPEED INCREASER (✓ 1/2 FULL)	✓		
	CHECK BEARING OIL FLOW, NO LEAKS, ETC. (✓ OK)	✓		
C MAKEUP & PURIFICATION PUMP CHECK (✓ OK)		✓		
	AUX. LUBE PUMP OIL PRESSURE (8 – 15 PSIG)	13		
(IF MU PUMP RUNNING)	SPEED INCREASER LUBE OIL PRESS. (12 – 18 PSIG)	STBY		
	OIL LEVEL IN PUMP LUBE OIL SUMP (✓ 1/2 FULL)	✓		
	OIL LEVEL IN SPEED INCREASER (✓ 1/2 FULL)	✓		
	CHECK BEARING OIL FLOW, NO LEAKS, ETC. (✓ OK)	✓		
CHECK MU&P VALVE ALLEY AREA/LEAKOFF FUNNELS (✓ OK)		✓		
Spent Fuel Pools A/B 38 Wall Leakage Tell-Tale Detectors OK (✓)		✓		
LETDOWN FILTER ΔP MU-F 2A/B (PSID – 25 PSID MAX.)		6		
IN SERVICE FILTER (CIRCLE)		A (B)	A B	A B
RCP NO. 2 SEAL BACK PRESSURE @ MU – 39 PI (27 TO 90 PSIG)		31		
If [illegible] Evap is operating, obtain sample of Cond. Demin. Return to be analyzed for Gross Beta Gamma. (If sample result taken or activity is greater than [illegible] shut down evaporator).		N/S ✓		
Misc. Evap. Feed Tank Pressure, if shut down. Open MDL-V227. If pressure above 4 psig open and reclose valve to relieve pressure		✓		
11-7 Shift Nightly Remove Hose from M.W. Evap. vacuum pump make-up water and flush drain in Reclaimed Boric Acid Tank Room for five minutes. If drain is plugged, report to Shift Foreman. (✓ OK)		✓		
R.C. Evap., if shut down open MDL-V226 for 3 mins.		IS		

192 123

PRIMARY AUX. OPERATORS LOG - TOUR READINGS 3/28/79 DATE

SHEET 3

Log Daily and Return to OPS Engineer (Following S/F Review)

		11-7	7-3	3-11
Trash Compactor Area - Verify that the posted radiation levels at the boundary are still applicable - Notify HP Dept. if not (✓ OK)		✓		
11-7 shift As Required: Compact accumulated trash in solid waste area. (Container > ½ full.)		✓		
RM-A12	V1, V2, V3, V4 in #B Position (✓OK)	0-0-S		
	Flow (1 CFM) (CFM)	↓		
	Vacuum (2-5) (in Hg)			

Check the following Fire Doors as being closed.	11-7	7-3	3-11
1. F.H. Bldg. at 281' Elev. - Southeast Storage Area	✓		
2. F.H. Bldg. at 331' Elev. - Entrance to Chemical Addition Room	✓		
3. Hot Machine Shop Area - North end, 305' Elev. - Roll-up door must be down and access door closed.	✓		

192 124

*NOTE: Circle all out of spec readings	11-7	7-3	3-11
AUX. OPERATOR SIGNATURE	BULCHER		
SHIFT FOREMAN SIGNATURE	[illegible]		

Sheet 4
Date 3/28/79

OPERATIONAL FUNCTIONS DATA SHEET

Part I List all noteworthy functions as performed during shift.

2300-0700	
0700-1500	
1500-2300	

Part II List all oil addition to equipment.

	Equipment Tag No.	Amount of Oil Added	Type of Oil	Comments
2300-0700				
0700-1500				
1500-2300				

AUX. OPERATORS LOG SHEETS - OUT-BUILDING TOUR

Log Daily and Return to Ops. Engineer (Following Shift Foreman Review)

Date

			11-7	7-3	3-11
RIVER WATER PUMP HOUSE					
R&T Switchgear (Relays, Temperature)		(✓ OK)	✓	✓	✓
NR-P1A	Discharge Pressure (PI-470A)	(PSIG)	28	51	28
✓If running	Booster Pump Discharge Pressure (PI-537A)	(PSIG)	53	24	52
	Lub Water Differential Pressure (DPI-508A)	(PSID)	22	22	22
RR-P1A	Discharge Pressure (PI-469A)	(PSIG)	NIS	NIS	0
✓If running	Booster Pump Discharge Pressure (PI-536A)	(PSIG)	↓	↓	0
	Lub Water Differential Pressure (DPI-507A)	(PSID)	✓	✓	8
SR-P1A	Discharge Pressure (PI-471A)	(PSIG)	19	15	20
✓If running	Booster Pump Discharge Pressure (PI-538A)	(PSIG)	28	29	26
	Lub Water Differential Pressure (DPI-509A)	(PSID)	2	2	2
DR-P1B	Discharge Pressure (PI-472B)	(PSIG)	NIS	NIS	0
✓If running	Booster Pump Discharge Pressure (PI-539A)	(PSIG)	↓		14
	Lub Water Differential Pressure (DPI-510B)	(PSID)	✓		15
SW-P1A	Discharge Pressure (PI-524A)	(PSIG)	NIS		0
✓If running	Booster Pump Discharge Pressure (PI-540A)	(PSIG)	↓		23
	Lub Water Differential Pressure (DPI-511A)	(PSID)	✓		33
NR-P1B	Discharge Pressure (PI-470B)	(PSIG)	NIS		0
✓If running	Booster Pump Discharge Pressure (PI-537B)	(PSIG)	↓		27
	Lub Water Differential Pressure (DPI-508B)	(PSID)	✓		28
SW-P2A/B	Discharge Pressure (PI-473A/B)	(PSIG)	NIS		NIS
(Circle A or B)	Booster Pump Discharge Pressure (PI-541A/B)	(PSIG)	↓		↓
Which is running	Lub Water Differential Pressure (DPI-512A/B	(PSID)	✓		✓
SR-P1B	Discharge Pressure (PI-471B)	(PSIG)	NIS		0
✓If running	Booster Pump Discharge Pressure (PI-538B)	(PSIG)	↓		23
	Lub Water Differential Pressure (DPI-509B)	(PSID)	✓		26
SW-P1B	Discharge Pressure (PI-584B)	(PSIG)	NIS		0
✓If running	Booster Pump Discharge Pressure (PI-540B)	(PSIG)	↓		21
	Lub Water Differential Pressure (DPI-511B)	(PSID)	✓	✓	36
DR-P1A	Discharge Pressure (PI-472B)	(PSIG)	12	10	12
✓If running	Booster Pump Discharge Pressure (PI-539B)	(PSIG)	34	34	33
	Lub Water Differential Pressure (DPI-510A)	(PSID)	20	21	20
RR-P1B	Discharge Pressure (PI-469B)	(PSIG)	NIS	NIS	0
✓If running	Booster Pump Discharge Pressure (PI-536B)	(PSIG)	↓	↓	0
	Lub Water Differential Pressure (DPI-507B)	(PSID)	✓	✓	19
SR-P1C	Discharge Pressure (PI-471C)	(PSIG)	NIS	↓	0
✓If running	Booster Pump Discharge Pressure (PI-538C)	(PSIG)	↓	↓	26
	Lub Water Differential Pressure (DPI-509C)	(PSID)	✓	✓	25
NR-P1C	Discharge Pressure (PI-470C)	(PSIG)	27	27	27
✓If running	Booster Pump Discharge Pressure (PI-537C)	(PSIG)	52	52	53
	Lub Water Differential Pressure (DPI-508C)	(PSID)	22	22	22
	Check Screens & Rakes	(✓ OK)	✓	✓	✓
	Check Trash Pits for Excessive Debris	(✓ OK)	✓	✓	✓
	Rotate & Blowdown Hand Strainers	(✓ OK)	✓	✓	✓
	RW Fire Service Diesel - Radiator Water Level	(✓ OK)	✓	✓	✓
	Hose Debris Off Floor Near Screens & Rakes		✓	✓	✓
	River Water Chlorination Bldg. (@ Chlorination Times Set)		1 AM	9 AM	5 PM
	Chlorine Press. (PI-523)	(PSIG)	90 92	126	NIS
	Chlorine Evap. Temperatures	(✓ OK)	✓	↓	↓
	Duration of Chlorination Timer Setting (15 Min)	(Min.)	✓		
	Chlorination Rate (From Rotometer)	(lb/Day)		↓	↓
	Booster Pump Check (Seals Lube)	(✓ OK)	✓	✓	✓

