Omaha Public Power District
1623 Harney Omaha, Nebraska 68102-2247
402/536-4000

January 15, 1990
LIC-90-0008

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

Gentlemen:

SUBJECT: December Monthly Operating Report

Pursuant to Technical Specification Section 5.9.1, and 10 CFR Part 50.4(b)(1), please find enclosed one copy of the December 1989 Monthly Operating Report for the Fort Calhoun Station Unit No. 1.

If you should have any questions, please contact us.

Sincerely,

K. J. Morris
Division Manager
Nuclear Operations

KJM/pjc

Enclosures

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator, Region IV
P. H. Harrell, NRC Senior Resident Inspector
R. M. Caruso - Combustion Engineering
R. J. Simon - Westinghouse
Office of Management & Program Analysis (2)
Nuclear Safety Analysis Center
INPO Records Center
American Nuclear Insurers

IE24
1/1

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	50-285
UNIT	Fort Calhoun Station
DATE	January 12, 1990
COMPLETED BY	D. L. Stice
TELEPHONE	(402)636-2474

MONTH December 1989

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	466	17	465
2	466	18	466
3	466	19	466
4	467	20	466
5	467	21	466
6	467	22	466
7	466	23	466
8	466	24	465
9	466	25	466
10	466	26	466
11	466	27	465
12	465	28	466
13	465	29	466
14	466	30	466
15	466	31	466
16	466		

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

OPERATING DATA REPORT

DOCKET NO. 50-285
UNIT Fort Calhoun Station
DATE January 12, 1990
COMPLETED BY D. L. Stice
TELEPHONE (402)636-2474

OPERATING STATUS

1. Unit Name: Fort Calhoun Station — Notes
2. Reporting Period: December 1989
3. Licensed Thermal Power (MWt): 1500
4. Nameplate Rating (Gross MWe): 502
5. Design Electrical Rating (Net MWe): 478
6. Maximum Dependable Capacity (Gross MWe): 502
7. Maximum Dependable Capacity (Net MWe): 478
8. If changes occur in Capacity Ratings (Item Numbers 3 through 7) Since Last Report, Give Reasons:
   N/A
9. Power Level to Which Restricted, If Any (Net MWe): N/A
10. Reasons for Restrictions, If Any: N/A

		This Month	Yr-to-Date	Cumulative
11.	Hours in Reporting Period	744.0	8,760.0	142,610.0
12.	Number of Hours Reactor was Critical	744.0	7,816.5	111,166.3
13.	Reactor Reserve Shutdown Hours	0.0	0.0	1,309.5
14.	Hours Generator On-Line	744.0	7,590.1	110,005.4
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,110,918.9	10,726,117.3	143,615,111.2
17.	Gross Electrical Energy Generated (MWH)	363,544.0	3,465,980.0	47,210,108.2
18.	Net Electrical Energy Generated (MWH)	346,640.4	3,296,048.0	45,067,552.8
19.	Unit Service Factor	100.0	86.6	77.1
20.	Unit Availability Factor	100.0	86.6	77.1
21.	Unit Capacity Factor (Using MDC Net)	97.5	78.7	68.7
22.	Unit Capacity Factor (Using DER Net)	97.5	78.7	67.0
23.	Unit Forced Outage Rate	0.0	3.6	2.9

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):
    Refueling Outage estimated to begin on February 16, 1990, with a planned duration of 86 days.
25. If Shut Down at End of Report Period, Estimated Date of Startup: N/A
26. Units In Test Status (Prior to Commercial Operation):

	Forcast	Achieved
INITIAL CRITICALITY		
INITIAL ELECTRICITY	N/A	
COMMERCIAL OPERATION		

DOCKET NO. 50-285
UNIT NAME Fort Calhoun Station
DATE January 12, 1990
COMPLETED BY D. L. Stice
TELEPHONE (402) 636-2474

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH December, 1989

No.	Date	Type (1)	Duration (Hours)	Reason (2)	Method of Shutting Down Reactor (3)	Licensee Event Report #	System Code (4)	Component Code (5)	Cause & Corrective Action to Prevent Recurrence
									There were no unit shutdowns or power reductions during the month of December, 1989.

1
F-Forced
S-Scheduled

2
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Examination
F-Administative
G-Operational Error
H-Other (Explain)

3
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Other (Explain)

4
Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)

5
Exhibit 1 - Same Source

Refueling Information
Fort Calhoun - Unit No. 1

Report for the month ending December 1989

1. Scheduled date for next refueling shutdown. February 16, 1990

2. Scheduled date for restart following refueling. May 14, 1990

3. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? Yes

   a. If answer is yes, what, in general, will these be?

      - Incorporate specific requirements resulting from reload safety analysis

   b. If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload. N/A

   c. If no such review has taken place, when is it scheduled? N/A

4. Scheduled date(s) for submitting proposed licensing action and support information. January 26, 1990

5. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures. None Planned

6. The number of fuel assemblies:

a) in the core	133	assemblies
b) in the spent fuel pool	437	"
c) spent fuel pool storage capacity	729	"
d) planned spent fuel pool storage capacity	May be increased via fuel pin consolidation or dry cask storage	

7. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity. 1994*

*Capability of full core offload of 133 assemblies lost.

Prepared by Ken Kalet Date January 8, 1990

OMAHA PUBLIC POWER DISTRICT
Fort Calhoun Station Unit No. 1

December 1989
Monthly Operating Report

I. OPERATIONS SUMMARY

Fort Calhoun Station operated at a nominal 100% power throughout the month of December, 1989. Forty new fuel assemblies for Cycle 13 were delivered and inspected. Replacement of the diesel fire pump discharge piping is still in progress.

Raw water pump AC-10C was damaged when an object was sucked up into the pump impellers. The pump has been rebuilt and returned to service.

Diesel generator DG-1 was declared inoperable when the inlet air dampers were not operating properly. Investigation determined that the instrument air solenoid to the air operator was not rated for the extreme cold temperatures it was exposed to. A method was developed to keep the solenoid exposed to the proper temperature range. The diesel generator was returned to service.

A design basis problem was identified with the suction piping for the containment spray pumps. Under some conditions where the containment spray pumps could be used for alternate shutdown cooling, the piping is not rated for the potential pressure of the reactor coolant system. Administrative restrictions have been placed on the use of the containment spray pumps for shutdown cooling.

Modification work continues on the instrument air dryer and security system. Construction continues on the Chemistry and Radiation Protection and Rad Waste Buildings.

Annual licensed operator requalification examinations were being administered through December, 1989.

The following NRC inspections took place in December:

IR 89-50	Resident Inspectors' Monthly Inspection
IR 89-46	Commercial Grade Dedication
IR 89-49	Security

The following LER's were submitted:		Date Submitted
89-022	Approved Procedure Which Could Have Caused Inoperability of Both Diesel Generators	December 20, 1989
89-S09	Discovery of Degraded Vital Area Barrier	December 20, 1989

No safety valve or PORV challenges or failures occurred.

A. CHANGES, TESTS AND EXPERIMENTS CARRIED OUT WITHOUT COMMISSION APPROVAL

Procedure	Description
SP Delta T Data-2	This procedure does not constitute an unreviewed safety question as defined by 10 CFR 50.59 because this procedure only provides direction to plant personnel in monitoring a power ascension from approximately 70% to 100%. It provides guidance to operations personnel in the event that a delta T power anomaly occurs. This procedure in no way permits the plant to be operated outside of the bounds of the Technical Specifications and USAR.
SP-ECT-1	Eddy Current Testing of Heat Exchanger Tubes This procedure did not constitute an unreviewed safety question as defined by 10 CFR50.59 because the procedure only allows for the eddy current testing of heat exchanger tubes. This is a non-destructive testing method which does not alter the function of the components tested and is carried out within the bounds of the Technical Specifications and USAR.
SP-EL-2	Emergency Lighting Evaluation This procedure did not constitute an unreviewed safety questioned as defined by 10 CFR 50.59 because the procedure only was performed to test the adequacy of the Emergency Lighting System for the safe shutdown of the plant following loss of AC power. The identified deficiencies discovered from the test have been incorporated into SAO 89-09, and will be resolved under modification MR-FC-89-61.