NOTE: IF REMOVED OR RETURNED TO SERVICE, NOTIFY CHEM. DEPARTMENT

47

	Date 11-7	7-3	3-11
MECHANICAL DRAFT COOLING TOWER			
Check Charts (Time, Date, Ink, Paper) (✓ OK)	✓		
Station RW ΔT (Mixed Discharge River Temp.- RW Supply Temp.)	+3	-12.5	+2
Notify CRO of Reading (✓ OK)	✓	✓	✓
Check Pump (Lube, Seals) (If Running) SR-P3A (✓ OK)	N/A	N/A	N/A
SR-P3B (✓ OK)	✓	✓	✓
REMAKRS: (NOTE: N. of MDCT) Switch on outside Speakers @0700 (✓ OK)		N/A	N/A
Switch off outside Speakers @1700 (✓ OK)			
Warehouse Fire System Air Pressure (PSI) >42 PSI (Run Compressor if Required)		45	
INDUSTRIAL WASTE TREATMENT SYSTEM			
1. LI-300 Waste Collection Sump Level			
2. FRC-338 Influent Flow Rate (GPM), check for proper inking and paper. FM-338 Total Gallons Processed.			
3. FR-342 Effluent Flow Rate (GPM), check for proper inking and paper. FM-342 Total Gallons Discharged.			
4. CRC 74/75 Red - Influent Ph, check for proper inking and paper. CRC 74/75 Purple - Effluent Ph (Time/Date-Midnight)			
5. IW-P-1 or IW-P-2 Which Acid Pump is in Service			
6. IW-V1072 CE 74 Check Ph Sensor Flow ✓ DONE IW-V1075 CE 75 Check Ph Sensor Flow ✓ DONE			
7. Air Flow-tation Check Discharge Water (should be clear) at CE-82, Aeration Mechanisms, Foam & Skimmers ✓ DONE			
8. IW-T-4 Breakup oil/sludge on top of water with water spray, stick, etc. ✓ DONE Pump oil/sludge from top of water if over 1" deep. ✓ DONE		192	127

5-25-79 Date

			11-7	7-3	3-11
MECHANICAL DRAFT COOLING TOWER					
Check Charts (Time, Date, Ink, Paper)		(✓ OK)			
Station RW ΔT (Mixed Discharge River Temp.- RW Supply Temp.)					
Notify CRO of Reading		(✓ OK)			
Check Pump (Lube, Seals) (If Running)	SR-P3A	(✓ OK)			
	SR-P3B	(✓ OK)			
REMAKRS: (NOTE: N. of MDCT)	Switch on outside Speakers @0700 (✓ OK)				
	Switch off outside Speakers @1700 (✓ OK)				
Warehouse Fire System Air Pressure (PSI) >42 PSI (Run Compressor if Required)					
	INDUSTRIAL WASTE TREATMENT SYSTEM				
1. LI-300	Waste Collection Sump Level				
2. FRC-338	Influent Flow Rate (GPM), check for proper inking and paper.		42		
FM-338	Total Gallons Processed.				
3. FR-342	Effluent Flow Rate (GPM), check for proper inking and paper.		100		
FM-342	Total Gallons Discharged.		73743		
4. CRC 74/75	Red - Influent Ph, check for proper inking and paper.		6.7		
CRC 74/75	Purple - Effluent Ph (Time/Date-Midnight)		7.2		
5. IW-P-1 or IW-P-2	Which Acid Pump is in Service		IWP2		
6. IW-V1072	CE 74 Check Ph Sensor Flow	✓ DONE			
IW-V1075	CE 75 Check Ph Sensor Flow	✓ DONE			
7. Air Flow-tation	Check Discharge Water (should be clear) at CE-82, Aeration Mechanisms, Foam & Skimmers	✓ DONE			
8. IW-T-4	Breakup oil/sludge on top of water with water spray, stick, etc.	✓ DONE			
	Pump oil/sludge from top of water if over 1" deep.	✓ DONE			

192 128

			11-7	7-3	3-11
9.	IW-T-4	Sludge Level at the Bottom of Tank. If over 6" Deep, Pump Sludge ✓ DONE			
10.	LI-304 LI-306	Check Pump Oil Level (IW-P1/2) ✓ OK Acid Tank Level IW-T-1 Acid Tank Level IW-T-2			
11.	LI-323 LI-325	Check Pump Oil Levels (IW-P3,4,5) ✓ OK Cationic Polymer Level & proper pump operation. Anionic Polymer Level & proper pump operation.			
12.	IW-M-7	Large Agitator for Proper Operation and Oil Level ✓ OK			
13.	IW-M-8	Small Agitator Oil Level ✓ OK			
14.	Air Compressor IW-P10&11	Blow Condensation from Air Receiver Tank ✓ DONE			
15.		Drain Water from Waste Oil Tank ✓ DONE			
16.	IW-T-7	Check Filtered Water Tank Level ✓ DONE			
17.	IW-V-86	Drain dirt from Filtered Water Tank for 1 minute. ✓ DONE			

INDUSTRIAL WASTE FILTER SYSTEM

CHECK THAT TEMPORARY SUBMERSIBLE SUMP PUMP IS 4 RUNGS DOWN ON THE LADDER. RUN ONLY IN EMERGENCY. RECORD TIME STARTED AND STOPPED.

1.	LI-354	Raw Sludge Collection Sump Level			
2.	FR-373 FM-373	Effluent Flow Rate (GPM) Check for proper inking and paper. Total Gallon Processed			
3.	CRC-89/90 CRC-89/90	Red-Influent Ph Check for proper Purple-Effluent Ph. inking and paper			
4.	LIC-345	Record Filtrate Tank Level IW-T-19			
5.	PR-842	Check Filter Press Pressure Recorder for proper inking and paper ✓ DONE			
6.		Record cake dump counter reading			

192 129

			11-7	7-3	3-11
7.	IW-V1136	Check that filtrate is clear (If not, contact S/F) ✓ DONE	✓		
8.	IW-V1145	CE-89 Check Ph Sensor Flow ✓ DONE	✓		
9.	LI-350	Acid Tank Level IW-T-26 (Refill below 250 gallons)	320		
10.		Air Compressors IW-P-36&37, record hour meter rdg. Oil Level Between Marks on Dip Stick	2335 67.1		
11.	IW-V-410	Blow Condensation from Air Receiver ✓ DONE	✓		
	IW-V-737	Blow Condensation from Air Dryer ✓ DONE	✓		
12.	IW-V-421 IW-V-422	Blow Condensation from After Coolers ✓ DONE	✓		
13.		Adjust aftercooler water to 6 GPM ✓ DONE	✓		
14.	Dumpster	Check filter cake level and have dumpster removed when full. ✓ DONE	✓		
15.		Filtrate Pumps IW-P-29 & 30 Seal Flow 1½ GPM	✓		
16.		Filter Press feed pumps IW-P-25 & 26 1 GPM	✓		
17.		Precoat pumps IW-P-33 & 34 Oil Visible in Sight Glass	✓		
		Precoat Pump Seal Flow ½ at 40 psi	✓		
18.		Lime Slurry Pumps IW-P-31&32 Oil Visible in Sight Glass	✓		
		Lime Slurry Pp. Seal Flow ½ at 40 psi	✓		
19.	IW-T-20	Check lime tank level, mix new DE solution as needed. Check tank mixer is running ✓ DONE Check lime solution is recirculating ✓ DONE	✓		
20.	IW-T-21	Check precoat tank level, mix new precoat solution before starting a new batch. Check tank mixer is running ✓ DONE Check precoat solution is recirculating ✓ DONE	✓		
21.	IWP-27&28	Adjust cooling water at pwr. paks for 110°F oil temperature. ✓ DONE	✓		
	IWP-35	Oil Only Oil Level as Indicated On Sight Glass	✓	192 130	

			11-7	7-3	3-11
22.	IW-F-4	Check filter press Arms up on each side during filtration Normal pressure swings (20-25 psi range) No leaks ✓ DONE	✓		
23.	IW-M-12	Check sludge conditioning tank mixer is running ✓ DONE	✓		
24.	IW-M-11	Check reaction mix tank mixer is running ✓ DONE	✓		
25.	Seal Water	Raw sludge pumps IW-P-23 & 24 GPM 1½	✓		
26.		Sump Agitators IW-M-16&17 Oil level between marks on dip stick	✓		

	11-7		7-3		3-11	
	Signature	Date	Signature	Date	Signature	Date
Aux. Operator Assigned to IWTS	[illegible]	3-28-79				
Shift Foreman	[illegible]	3-28-79				

		11-7	7-3	3-11
RAD MONITORING PIT BLDG.				
CHLORINE MONITOR CHECK (FLOW ETC.)	(✓ OK)			
FLOW THROUGH RM-L7 (½ to 3/4 of flow indicator)	(gal/min)			
SEWAGE PUMP STATION				
Check Dry Well for leakage	(✓ OK)			