System Acceptance Committee Packages for December 1989:

Package	Description/Analysis
None	

B. RESULTS OF LEAK RATE TESTS

The reactor coolant system leak rate test, ST-RLT-3 F.1, indicates for the month of December a continuation of the elevated leak rates seen throughout Cycle 12. The actual leak rate tests showed varying results due to constant change in the condition of the operating and standby charging pumps.

The maximum leak rate for the month was recorded on December 14, 1989. This test registered a total leak rate of 0.810 gpm and an unknown leak rate of 0.457 gpm. The minimum leak rate for the month was recorded on December 26, 1989. At this time, the total leak rate was 0.487gpm and the unknown leak rate was 0.071 gpm.

A substantial improvement in the unknown leak rate was observed after December 20 as a result of ongoing charging pump maintenance. The reduction in unknown leak rate results in a corresponding reduction in total leak rate. Known leakage to the Reactor Coolant Drain Tank (RCDT) remains relatively constant for the month at approximately 0.4 gpm.

C. CHANGES, TESTS AND EXPERIMENTS REQUIRING NUCLEAR REGULATORY COMMISSION AUTHORIZATION PURSUANT TO 10CFR50.59

Amendment No.	Description
None	

II. MAINTENANCE (Significant Safety Related)

See attached Maintenance printout.

Three Maintenance work orders are also attached to provide information omitted from the maintenance printout.

G. R. Peterson
Manager-Fort Calhoun Station

MWO # / EQUIP ID	SYSTEM		LEAD DISC	PRINT STATUS
894148	EE	WORK DESCRIPTION DURING THE PERFORMANCE OF ST-ESF-2,F1,STEP#17,IT TOOK 13 MINUTES FOR THE RED LIGHT INDICATION OF 62/A-LS OPERATION TO ENERGIZE. NEED TO TROUBLESHOOT THE CIRCUIT FOR TIME DELAY RELAY 62/A-LS,INSPECT RELAY,WIRE CONNECTIONS,CLEAN ,&ADJUST IF REQUIRED. IF STILL INOPERABLE,REPLACE RELAY.	EM	C
62/A-LS		WORK PERFORMED FOUND CONTACTS #7211 NOT MAKING UP PROPERLY NEW TIME DELAY ORDERED 8-11-89. CHANGED OUT RELAY PER ATTACHED INSTRUCTIONS. G.F.B. 12-28-89		
CQE: Y CLASS: 1				
COMPLETE: 12/28/89				
894502	AC-SFP	WORK DESCRIPTION VENDOR TO CREATE A FREEZE SEAL ON 8 INCH STAINLESS STEEL PIPE BETWEEN SPENT FUEL POOL AND AC-SFP PUMPS,AC-5A AND AC-5B. TO ALLOW US TO REBUILD ISOLATION VALVES.	PE	C
AC-SFP		WORK PERFORMED INSTALLED FREEZE SEAL PER ATTACHED PROC. FREEZE SEAL INSTALLATION WAS DONE BY VENDOR AND P.E. M.M. PERFORMED PIPE MEASUREMENTS AND Q.C. PERFORMED DYE CHECK.		
CQE: Y CLASS: 3				
COMPLETE: 12/28/89				
894666	AC-CCW	WORK DESCRIPTION DURING ISI TEST VALVE CYCLED IN PROPER TIME 10-11 SEC.,BUT CONTROL ROOM INDICATION TOOK 45 SEC. SUGGEST THAT OPS CYCLES VALVE AND THEN RE-TIME.IF RESULTS ARE STILL NOT SATISFACTORY,LUBRICATE ,OR ADJUST LIMIT SWITCHES AS REQUIRED. F.G.BUCK/JEV	EM	C
HCV-481		WORK PERFORMED NO WORK DONE UNDER THIS MWO. OPERATIONS INFORMED ME THAT THE VALVE ITSELF WAS TAKING 45 SECONDS TO CLOSE. THERE ARE OUTSTANDING MWR'S 719 AND 914 TO REBUILD, INSPECT AND REMOVE TEMP. MOD. TO THIS VALVE. I DID HAVE OPS. CYCLE VALVE AND IT IS PRESENTLY TAKING LESS THAN 10 SECONDS TO GO BOTH DIRECTIONS. STROKE TIME AND INDICATION TIME IS THE SAME AS NEAR AS I CAN TELL GFB WORK WILL BE COMPLETED PER MWR 719 AND 914 AT A L		
CQE: Y CLASS: 3				
COMPLETE: 12/06/89				
		FOR MORE INFORMATION SEE ATTACH COPY OF MWO		
894679	AC-RW	WORK DESCRIPTION INSPECT SEISMIC RESTRAINT STUDS TO INSURE PROPER THREAD ENGAGEMENT. IF NOT FULLY ENGAGED, STUDS NEED TO BE REPLACED WITH LONGER STUDS. CO-ORDINATE THIS WORK WITH NEXT PUMPOVERHAUL. REFERENCE SECTIONS OF MAINTENANCE PROCEDURE TO INSURE PROPER INSTALLATION.	MM	C
AC-10C		WORK PERFORMED NOTE MP-AC-10 HAS BEEN SUPERCEDED BY MM-RR-0001 F G BUCK 12-20-89. FABRICATED 8.4" STUDS OUT OF CQE MATERIALAND INSTALLED IN PLACE OF EXISTING STUDS. COORDINATED WORK WITH MWO 895821 AND INSTALLED SEISEMIC RESTRAINTS PER PROCEDURE (STEP 6.32).		
CQE: Y CLASS: 3				
COMPLETE: 12/21/89				

MWO # / EQUIP ID	SYSTEM		LEAD DISC	PRINT STATUS
889009	AC-RW	WORK DESCRIPTION AIR LEAK ON INLET SIDE OF REGULATOR. REPAIR AS NECESSARY.	IC	C
HCV-2874A				
CQE: Y CLASS: 3		WORK PERFORMED REPLACED TUBING ON INLET TO REGULATOR AND RECHECKED FITTING ON INLET TO REGULATOR CHECKED NO LEAKS CYCLED VALVE TO PROVE OPERABILITY. QC WITNESS OK		
COMPLETE: 12/07/89				
891625	CH	WORK DESCRIPTION SPARE WIRING INTERFERES WITH MICROSWITCHES INSIDE TIC-255. THE SAME PROBLEM EXISTS IN TIC-256, TIC-262 AND TIC-263. SPARE WIRING NEEDS TO BE REMOVED. T.S. 2.2	EM	C
TIC-255				
CQE: Y CLASS: SR		WORK PERFORMED PUT SPARE WIRES IN THEIR OWN COMPARTMENT SO THEY DON'T CROSS OVER ANY SIGNAL CARRYING WIRES OR TERMINATIONS.		
COMPLETE: 12/06/89				
893468	SI-LP	WORK DESCRIPTION HCV-341 IN ROOM 13 IS LEAKING OUT OF PACKING.NEED TO REMOVE INSPECTION COVER AND ADJUST PACKING TO STOP LEAK.	PE	C
HCV-341				
CQE: Y CLASS: 1		WORK PERFORMED TIGHEN PACKING AND OPS CYCLED VALVE		
COMPLETE: 12/13/89				
893860	AC-CCW	WORK DESCRIPTION ISOLATE, DRAIN, DISASSEMBLE, CLEAN &INSPECT THE RAW WATER SIDE OF CCW HEAT EXCHANGER. SUPPORT ECT EXAMINATIONS, IF ACCOMPLISHED, & RE-ASSEMBLE THE HEAT EXCHANGER ON COMPLETION OF INSPECTIONS.	PE	C
AC-1D				
CQE: Y CLASS: 3		WORK PERFORMED SEE REMARKS SECTION OF PROCEDURE FOR A FULL EXPLANATION OF THE WORK ACCOMPLISHED. THE EXCHANGER WAS NOT CLEANED AND ALL MANWAYS REMOVED WERE RETORQUED AND LEAK CHECKED.		
COMPLETE: 12/04/89				