192 131

CHEMICALS ADDED DATA

TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (Gal)	TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (G

			11-7	7-3	3-11
22.	IW-F-4	Check filter press Arms up on each side during filtration Normal pressure swings (20-25 psi range) No leaks ✓ DONE			
23.	IW-M-12	Check sludge conditioning tank mixer is running ✓ DONE			
24.	IW-M-11	Check reaction mix tank mixer is running ✓ DONE			
25.	Seal Water	Raw sludge pumps IW-P-23 & 24 GPM 1½			
26.		Sump Agitators IW-M-16&17 Oil level between marks on dip stick			

	11-7		7-3		3-11	
Aux. Operator Assigned to IWTS	Signature	Date	Signature	Date	Signature	Date
Shift Foreman	Signature	Date	Signature	Date	Signature	Date

RAD MONITORING PIT BLDG.				
CHLORINE MONITOR CHECK (FLOW ETC.)	(✓ OK)		N/A	N/A
FLOW THROUGH RM-L7 (½ to 3/4 of flow indicator)	(gal/min)		2.5	2.5

SEWAGE PUMP STATION			
Check Dry Well for leakage	(✓ OK)	N/A	N/A

192 132

CHEMICALS ADDED DATA

TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (Gal)	TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (G

		DATE 11-7	7-3	3-11
PRETREATMENT				
CHECK MIX TANK LEVELS	(✓ OK)	✓	✓	✓
CHECK pH PROBE FEEDS	(✓ OK)	✓	✓	✓
CHECK CHEM. ADDITION PUMP RATIO CONTROLLERS	(✓ OK)	✓	✓	✓
CHECK CHEM. ADDITION PUMP OPERATIONS	(✓ OK)	✓	✓	✓
CHECK FLOCCULATOR DRIVE SPEED	(✓ OK)	✓	✓	✓
CHECK CLARIFIER FLOCK BED & SKIMMER OPERATION	(✓ OK)	✓	✓	✓
FILTER (NO. 1) DIFF. PRESS.	(PSID)	4.6	4.9	3.0
FILTER (NO. 2) DIFF. PRESS.	(PSID)	3.2	4.9	3.25
CLEAR WELL LEVEL	(FT.)	5'6"	6.7	6.6
FLUSH CLAY PUMP DISCHARGE LINE	(✓ OK)	✓	✓	✓
Check water softener brine tk. level.	(✓ OK)	NA		

REMARKS:

CHEMICALS ADDED DATA

TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (Gal)	TIME	CHEMICALS ADDED	AMOUNT ADDED	WATER ADDED (Gal)
0200	Magnafloc	37.5 qts.	250				
0200	clay	50 #	110				
0930	CLAY	50 #	110 GAL				
1700	CLAY	50 #	110 GAL				
2200	CLAY	50 #	110 GAL				

SUBSTATION CONTROL BLDG.				
A TRANSFER SWITCH POSITION	(CIRCLE)	NORM	NORM/ALT	NORM
B TRANSFER SWITCH POSITION	(CIRCLE)	NORM	NORM/ALT	NORM
MAIN TRANSFORMERS CHECK PUMPS RUNNING	(✓ OK)		✓	
(ASSURE WINDING TEMPS ARE A OIL TEMP.	(°F)		112	
BELOW ALARM POINTS) B OIL TEMP.	(°F)		108	
AUX. TRANSFORMERS CHECK PUMPS RUNNING	(✓ OK)		✓	
CHECK TEMPS. BELOW ALARM POINT	(°F)		116	

NOTE: SWITCH ON OUTSIDE SPEAKERS @ 0700 (✓OK)
SWITCH OFF OUTSIDE SPEAKERS @ 1700 (✓OK)
(at ① B AUX TRANS. ② A & B MAIN TRANS. ③ E. TURB DOOR NEAR AUX. TRANS.
④ E. TURB. DOOR NEAR AUX BOILER, ⑤ NORTH TURB DOOR NEAR AUX BOILER)

H_2 BOTTLE STATUS CHECK. (7-3 SHIFT) INDICATE – F-FULL E-EMPTY I-IN SERVICE

192 133

1A	1B	1C
1D	1E	1F
2A	2B	2C
2D	2E	2F

DATE _____

			11-7	7-3	3-11
ALTITUDE TANK – (> 61 psig or 27 ft), call LEVEL LI-107 into CRO.			64	65	64
			730	730	>30
TEMPERATURE			43	47	46
CIRCULATING WATER PUMP HOUSE	WATER SWITCH ON OUTSIDE SPEAKERS @ 0300 (✓OK) SWITCH OFF OUTSIDE SPEAKERS @ 1700 (✓OK) (EAST & WEST CIRC. WATER PUMP HOUSE)				
CHECK CIRC. WATER PUMP OIL LEVEL & SEALS (Report seals throwing water to Shift Foreman)	CW-P1A	(✓ OK)	✓	N/S	N/S
	CW-P1B	(✓ OK)	✓	✓	✓
	CW-P1C	(✓ OK)	✓	✓	✓
	CW-P1D	(✓ OK)	✓	✓	✓
	CW-P1E	(✓ OK)	✓	✓	✓
	CW-P1F	(✓ OK)	✓	✓	✓
CT Fire Service Diesel - Radiator Water Level		(✓ OK)	✓		
FLUME LEVEL & RACKS CLEAR OF DEBRIS		(✓ OK)	✓	N/S	N/S
ESTIMATE Δ LEVEL ACROSS RACK		(INCHES)	Even	N/S	N/S
CIRC. WATER CHLORINATION BLDG. (AT CHLORINATION TIMES LISTED)			5 AM	1 PM	9 PM
CHLORINE PRESSURE PI-522		(PSIG)	85	80	N/S
CHLORINE TEMPERATURES NORMAL		(✓ OK)	130	✓	✓
DURATION OF CHLORINATION TIMER SETTING		(MIN.)	15	✓	✓
CHLORINATION RATE (FROM ROTAMETER)		(LB/DAY)	500	500	✓
ACID TANK LEVEL (CHECK ACID PUMP)		(FT.)	6.5	6.5	6.5
CHECK ACID TANK PIT: Maintain Dry. Flush and pump out any acid spill.			✓	✓	DRY
200,000 GALLON FUEL OIL TANK					
FO-T-2 Level		(Ft./In.)			21' 3¼
FO-P-3A/B (✓ if general condition is OK. If pump is running for no reason and/or significant oil leaks, notify Shift Foreman and note on last log sheet)					✓
FO-P-4 (✓ if general condition is OK. Note any significant oil leak, collect and return to Ops. office any fuel oil receipts located in the FO-P-4 Control Box.)					✓
			192	134	

Chec Fuel Oil Spill Collection Basin For Accumulated Oil and/or Water Remove Oil (if Necessary) - Drain Water Close Discharge Valve	Basin Dry (Yes)			
	Basin Drained (Yes)			

WHEN NOT IN AUTOMATIC OPERATION DO THE FOLLOWING:
When time to run chlorinators, notify Chemistry so they can sample them. If they can't run samples don't run chlorinators. Fill in name of Chemist notified.

Chlorinator Run				Chemist Notified
Time____	RW____	Yes____	No____	____ Name
Time____	RW____	Yes____	No____	____ Name
Time____	RW____	Yes____	No____	____ Name
Time____	CW____	Yes____	No____	____ Name
Time____	CW____	Yes____	No____	____ Name
Time____	CW____	Yes____	No____	____ Name

	11 - 7	7 - 3	3 - 11
AUX. OPERATOR SIGNATURE	C. Gordon	R. Beatman	[illegible]
SHIFT FOREMAN'S SIGNATURE	D Crose	D L Pitt	D Crose

POOR ORIGINAL

192 135

Date _____

OPERATIONAL FUNCTIONS DATA SHEET

Part I List all noteworthy functions as performed during shift.

2300-0700	
0700-1500	
1500-2300	

Part II List all oil addition to equipment.

	Equipment Tag No.	Amount of Oil Added	Type of Oil	Comments
2300-0700				
0700-1500				
1500-2300				

192 136

SECONDARY AUX. OPERATOR'S LOG SHEETS

3-25-79 DATE

(RETURN DAILY TO OPS ENGINEER FOLLOWING SHIFT FOREMAN REVIEW)

		11-7	7-3	3-11
CONTROL BLDG. 5TH FLOOR				
CHILLED WATER TANK LEVEL (in sightglass)	(% FULL)	45%		40
B FAN CHECK (VIBRATION ETC.) (AH-E 17B)	(✓ OK)	✓		✓
AH F4B ΔP (< 2 1/2") NORMAL FILTER	("H_2O)	1.7		1.8
A FAN CHECK (VIBRATION ETC.) (AH-E 17A)	(✓ OK)	NIS		NIS
AH-F4A ΔP (< 2 1/2") NORMAL FILTER	("H_2O)	NIS		✓
RM-A1 Pump Running	(✓OK)	NIS		NIS
Valves V-1, V-2, V-3, V-4 are in the #1 position	(✓OK)	✓		✓
Verify Air Flow at 1 CFM	(CFM)	✓		✓
Verify Vacuum at (2-5)	(in Hg)	✓		✓

Check the following fire doors closed. Control Building Elevation 380'	11-7	7-3	3-11
1. Elev. 380' - 2 Doors, entrance to stairway from turbine bldg.	✓		✓
2. Elev. 380' - Entrance to patio from stairway.	✓		✓
3. Elev. 380' - Door between "A" equipment room & patio.	✓		✓
4. Elev. 380' - Door between "B" equipment room & patio.	✓		✓

CONTROL BLDG. 3RD FLOOR				
4160 SWGR. CHECK (RELAY TARGETS)	(✓ OK)			
Fire Hazard Check (No excess recorder chart paper, etc.)				

480 V. SWITCHGEAR (RELAY TARGETS, TEMP.)	(✓ OK)			
INVERTERS A INVERTER – IN SYNCH	(YES or NO)	Yes		Yes
FEED FROM	(BATT. or NORM.)	Norm		Norm
STATIC SWITCH: ATA FEED FROM	(VBA / VBB / VBC / VBD)	12A 72 / 11B2		11B1-A / 11B2
B INVERTER – IN SYNCH	(YES or NO)	Yes		Yes
FEED FROM	(Batt. or Norm.) (VBA / VBB / VBC / VBD)	Norm / 11B		Norm / 11B2
C INVERTER – IN SYNCH	(YES or NO)	Yes		Yes
FEED FROM	(Batt. or Norm.) (VBA / VBB / VBC / VBD)	Norm / 11B		Norm / 11B2
D INVERTER – IN SYNCH	(YES or NO)	Yes		Yes
FEED FROM	(Batt. or Norm.) (VBA / VBB / VBC / VBD)	Norm / 12B		Norm / 11B2
E INVERTER – IN SYNCH	(YES or NO)	Yes		Yes
FEED FROM	(Batt. or Norm.) (VBA / VBB / VBC / VBD)	Norm / 11B		Norm / 11B2
STATUS E INVERTER FEEDING	(ATB or VBA, VBB VBC, VBD)	ATB		ATB

192 137

SECONDARY AUX. OPERATORS'S LOG SHEETS

3-26-79 Date

			11-7	7-3	3-11
BATTERY GROUND DETECTOR	(11-7) SHIFT READINGS		KΩ		
	A BATTERY	P BUS	+200		
		PN BUS	+200		
		N BUS	+100		
	B BATTERY	P BUS	-12		
		PN BUS	-335		
		N BUS	+225		
Verify A Battery Room Ventilation Flow Exists (✓ if ribbons indicate flow)			✓		✓
Verify B Battery Room Ventilation Flow Exists (✓ if ribbons indicate flow)			✓		✓
1C 480 V E.S. CC FED FROM (S or P) 480 V BUS			S		
1M DC DIST PANEL FED FROM (A or B) BATTERY			B		

Check closed Fire Doors on Elev. 322' of Control Building	11-7	7-3	3-11
1. Elev. 322' - 2 Doors, entrance to stairway from turbine bldg.	✓		✓
2. Elev. 322' - Entrance to patio from stairway.	✓		✓
3. Elev. 322' - Entrance to control bldg. from stairway.	✓		✓
4. Elev. 322' - Entrance to patio from transfer switch room- Double Door	✓		✓
5. Elev. 322' - Entrance to patio from "B" battery room - Double Door	✓		✓
6. Elev. 322' - Double Door between "A" & "B" Battery Rooms.	✓		✓
7. Elev. 322' - Door between "A" Battery Room & "A" Inverter Room.	✓		✓
8. Elev. 322' - Door between "B" Battery Room & "B" Inverter Room.	✓		✓
9. Elev. 322' - Door between "A" & "B" Inverter Rooms.	✓		✓
10. Elev. 322' - Double Door between "A" Inverter Room & 1P Bus.	✓		✓
11. Elev. 322' - Double Door between "B" Inverter Room & 1S Bus.	✓		✓
12. Elev. 322' - Door between 1P Bus & 1S Bus Rooms.	✓		✓
13. Elev. 322' - Double door between 1P Bus & 1S Bus Rooms.	✓		✓
14. Elev. 322' - Door between 1S Bus & Transfer Switch Room.	✓		✓
15. Elev. 322' - Double Door between 1S Bus and Transfer Switch Room.	✓		✓

SECONDARY AUX. OPERATOR'S LOG SHEETS

9-23-74 DATE

	11 - 7	7 - 3	3 - 11
CONTROL BLDG BASEMENT			
AH-E 8A/B, 9A/B COMPRESSOR (BLOW DOWN RECEIVER, MECH. CHECK) (✓ OK)	✓		
CHILLERS (LOG FOR RUNNING CHILLER) WHICH CHILLER RUNNING (A/B)	B		
CONDENSER PRESSURE (10" Vac Hg-9 psig)	6		
OIL PRESSURE (70-80 psig) (psig)	62		
COOLER PRESSURE (15-20" Vac) ("Hg)	17		✓
IS STANDBY CHILLER OIL HEATER ON (YES or NO)	✓		✓
LIST ANY ALARMS CHECK CHILLER OIL LEVELS (✓ OK)	✓		A Low
Check the following Fire Doors Closed.			
Control Bldg. Elev. 305' and 281'			
1. Elev. 281' - Entrance to Control Bldg. Chillers.	✓		✓
2. Elev. 305' - Entrance to Storage Area in H. P. Room.	✓		
3. Elev. 305' - Entrance to Control Bldg. from F.H. Bldg.	✓		
4. Elev. 305' - Entrance to Control Bldg. from Stairway.	✓		✓
5. Elev. 305' - 2 Doors, Entrance to stairway from Turbine Bldg.	✓		✓
REMARKS:			
TURBINE BUILDING - 5TH FLOOR			
4A HEATER LEVEL Sightglass/Yarway (20-40%/-1 to -3 ") (± INCHES)	-1.5	/	-1 1/2
4B HEATER LEVEL " " " " (± INCHES)	-1	/	-1
2A HEATER LEVEL " " " " (± INCHES)	-1	/	-1
2B HEATER LEVEL " " " " (± INCHES)	-1	/	-1
TURBINE BUILDING - 4TH FLOOR			
GENERATOR CORE MONITOR (CHECK FLOW, POWER, > 85%) (✓ OK)	✓		
BEARING OIL HEADER PRESS. - FRONT STANDARD (23 - 28.5 psig) (PSIG)	23.5	~~23.5~~	23.5
MAIN PUMP SUCTION PRESSURE (18 - 28.7 psig) (PSIG)	0	0	0
OPERATING OIL PRESSURE (255 - 275 PSIG) (PSIG)	25	~~25~~	25
MAIN BEARING HEADER OIL TEMP. (110 - 125°F) (°F)	92		95
NO. 1 BEARING OIL DRAIN TEMP. (125 - 130°F) (°F)	95		97
NO. 2 BEARING OIL DRAIN TEMP. (130 - 140°F) (°F)	98		102
THRUST BEARING OIL DRAIN TEMP. - TURBINE END (130 - 147°F) (°F)	92		94
THRUST BEARING OIL DRAIN TEMP. - GENERATOR END (120 - 140°F) (°F)	95		95
NO. 3 BEARING OIL DRAIN TEMP. (125 - 135°F) (°F)	94		96
NO. 4 BEARING OIL DRAIN TEMP. (130 - 140°F) (°F)	95	192 139	98
NO. 5 BEARING OIL DRAIN TEMP. (125 - 135°F) (°F)	94		97

		11-7	7-3	3-11
NO. 6 BEARING OIL DRAIN TEMP. (130 – 140°F)	(°F)	75		75
NO. 7 BEARING OIL DRAIN TEMP. (130 – 140°F)	(°F)	96		95
NO. 8 BEARING OIL DRAIN TEMP. (130 – 140°F)	(°F)	94		101
NO. 9 BEARING OIL DRAIN TEMP. (130 – 140°F)	(°F)	93		95
NO. 10 BEARING OIL DRAIN TEMP. (120 – 130°F)	(°F)	91		94
NO. 11 BEARING OIL DRAIN TEMP. (120 – 140°F)	(°F)	84		92
NO. 12 BEARING OIL DRAIN TEMP. (120 – 140°F)	(°F)	93		96
H_2 SEAL OIL PRESSURE TO TURB. & GEN. END COLLECTOR SEALS	(PSIG)	62		30/60