MWO # / EQUIP ID	SYSTEM		LEAD DISC	PRINT STATUS
894873	AC-CCW	WORK DESCRIPTION AC-1B END BELL HAS A FLANGE LEAKING.REMOVE THE END BELL TO REPAIR THE LE AK AND EDDY CURRENT TESTING.	PE	C
AC-1B				
CQE: Y CLASS: 3		WORK PERFORMED REMOVED BOTH HEADS TO ALLOW FOR ECT AND PLUGGING FROM BOTH ENDS. MWO WAS COMPLETED PER ATTACHED PROCEDURE. 4 TUBES WERE PLUGGED FOLLOWING ECT AS NOTED ON PROC.		
COMPLETE: 12/18/89				
895121	CH	WORK DESCRIPTION ADD OIL AS NEEDED TO CHARGING PUMPS CRANK CASE AND GEAR BOX ON CH-1A/B/C DURING THE MONTH OF NOVEMBER.	MM	C
CH-1A				
CQE: Y CLASS: 2		WORK PERFORMED NO WORK DONE USING THIS MWO THIS MONTH		
COMPLETE: 12/01/89				
895131	SI	WORK DESCRIPTION ALL S. I. TANK REFERENCE LEGS NEED TO BE FILLED FOR THE MONTH OF NOVEMBER.	IC	C
SI				
CQE: Y CLASS: 1		WORK PERFORMED TRIED TO FILL SI-60 NARROW RANGE LEVEL (LT-2964X) TRANSMITTER BUT FOUND BAD POWER SUPPLY. REFER MWO 895346 J.M. 12-1-89. NO OTHER REF. LEGS FILL ED FOR MONTH OF NOVEMBER.		
COMPLETE: 12/01/89				
895199	EE	WORK DESCRIPTION RECHARGE ELECTRICAL PENTRATION D-7 TO 20 PSIG WITH NITROGEN ON CANNIS- TER. FOUND DURING CONDUCTION OF PM-EE-PENT.	IC	C
D-7				
CQE: Y CLASS: 2		WORK PERFORMED FILLED PENETRATION D-Z TO 20PSIG AS PER INSTRUCTIONS AND HAD QC VERIFY AND SnOOPED FOR LEAKS.		
COMPLETE: 12/08/89				