192 140

3-28-79 DATE

		11 - 7	7 - 3	3 - 11
EXCITER: ASSURE NO ARCING IN BRUSHES	(✓ OK)	✓	✓	✓
ASSURE NEON LIGHTS ARE ON	(✓ OK)	N/S	N/S	N/S
Roof Fans (various buildings) Operate fans as needed and submit work requests for drive belt and damper problems.	(✓ OK)	✓	✓	✓
GAGE BOARD BY 8TH STAGE & 10TH STAGE HTR'S.:				
MAIN STEAM PRESS. A (860 - 910 PSIG)	(PSIG)	0		
MAIN STEAM PRESS. B (860 - 910 PSIG)	(PSIG)	870		
MAIN STEAM PRESS. C (860 - 910 PSIG)	(PSIG)	900		
MAIN STEAM PRESS. D (860 - 910 PSIG)	(PSIG)	875		
ΔP ACROSS NO. 1 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
ΔP ACROSS NO. 2 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
ΔP ACROSS NO. 3 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
ΔP ACROSS NO. 4 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
ΔP ACROSS NO. 5 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
ΔP ACROSS NO. 6 MOIST. SEPARATOR 3 PSID MAX. (IN PRESS - OUT PRESS)	(PSID)	0		
EXH. HOOD TEMP A HOOD NORTHWEST CORNER (95-115°F)	(°F)	84		
PRESS OUT OF NO. 4 CIV (155-170 psig)	(PSIG)	0		
B EXH. HOOD TEMP NORTHWEST CORNER (95-120°F)	(°F)	108		
PRESS OUT OF NO. 5 CIV (155-170 psig)	(PSIG)	0		
B EXH. HOOD TEMP SOUTHWEST CORNER (95-120°F)	(°F)	75		
PRESS OUT OF NO. 6 CIV (155-170 psig)	(PSIG)	0		
C EXH. HOOD TEMP SOUTHWEST CORNER (100-130°F)	(°F)	73		
NOTE: CRACK OPEN H_2 COOLER VENTS THEN CLOSE WHEN VENTED	(✓ OK)	✓		
PRESS OUT OF NO. 1 CIV (155-170 psig)	(PSIG)	0		
C EXH. HOOD TEMP NORTHEAST CORNER (100-130°F)	(°F)	78		
B EXH. HOOD TEMP SOUTHEAST CORNER (95-120°F)	(°F)	82		
PRESS OUT OF NO. 2 CIV (155-170 psig)	(PSIG)	0		
A EXH. HOOD TEMP SOUTHEAST CORNER (95-115°F)	(°F)	80		
PRESS OUT OF NO. 3 CIV (155-170 psig)	(PSIG)	0		

SUNRISE - 4th Floor lighting panel (TB-3) lower section switches #10 to #20 turned "OFF" (unless maintenance taking place requires lighting; Minimum of switches: #12 to #16; Maximum switches used: #10 to #20). initial

SUNSET - TB-3 lighting panel lower section switches #12 to #16 turned "ON" 192 141 (Use lower section switches #10 to #20 if Maintenance Dept. requires them.) initial

SECONDARY AUX. OPERATOR'S LOG SHEETS

5-26-79 DATE

		11 - 7	7 - 3	3 - 11
TURBINE BLDG. 4TH FLOOR	Rotate strainers if N.P. Lift Pumps are in service.	✓		✓
BEARING LIFT PUMPS (WHEN RUNNING)	NO. 6 (1900-2300)(psig)	1700		2300
	NO. 3 (1400-2000)(psig)	900		700
	NO. 1 (1300-1400)(psig)	1300		1250
	NO. 5 (1200-1300)(psig)	1000		900
	NO. 4 (1600-2300)(psig)	500		450
	NO. 2 (1300-1600)(psig)	1300		1150
	NO. 8 (1200-1400)(psig)	600		700
	NO. 7 (1600-2300)(psig)	1400		1450
	NO.10 (400-600) (psig)	1500		1500
	NO. 9 (2200-2500) (psig)	2300		2250
A 8TH STAGE HEATER LEVEL - Sightglass (20-40%)	(% LEVEL)	45%		30%
B 8TH STAGE HEATER LEVEL - Sightglass (20-40%)	(% LEVEL)	N/S		
A 10TH STAGE HEATER LEVEL - Sightglass (20-40%)	(% LEVEL)	↓		
B 10TH STAGE HEATER LEVEL - Sightglass (20-40%)	(% LEVEL)	↓		
TURBINE BLDG - MEZZANINE				
6000, 4160 & 480 SWITCHGEAR (LIGHTS, RELAY TARGETS)	(✓ OK)		✓	
POWDEX (LOG 11 - 7 SHIFT) RECORD POWDEX OPERATING DATA IN POWDEX LOG BOOK & LEAVE IN POWDEX LOG BOOK.	(✓ OK)	11 - 7 SHIFT ✓		
REMARKS: (Note any vessel precoated)				
Bus Duct Cooling Temp. (TI/TS-365) (alarm set @ 160°F) (°F)		83		90
Bus Duct Cooling Water Outlet Temp. (TI-167)	(°F)	77		84
Bus Duct Cooling Water Flow FI-44	(gpm)	7120		7120
Bus Duct Cooler A or B in service - damper handle out. (North or South cooler)		S		30%
GLAND STEAM EXHAUSTER VACUUM (10 - 15 DURING OPERATION, 6 - 12 ON TURNING GEAR)	(IN. H_2O)	7		✓
TURBINE 1ST STAGE PRESSURE (JUST SOUTH OF LUBE OIL RES.)	(PSIG)	0		0
TURBINE LUBE OIL LEVEL (Normal ± 4 inches)	(inches)	+3		+3
OIL TEMP. TO COOLER (135 - 145°F)	(°F)	78		100
OIL TEMP. FROM COOLER (110 - 130°F)	(°F)	96 192 142		99
TANK EXHAUSTER IN OPERATION	(✓ OK)	✓		✓
MOTOR BEARING PUMP UPPER BEARING OIL LEVEL (> 25%)	(✓ OK)	✓		✓

SECONDARY AUX. OPERATOR'S LOG SHEETS

5-25-79 DATE

			11 - 7	7 - 3	3 - 11
TURBINE BLDG. MEZZANINE – FEED PUMP TURBINES					
A FWP	OIL PRESSURE BEFORE FILTER (45 - 50) PG. 3	(PSIG)	43		42.5
	OIL PRESSURE AFTER FILTER (38 - 50) PG. 4	(PSIG)	40		40.5
	DIFFERENTIAL ACROSS OIL FILTER (0 - 7) PG. 3 – PG. 4	(PSIG)	3		2
	PUMP BEARING OIL PRESSURE (12-20) PG. 9	(PSIG)	16.2		16.2
	OIL TANK LEVEL (Normal ± 1 inch)	(inches)	-1		-2
	HYDRAULIC OIL PRESSURE (185-210) PG. 1	(PSIG)	198		198
	TURBINE BEARING OIL PRESSURE (10 - 13) PG. 2	(PSIG)	13		13.4
	OIL TEMPERATURE FROM COOLER (Variable) DT 1	(°F)	88		90
	THRUST BEARING OIL DRAIN TEMPERATURE (130-150 DT 2	(°F)	96		98
	CONTROL OIL PRESSURE (55 - 60) PG. 5	(PSIG)	54		54
	SEAL WATER ΔP (47-50 PSID)	(PSID)	N/S		48
	HP JOURNAL OIL DRAIN TEMPERATURE (130-145) DT 4	(°F)	92		95
Near Exhaust →	LP JOURNAL OIL DRAIN TEMPERATURE (140-155) DT 3	(°F)	100		103
	PERFORM HP STOP VALVE TEST PER OP 1106-3	(✓ OK)	✓ N/S		
	PERFORM LP STOP VALVE TEST PER OP 1106-3	(✓ OK)	✓ N/S		
B FWP	OIL PRESSURE BEFORE FILTER (45 - 50) PG. 3	(PSIG)	44		42.
	OIL PRESSURE AFTER FILTER (38 - 50) PG. 4	(PSIG)	38		37
	DIFFERENTIAL ACROSS OIL FILTER (0 - 7) PG. 3 - PG. 4	(PSIG)	6		5
	PUMP BEARING OIL PRESSURE (12-20) PG. 9	(PSIG)	12.8		13.4
	OIL TANK LEVEL (Normal ± 1 inch)	(inches)	-½		-1
	HYDRAULIC OIL PRESSURE (185-210) PG. 1	(PSIG)	180		194
	TURBINE BEARING OIL PRESSURE (10 - 13) PG. 2	(PSIG)	12		12.5
	OIL TEMPERATURE FROM COOLER (Variable) OT 1	(°F)	110		120
	THRUST BEARING OIL DRAIN TEMPERATURE (130-150 DT 2	(°F)	122		130
	CONTROL OIL PRESSURE (55 - 60) PG 5	(PSIG)	62		62
	SEAL WATER ΔP (47-50 PSID)	(PSID)	50		53
	HP JOURNAL OIL DRAIN TEMPERATURE (130-145) DT 4	(°F)	122		130
Near Exhaust →	LP JOURNAL OIL DRAIN TEMPERATURE (140-155) DT 3	(°F)	134		136
	PERFORM HP STOP VALVE TEST PER OP 1106-3	(✓ OK)	✓		
	PERFORM LP STOP VALVE TEST PER OP 1106-3	(✓ OK)	✓		
FWP GAUGE BOARD	FWP A SUCTION PRESS. PI - 77 *420	(PSIG)	0		0
*Approximately at 100% power	FWP A DISCH. PRESS. PI - 62 *1100	(PSIG)	600		620
	FWP B SUCTION PRESS. PI 78 *420	(PSIG)	0		0
	FWP B DISCH. PRESS. PI 63 *1100	(PSIG)	560		590

192 143

SECONDARY AUX. OPERATORS LOG SHEETS

DATE 8-28-7-

		11 - 7	7 - 3	3 - 11
TURBINE BLDG – MEZZANINE				
LOW PRESS. DRAIN COLLECTION TANK LEVEL (55%)	(% FULL)	55%	5[illegible]	5[illegible]
PRESSURIZER HEATER MCC (CHECK CIRCUIT FAILURE LIGHTS)	(✓ OK)	✓		✓
480 V E & F SWITCHGEAR (TEMP., RELAYS)	(✓ OK)			
RM-A5 FLOW ADJUST TO 6 IF REQUIRED (CORRESPONDS TO 6,000 CC/MIN)	(GAUGE GLASS FLOW #)	6	6	6
IWT				
VACUUM DEGASSIFIER VACUUM (> 25" HG - PI-622)	(" HG)	27		27
LEVEL (80%)	(%)	85%		80
VACUUM PUMP WT-P9 A/B OIL SEPARATOR LEVEL	(%)	✓		0/50
TURBINE BLDG. BASEMENT				
A LOOP AMERTAP ΔP (3" H20)	("H_2O)	1.5		N/A
B LOOP AMERTAP ΔP (3" H20)	("H_2O)	1.5		N/A
DEGASSIFIER BOOSTER PUMP (A/B) DISCH. (75 - 105 PSIG)	(PSIG)	1.5		1.5
NUCLEAR MAKEUP FILTER WT-F1 ΔP (IF IN SERVICE) (2 PSID)	(PSID)	1.5		N/A
CATION INLET FLOW INTEGRATOR (LOG 11 - 7 SHIFT)		4 2 6 4 5 4		00 GAL.
ANION A INLET FLOW TOTALIZER (RED NEEDLE) X 22,200		0		5
ANION B INLET FLOW TOTALIZER (RED NEEDLE) X 22,200		4		0
MIXED BED A INLET FLOW TOTALIZER (RED NEEDLE) X 22,200		70		6.5
MIXED BED B INLET FLOW TOTALIZER (RED NEEDLE) X 22,200		0		70
MIXED BED TO TURB. PLANT INTEGRATOR (LOG 11 - 7 SHIFT)		8 1 7 1 5 4		00 GAL.
MIXED BED TO NUCLEAR PLANT INTEGRATOR (LOG 11 - 7 SHIFT)		3 5 6 1 2 2		00 GAL.
Is IWT within 20% of end of run? If Yes, notify Chemistry.		NO		NO
*T.S. A CONDENSATE STOR. TK. LEVEL (> 11')	(FT.)	16.2		12.0
*T.S. B CONDENSATE STOR. TK. LEVEL (> 11')	(FT.)	16.2		13.7
NEUTRALIZING TANK LEVEL	(FT.)	20"		35"
MILLION GAL. DEMIN. WATER TK. LEVEL (≥ 35 ft.)	(FT.)	24		17
CAUSTIC TANK LEVEL TO TAKE READING: CUT IN INSTRUMENT PER OP 1104-23 (> 1500 gal)	(GAL.)	3140		
ACID TANK LEVEL TO TAKE READING: CUT IN INSTRUMENT PER OP 1104-23 (> 1500 gal)	(GAL.)	1720		
REMARKS:				
CL-P1 DOMESTIC WATER CHLORINATOR (TANK FULL)	(✓ OK)	✓		✓
POWDER SPENT RESIN SUMP DISCH. INTEGRATOR		0 1 2 9 5 6 2 3		0 GAL.
SERVICE AIR COMPRESSORS OIL LEVEL	(✓ OK)	✓		✓
A WATER OUTLET TEMPERATURE (95 - 105)	(°F)	54		93
B WATER OUTLET TEMPERATURE (95 - 105)	(°F)	61	192 144	94
A/B RECEIVER PRESSURES (90 - 100 PSI NORMAL)	(PSIG)	90		90/90
BLOWDOWN RECEIVERS	(✓ OK)	✓		
*T.S. CHLORINE MONITOR (CHECK PROPER FLOW, REAGENT LEVEL)	(✓ OK)	✓/0		1.1
*T.S. CIRC. WATER CL PPM @ TIME SPECIFIED CORRESPONDS TO CHLORINATION CYCLE	(PPM)			1.5

SECONDARY AUX. OPERATOR'S LOG SHEETS

3-25-79 DATE

		11-7	7-3	3-11
CIRC. WATER BLOWDOWN FLOW (2500 GPM)	(GPM)	15	0	0
BLOWDOWN IN MANUAL OR AUTO.	(MAN. OR AUTO)	MAN		MAN
IS DEICING IN PROGRESS?	(YES or NO)	NO		NO
/ TURBINE BLDG. – BASEMENT NOTE: SSCCW ΔT >12°F REQUIRES BACKWASH				
SSCC WATER INLET TO HEAT EXCH. TEMP (TI-161) (60-90°F)	(°F)	48		50
SSCCW OUTLET TEMP. A HT. EXCH. (TI-162) (50-85°F)	(°F)	51	~~52~~	52
SSCCW OUTLET TEMP. B HT. EXCH. (TI-163) (50-85°F)	(°F)	45	~~41~~	46
SSCCW OUTLET TEMP. C HT. EXCH. (TI-164) (50-85°F)	(°F)	50	~~52~~	52
SSCCW OUTLET TEMP. D HT. EXCH. (TI-165) (50-85°F)	(°F)	50	~~52~~	52
SSCCW HEAT EXCHANGER COMMON OUTLET TEMP. (TI-166) (50-85°F)	(°F)	50		51
SSCCW PUMP CHECK	(✓ OK)	✓		✓
H_2 SEAL OIL – GENERATOR H_2 (CHECK TO ASSURE MOISTURE SEPARATOR IS DRY)				
GAS FLOW TG-AFM (1.0 SCFH)	(SCFH)	1		0.7
H_2 PRESSURE (HEISEY GAUGE IF AVAIL.) (58-62 PSIG)	(PSIG)	53		61.2
H_2 PURITY (100%)	(% H_2)	100		100
ALTERNATOR GAS TEMP. (MAX. 51 °C)	(°C)	26		27
SEAL OIL/MACH GAS PRESS (HGA-2) > 25 PSID	(PSID)	68		10
VACUUM (HGA-3) (26 in. HG)	(IN. HG)	26		26.6
MAIN OIL PUMP PRESS. (HGA-1) (> 105 PSIG)	(PSIG)	105		107
VACUUM PUMP OIL LEVEL (1/4 TO 1/2)	(✓ OK)	✓		✓
LEAK DETECTORS (0 to 1/4)	(✓ OK)	✓		✓
STATOR COOLING	(✓ OK)	✓		✓
GE-P5 A/B OIL LEVEL (1/4 TO FULL)	(PSIG)			130
STATOR COOLING PUMP DISCH. PRESS. (115-135 PSIG)	(PSIG)	55		55
STATOR WINDING INLET PRESS. (45-55 PSIG)	(GPM)	52		52.0
STATOR WINDING COOLANT FLOW (440-480 GPM)	(°C)	20		20
STATOR WINDING DISCH. TEMP. (50-65°C)	(°C)	24		24
STATOR WINDING INLET TEMP. (25-50°C)	(PSID)	2		1
FILTER DP (TG-PI-517-518) 8 PSID MAX.	(PSID)	1		5
DEMINERALIZER DP (TG-PI 519-520) (3-10 PSID)	(± INCHES)	+1		-1
SURGE TANK LEVEL (±2 INCHES)	(GPM)	17		20
RECTIFIER FLOW (17-20 GPM)				
OPEN VALVE Y-80 TO DRAIN ANY CONDENSATE ACCUMULATION				✓
CONDENSATE SURGE CHAMBER LEVEL (12 inches)	(✓ OK)	✓		✓
CONDENSATE PUMPS (LUBE, PRESS., STRAINER ΔP)	(✓ OK)	✓		✓
* NPDES TURB. ROOM SUMP PUMP SD-P5 DISCH. FLOW INTEGRATOR (11-7)		002201		00 GAL.
* NPDES TURB. ROOM SUMP PUMP DISCH. FLOW INTEGRATOR (11-7)		019308		0 GAL.