MWO # / EQUIP ID	SYSTEM	WORK DESCRIPTION / WORK PERFORMED	LEAD DISC	PRINT STATUS
895495 FT-1369 CQE: Y CLASS: 3 COMPLETE: 12/28/89	FW-AFW	WORK DESCRIPTION REPLACE GAULDED TEST TEE SWAGELOK FITTING ON TRANSMITTER FT-1369, LOW SIDE. WORK PERFORMED VALVED OUT TRANSMITTER, REPLACED FITTING ON LOW SIDE, VALVED IN TRANSMIT TER. FILLED AND VENTED TRANSMITTER FROM HIGH SIDE. NO DEFICIENCY TAG.	IC	C
895550 VCV-1045A CQE: Y CLASS: 2 COMPLETE: 12/05/89	MS	WORK DESCRIPTION REPAIR/REWORK VALVE WHICH APPEARS TO STICK OPEN OCCASSIONALLY DURING OPERATIONS. REF: J YEAGER,6623 WORK PERFORMED HAD OPS CYCLE VALVE SEVERAL TIMES WHILE OBSERVING VALVE LOCALLY. COULD FIND NO PROBLEM WITH VALVE OPERATION PERFORMED APPLICABLE STEPS OF ST-ISI-MS-F.! TO POOR OPERABILITY.	IC	C
895599 CH-1A CQE: Y CLASS: 2 COMPLETE: 12/08/89	CH	WORK DESCRIPTION CH-1A HAS A RATTLE SOUND AND SUCTION LINE IS PULSING WORSE THAN NORMAL.N EED TO TROUBLESHOOT PUMP IN ACCORDANCE WITH DETAILED WORK INSTRUCTIONS A TTACHED TO MWO. ANY REPAIRS REQUIREDWILL BE PER PRC APPROVED PROCEDURES. W. KERMOADE/JEV WORK PERFORMED REMOVED PLEXI-GLASS COVER, INSPECTED FOR FILINGS AND DEBRIS, FILINGS FOU ND. REINSTALLED COVER AS DIRECTED IN DETAILED WORK INSTRUCTIONS. ASSISTE D IN BRATION MEASUREMENTS SEE DETAILED WORK INSTRUCTION FOR ADDITIONAL I NFO (T SANDENE FOR MACHINISTS) SH26A HAD 5PSI AND WAS CHARGED TO 17 PSI FW PATTERSON/SH22A HAD 1470 PSI NONE WAS ADDED FW PATTERSON/ USED ONLY DETAILED WORK INSTRUCTIONS, NO WORK PERFORMED UNDER MP-CH-1	MM	C
895693 1B3C-4C-4 CQE: Y CLASS: S COMPLETE: 12/14/89	AC-CCW	WORK DESCRIPTION 69 PERMISSIVE SWITCH FOR AC-3C BREAKER. THE GE TYPE SWITCHES (#165B1EB4C 83SPR2P) WERE INSTALLED UNDER MWO 872012. THE PARTS WERE COMMERCIAL UPG RADED-CQE UNDER PO 19921. PAR AUDIT FINDS THIS WRONG. REPLACE SWITCH WIT H QUALIFIED CQE PARTS. LPH (6681) FOR F. BUCK (6820) @ 0749 12/07/89 WORK PERFORMED REMOVED SPARE SWITCH FROM 1B3C-10 PER PROCEDURE. REMOVED UNQUALIFIED SWITCH FROM 1B3C-4C-4 PER PROCEDURE INSTALLED SPARE FROM 1B3C-10 IN TO 1B3C-4C-4 PER PROCEDURE.	EM	C

MWO # / EQUIP ID	SYSTEM		LEAD DISC	PRINT STATUS
		WORK DESCRIPTION		
895713	CH	PUMP HAS EXCESSIVE LEAK RATE,TROUBLESHOOT AND REPAIR AS PER. MP-CH-1.	MM	C
CH-1A				
		WORK PERFORMED		
CQE: Y CLASS: 2		DISASSEMBLED PUMP, REBUILT PUMP INSTALLING NEW PLUNGERS, NEW PACKING AND GASKETS. USED NEOLUBE FOR LUBRICATION INSTEAD OF DOW CORNING MESS (ENGINEERING RECOMENDATIONS) TAGGED IN EQUIPMENT AND RAN IN ALSO INSTALLED FRONT CAP TEST FIXTURES PER PROCEDURE CHANGE #30386 SEE REMARKS IN PROCEDURE FOR RESULTS.		
COMPLETE: 12/14/89				
		WORK DESCRIPTION		
895754	DG	DURING THE MONTHLY PERFORMANCE OF ST-ESF-6 ON 12-13-89, THE STATIC EXCITER VOLTAGE REGULATOR REQUIRES MONITORING AT POINTS SPECIFIED BY SYS ENGINEER. RECORDER SPEED IS TO BE SET AT200MM/SEC. EXPECTED DURATION WILL BE -60 SEC.MONITORING POINTS/SCALING SPECIFIED IN MWO PACKAGE.	IC	C
EE-1F				
		WORK PERFORMED		
CQE: Y CLASS: N		HOOKED UP TEST EQUIPMENT AS PER INSTRUCTIONS OF S.E. M.C. 12-13-89 REMOVED TEST EQUIPMENT M.C. 12-13-89		
COMPLETE: 12/13/89				
		WORK DESCRIPTION		
895815	CH	CH-1C IS STARTING TO LEAK THROUGH THE PACKING. RECOMMEND REPACKING.	MM	C
CH-1C				
		WORK PERFORMED		
CQE: Y CLASS: 2		DISASSEMBLED PUMP REMOVED VALVES PACKING AND PLUNGERS. RESASSEMBLED EQUIPMENT WITH NEW PLUNGERS NEW PACKING RINGS - NEW PACKING NEW GASKETS.		
COMPLETE: 12/15/89				
		WORK DESCRIPTION		
895816	DG	DURING THE MONTHLY PERFORMANCE OF ST-ESF-6 ON 12/27/89, THE STATIC EXCITER VOLTAGE REGULATOR REQUIRES MONITORING. CONNECT A RECORDER AT THE POINTS SPECIFIED BY SYSTEM ENGINEER. THE RECORDER SPEED SHALL BE SET AT 200 MM/SEC. EXPECTED DURATION IS 60 SEC.	IC	C
EE-1G				
		WORK PERFORMED		
CQE: Y CLASS: N		INSTALL RECORDER LEADS AS INSTRUCTED BY SYSTEM ENGINEER. M.C. 12-27-89 REMOVE RECORDER LEAD AND RETURN TO NORMAL AS PER S. E. ATTACHEMENT.		
COMPLETE: 12/27/89				

MWO # / EQUIP ID	SYSTEM	WORK DESCRIPTION / WORK PERFORMED	LEAD DISC	PRINT STATUS
895821	AC-RW	AC-10C HAS A HIGH VIBRATION WHEN RUNNING,NEED TO TROUBLE-SHOOT AND REPAIR.	MM	C
AC-10C				
CQE: Y CLASS: 3		CHECKED PUMP SHAFT IF IT RAISED,IT DID NOT RAISE. PUMP TURNS FREELY CHECKED LIFT LOWERED SHAFT .0<0 TO BOTTOM SHAFT A:: THE WAY UP HAS .350 TOTAL TO TO LOWERED BACK DOWN RAISED .027 LIFT TURNS FREELY MM LS 12-18-89 RAN PUMP 12-18-89 STRUFFING BOX VIB 5.0 MILLS MOTOR INBOARD 10.0 MILLS OUTBOARD 22.. ILLS REMOVED PUMP 12-18-89 FOR REPAIR DISSAMBLED PUMP REASSEMPLED A PUMP WITH USED AND NEW PARTS REF MWO 897630. REINSTALLED PUMP &
COMPLETE: 12/21/89		FOR MORE INFORMATION SEE ATTACHED COPY OF MWO
895837	DG	REPLACE THE INSULATION ON THE ENGINE EXHAUST STACK ELBOW. RECORD ALL PURCHASE ORDER NUMBERS FOR INSULATION.	PE	C
DG-1				
CQE: Y CLASS: N		REPLACED CERIFIBER AROUND PIPE THRU PENETRATION		
COMPLETE: 12/20/89				
895865	RM	FILTER PAPER IS NOT AUTOMATICALLY ADVANCING. INVESTIGATE AND REPAIR OR REPLACE THE PAPER DRIVE MOTOR/CIRCITRY AS REQUIRED. IF CALIBRATION IS AFFECTED BY REPAIR THEN CALIBRATE MONITOR.	IC	C
RM-050				
CQE: Y CLASS: S		REPLACED CAM DRIVE MOTOR. TIMED MOTOR AT 7 MINUTES 10 SEC PER TRAVEL, THATS GOOD. THEN TIMED TAPE TRAVEL AT 1" PER HOUR. EVERYTHING WORKS GOOD, NO REPAIR AFFECTED THE CALIBRATION OF RMO-50.		
COMPLETE: 12/20/89				
897607	DG	DAMPER DID NOT OPEN ON DG RUN, LINKAGE APPEARS BENT REF MWO 897599	MM	C
DG-1				
CQE: Y CLASS: N		REMOVED H OPERATOR. TOOK TO SHOP REMOVED CYLINDER CLEANED PISTON O RINGS & CYLINDER REASSEMBLED REINSTALLED H UPERATOR. RESTORED AIR CYCLE DAMPERS BOTH FAILED TO GO FULLY CLOSED. BOTH SOLENOIDS BLEW BY. TECH CAUSE SLIGHT BACK PRESSURE SOLENOIDS OPERATED CORRECTLY WITH AIR OPERATORS OPENED CORRECTLY. CYCLED SOLENOIDS SEVERAL TIMES 3 EACH TIME SOLENOID BLEW BY. HEATED BOTH SOLENOIDS AND EACH PERFORM PROPERLY H AIR OPERATOR FAILED
COMPLETE: 12/16/89		FOR MORE INFORMATION SEE ATTACHED COPY OF MWO