	11 - 7	7 - 3	3 - 11
TURBINE BLDG. – BASEMENT			
AUX. BOILER CHEM. FEED AMMONIA TK. LEVEL (5 inches minimum) (FILL IF NECESSARY) (INCHES)	11		13
AMMONIA PUMP DISCH. PRESS. (50-350PSIG) (PSIG)	N/S		—
HYDRAZINE TK. LEVEL (5 inches minimum) (FILL IF NECESSARY) (INCHES)	13		5½
HYDRAZINE PUMP DISCH. PRESS. (50-350PSIG) (PSIG)	N/S		265
CONDENSATE CHEM. FEED AMMONIA TK. LEVEL (5 inches minimum) (FILL IF NECESSARY) (INCHES)	17		17
AMMONIA PUMP DISCH. PRESS. (100-150PSIG) (PSIG)	N/S		N/S
HYDRAZINE TK. LEVEL (5 inches minimum) (FILL IF NECESSARY) (INCHES)	33		25
HYDRAZINE PUMP DISCH. PRESS. (100-150PSIG) (PSIG)	210		220
Secondary Nitrogen Tube Trailor Pressure at NI-V-201 and/or NI-V-203 (when in service)	1900		1650 ~~1~~
SODIUM ANALYZER CHECK CHART FOR ABNORMALITIES. REPORT TO SF TIME & DATE CHART AT MIDNIGHT (✓OK)	✓		✓
Na^+ METER READING (CE-260) (50 PPB MAX) (ppb)	6½		21
NO. 2 FUEL OIL TANK LEVEL NOTIFY SHIFT FOREMAN WHEN BELOW (12' 10") (FT.-IN.)	16		16' 3½"
AUX. BOILERS (LOG DATA WHEN RUNNING) NOTE: MAINTAIN DRUM LEVEL -3" ±2 WHEN BOILER SHUTDOWN			
CHECK FORCED DRAFT FANS (LUBE, DEBRIS ON SCREENS, VIBRATION (✓ OK)	N/S		
INDICATE BOILER(S) IN SERVICE (A/B)			A&B
FEED PUMP DISCH. PRESS. PI-51 & 50 (275-325 PSIG) (PSIG)			275
FEED PUMP CHECK (SEALS LUBE VIBRATION) (✓ OK)			✓
If Boilers Are Running: Indicate which Unit steam is going to. (Unit #1 or #2)			
If Boilers Are Running: If steam is going to both, indicate estimated percentage to Unit #1 and Unit #2. (%Unit #1/%Unit #2)	✓		
If Boilers Are Running: Call Relay Room Coradox Unit Level & Pressure Rdg. to CRO.			10 300
A BOILER (IF IN SERVICE) IF NOT, IS PEGGING STEAM CUT IN? (YES NO)	N/S		YES
AS-V29A # TURNS OPEN (2 Turns) (#TURNS)			2
BLOW DOWN MUD DRUM / INDICATE DRUM LEVEL ⊕ (✓OK / INCHES)	✓	✓	✓ -2
ATOMIZING STEAM PRESSURE (125-140 PSIG) (PSIG)			102
STEAM FLOW (0-125,000 lb/hr) (10^3 LB/HR.)			135
FURNACE PRESSURE (9-13") ("H_2O)			10
WIND BOX PRESSURE (15-20") ("H_2O)			17
BOILER OUTLET PRESSURE (> + 2") ("H_2O)			
B BOILER (IF IN SERVICE) IF NOT, IS PEGGING STEAM CUT IN? (YES NO)			NO
AS-V29B # TURNS OPEN (TURNS)			2
BLOW DOWN MUD DRUM / INDICATE DRUM LEVEL ⊕ (✓OK / INCHES)	✓	✓	✓
ATOMIZING STEAM PRESSURE (110-125 PSIG) (PSIG)			112
STEAM FLOW (0-125,000 lb/hr) (10^3 LB/HR.)	192	146	122
FURNACE PRESSURE (10-14") ("H_2O)			11
WINDBOX PRESSURE (15-20") ("H_2O)	✓		17
BOILER OUTLET PRESSURE (> + 2") ("H_2O)			

SECONDARY AUX. OPERATORS LOG SHEETS

DATE 8-24-79

		11 - 7	7 - 3	3 - 11
TURBINE BLDG. -- BASEMENT				
EHC – EHC MANIFOLD PRESSURE (1500-1650 PSIG)	(PSIG)	1600		1600
RUNNING PUMP/DISCH. PRESS. (1500-1900 PSIG)	(A or B / PSIG)	B / 6	/	A / 44
INLET PRESSURE TO FINE FILTER (10-20 PSIG)	(PSIG)	21		21
INLET PRESS. TO FULLERS EARTH FILTER (25-45 PSIG)	(PSIG)	0		0
FLUID TEMPERATURE (85-100°F)	(°F)	96		100
FLUID LEVEL (Normal ± 2 inches)	(inches)	+5		+0.5
SUCTION STRAINER STATUS	(✓ STATUS) FILTER CLEAN	✓		✓
	NEEDS CLEANING			
	BYPASSING			✓
CIRCULATING WATER INLET TO CONDENSER PRESS A	(PSIG)	25.5		26
(ANY OVERPRESSURE TRIP LIGHTS OUT?) B	(PSIG)	26.5		26
CIRCULATING WATER PH (JAN - AUG → 7.3 PH; SEPT - DEC → 7.5 PH)	(PH)	7.2		7.6
CIRCULATING WATER CONDUCTIVITY (JAN - APR → 1630 M2MHO; MAR - AUG → 1470 M2MHO; SEP - DEC → 1510 M2MHO)	(MMHO)	4.0		5
MAIN LUBE OIL BOWSER – EXHAUSTER RUNNING	(✓ OK)	✓		✓
WATER LEVEL (MAINTAIN @ RED MARK)	(✓ OK)	✓		✓
OIL LEVEL – 1/2 FULL	(% FULL)	65%		65%
LO - P_2 DISCH. PRESS. (15-25 PSIG) PI-339	(PSIG)	16		16
FLOW FI-157 (1-3 GPM)	(GPM)	3.9		2.3
ΔP ACROSS INTERNAL FILTER PI-337 - PI-338 (6-25PSID)	(PSID)	6		6
FILTER BAG COMPT. SIGHTGLASS 0 - 6" (CHANGE @ 6")	(INCHES)	4		1.4
CONDENSATE BOOSTER PUMPS (LUBE, SEALS, OIL LEVEL)	(✓ OK)	✓		✓
A LUBE PRESS. (12 - 16 PSIG)	(PSIG/✓ IF CO-P-2A RUNNING)	12		15 ✓
B LUBE PRESS. (12 - 16 PSIG)	(PSIG/✓ IF CO-P-2B RUNNING)	12.5		15
C LUBE PRESS. (12 - 16 PSIG)	(PSIG/✓ IF CO-P-2C RUNNING)	12.5		15
MAIN VACUUM PUMPS (LOG DISCH FLOW) A	(CFM)	5		5
(CHECK SEAL WATER LEVEL, OIL LEVEL & DISCHARGE TEMP) B	(CFM)	4.5		4.5
C	(CFM)	3		2
MISC. DRAINS COLLECTION TANK LEVEL (20%)	(% FULL)	15%		
FEED WATER PUMP BOWSERS International Filter Δ P (0-25) PI-490-PI-489				
FILTER BAG COMPARTMENTS (0 - 6")	(INCHES)	1.5		1.5
OUTPUT FLOW "A" (0 - 4)	(0 - 4)	1		1
OUTPUT FLOW "B" (0 - 4)	(0 - 4)			
PRESSURE PI- 490 (20-30)	(PSIG)	✓		✓
AUX. CONDENSER VACUUM PUMPS				
INDICATE AIR FLOW FOR RUNNING PUMPS - A	(CFM)	13 192	147	12
(CHECK OIL, TEMP.) B	(CFM)	0		5-6
C	(CFM)	3		2.5

SECONDARY AUX. OPERATOR'S LOG SHEETS

HEATER DRAIN PUMPS		11-7	7-3	3-11
HD-P-1A	Flow (~ 2500 gpm)			
Outboard Pump Bearing Lube Oil				
Level	(~1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°)			
Inboard Pump Bearing Lube Oil				
Level	(~ 1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°F)			
Inboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			
Outboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			
HD-P-1B	Flow (~ 2500 gpm)			
Outboard Pump Bearing Lube Oil				
Level	(~ 1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°)			
Inboard Pump Bearing Lube Oil				
Level	(~ 1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°F)			
Inboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			
Outboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			

192 148

SECONDARY AUX. OPERATOR'S LOG SHEETS

HEATER DRAIN PUMPS		11-7	7-3	3-11
HD-P-1C	Flow (~ 2500 gpm)			
Outboard Pump Bearing Lube Oil				
Level	(~ 1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°)			
Inboard Pump Bearing Lube Oil				
Level	(~ 1/3 Full)			
Color	(Tan)			
Temperature	(100° - 130°F)			
Inboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			
Outboard Motor Bearing Lube Oil				
Level	(Bulls Eye ½ Full)			
Color	(Clear-Tan)			

SECONDARY AUX. OPERATOR'S LOG SHEETS

Date 3-28-79

			11-7	7-3	3-11
Intermediate Bldg.					
A	Instrument Air Compr. Oil Level (Visible)	(✓ OK)	✓		✓
	After Cooler Outlet Temp. (95-105°F)	(° F)	78		75
	1A-T1A Receiver Pressure (90-100)	(PSIG)	94		94
	Blowdown Receiver & After Cooler Trap	(✓ OK)	✓		✓
	Loading Check Avg. Time Loaded	(Min.)	40 sec		120"
	Estimate Times Over 2 Cycles Avg. Time Unloaded	(Min.)	120 sec		22"
	1A Dryer Moisture Indicator (Blue - Good) (Pink - Excess Moisture)	(✓ OK)	✓		✓
	1A Dryer Purge Pressure (56 to 60 psig when purging)	(PSIG)	60		60
	1A Dryer Heating Cycle Temp. (150-200°F) if heating	(°F)	140		150
	1A-F-2A/B Prefilters ΔP (PI 492-491) < 5 PSID	(PSID)	1		2
	1A-F-3A/B Afterfilters ΔP (PI 494-493) < 5 PSID	(PSID)	2		1
B	Instrument Air Compressor Oil Level (Visible)	(✓ OK)	✓		✓
	After Cooler Outlet Temp. (95-105°F) (If Running)	(°F)	N/S		N/A
	1A-T1B Receiver Pressure (90-100)	(PSIG)	95		95
	Blowdown Receiver & After Cooler Trap	(✓ OK)	✓		✓
	Loading Check Avg. Time Loaded	(Min.)	N/S		N/A
	Estimate Times Over 2 Cycles Avg. Time Unloaded	(Min.)			N/A
	Dewpoint Reading (-60°C to -10°C) > -10°C Inform SF		-45		-42
	Check RM-A2 In Service Radiation Monitor RM-A2 Pump Running	(✓ OK)	✓		✓
	Valves V-1, V-2, V-3, V-4 are in the #1 position	(✓ OK)	✓		✓
	Valves CM-V5, CM-V6 are in the #2 position	(✓ OK)	✓		
	Cover on Movable Filter is Secured	(✓ OK)	✓		✓
	Verify Air Flow at 2 CFM	(CFM)	2		2
	Verify Vacuum (2-5)		3		2
	EF-P1 Mechanical Overspeed Trip Device in Latched Position		✓		✓

192 150

SECONDARY AUX. OPERATOR'S LOG SHEETS Date 3-25-74

		11-7	7-3	3-11
NSCC Flow to AH-E-1A (F1-242A) (15-30 GPM)	(GPM)	21		20
NSCC Flow to AH-E-1B (F1-242B) (15-30 GPM)	(GPM)	R.T.		R.T.
NSCC Flow to AH-E-1C (F1-242C) (15-30 GPM)	(GPM)	22		23
Assure No NSCCW Flow to Emerg. Coolers F1-76)	(✓ OK)	✓		✓
Industrial Cooler Running Pump AH-P2A/B	(A or B)	A		B
Circ. Pump Disch. Press (70-85 PSIG)	(PSIG)	82		50
Circ. Pump Disch. Temp. (75-105°F)	(°F)	78		—
Head Tank Level (75-95%)	(% Full)	90%		—
Humidity Recorder (Time & Date Chart) (Interm. Bldg.-305 Elev.) (R.B. Press. Panel)	(✓ OK)	✓		✓
Main Steam Compartment Check (Check for steam & water leaks)	(✓OK)	✓		
Check the Following Fire Doors as Being Closed				
Intermediate Building 306'				
1. Elev. 306' - Double Door, Entrance to Intermediate Bldg.		✓		✓
2. Elev. 306' - Entrance to Leak Rate Dryer Room		✓		✓
3. Elev. 306' - Entrance to Stairway - IA-P-1A		✓		✓
4. Elev. 306' - Entrance to Stairway - Emerg. Cooler Valve Room		✓		—
5. Elev. 306' - Sliding Fire Door for EF-P-2A,B - (Fusible Link in Place)		✓		—
6. Elev. 306' - Sliding Fire Door for EF-P-1 - Fusible Link in Place)		✓		✓
7. Elev. 306' - Sliding Fire Door for IA-P-1B - Fusible, Link in Place)		✓		✓

SECONDARY AUX. OPERATOR'S LOG SHEETS

3-25-75 DATE

DIESEL GENERATORS (LOG 7-3 SHIFT) (CHECK DIESELS EVERY SHIFT)		A DIESEL	B DIESEL
OIL LEVELS (above low)	(✓ OK)	✓	✓
LUBE OIL SUMP (Dip Stick/Running side, non-running side)	(✓ OK)	✓	✓
GOVERNOR (SIGHT GLASS) (Between marks)	(✓ OK)	✓	✓
GENERATOR END BEARING (SIGHT GLASS) (> 1" in Sightglass)	(✓ OK)	✓	✓
FUEL OIL DAY TAN (> 1/2 FULL)	(% FULL)	90	90
AIR COMPRESSOR LUBE OIL (DIP STICK) (In checkered area)	(✓ OK)	✓	✓
COOLANT EXPANSION TANK LEVEL – (1/4 TO 3/4 FULL) GAGE IN UPPER BACK OF RADIATOR HOUSING	(✓ OK)	✓	✓
AIR RECEIVER PRESSURE (225 - 250 PSIG)	(PSIG)	235	235
JACKET WATER TEMPERATURE (120 - 140°F) @ EMIP	(°F)	117	132
LUBE OIL (90°-115°) TI-500 A/B TI-500 A/B WHEN DIESEL IS RUNNING ONLY IF DIESEL NOT RUNNING-TEMP. IS AMBIENT	(°F)	N/A	N/A
ELECTRICAL ES TEST LIGHT LIT	(YES or NO)	Y	Y
ALL SWITCHES IN AUTO (LIST IF NO)	(YES or NO)	Y	Y
ANY ALARMS (List if yes and report to S.E.)	(YES or NO)	N	N
VISIBLE LEAKAGE (OIL, WATER)	(YES or NO)	N	N

DF-T-1 Level (Gallons) 28 000

NOTE:

All oil leakage must be wiped up immediately. Special attention should be given to checking for oil accumulation in areas which are at high temperature when engine is running.

Example – A thorough check must be made around the engine exhaust manifolds and around the front cover plate. Check oil drip pans for accumulation of oil. Remove oil accumulation by wiping up or aspirating.

REMARKS:

	11-7	7-3	3-11
General Inspection of Diesel (✓ OK)	✓		✓
Check the following fire doors as being closed. Diesel Building 305'	✓		✓
1. Elev. 305' - Entrance to diesel room from Elect. Shop.	✓		✓
2. Elev. 305' - Entrance to "A" Diesel Room.	✓		✓
3. Elev. 305' - Entrance to "B" Diesel Room.	✓		✓
4. Elev. 305' - Double Door between Diesel control center rooms.	✓		✓

NOTE: CIRCLE ALL OUT OF SPEC READINGS

	11-7	7-3	3-11
AUX. OPERATOR SIGNATURE			
SHIFT FOREMAN SIGNATURE			

192 152

Date 3-15-79

OPERATIONAL FUNCTIONS DATA SHEET

Part I List all noteworthy functions as performed during shift.

2300-0700	
0700-1500	
1500-2300	

Part II List all oil addition to equipment.

	Equipment Tag No.	Amount of Oil Added	Type of Oil	Comments
2300-0700				
0700-1500				
1500-2300				

192 153