MWO # / EQUIP ID	SYSTEM	WORK DESCRIPTION	LEAD DISC	PRINT STATUS
897630	AC	INSPECT AND REPAIR AS NECESSARY, PUMP REMOVED FROM AC-10-C	MM	C

AC

CQE: Y CLASS: 3

COMPLETE: 12/20/89

WORK PERFORMED

PUMP REMOVED FROM AC-10-C WAS BADLY DAMAGED. THE ONLY PARTS WERE SAND COLLAR & BOTH IMPELLER. LINNERS USED UPPER & LOWER BARRERS SUCTION BELL AND 1 IMPELLER FROM A PREVIOUSLY REMOVED PUMP INSTALLED NEW BUSHINGS & WEAR RINGS AND SHAFT REASSEMBLED PUMP HAD A TOTAL LEFT OF 7/16" PUMP TO BE INSTALLED IN AC-10-C SEE NR#89-137 TO ADDRESS PUMP BOWL IDENTIFICATION AND RE-USE.

MWO # / EQUIP ID	SYSTEM	LEAD DISC	PRINT STATUS

TOTAL RECORDS SELECTED: 25

MWO # / EQUIP ID		WORK DESCRIPTION / WORK PERFORMED
893720	HE	THE CONTROL CIRCUIT FOR THE AUX. BUILDING CRANE TRIPS-OFF WHEN THE RES ET/ON BUTTON IS DEPRESSED THEN RELEASED.ELECTRICIANS NEED TO TROUBLESHO OT CONTROL CIRCUITS FOR HE-2 TO DETERMINE PROBLEM.REPAIRS WILL BE MADE O N SEPERATE MWO.
HE-2		
		WORK PERFORMED
CQE: Y	CLASS: S	FOUND CONTROL POWER CIRCUIT BREAKER TRIP FOR THE BRIDGE CONTROL. CIRCUIT BREAKER KEEP TRIPPING WHEN WE TRY TO OPERATE THE BRIDGE AND CONTROL CHEC K SCRS ALL SEEM GOOD CHECK BRAKE RELEASE HYDRAULIC BRAKE WORKS. BUT THER E IS A QUESTION ABOUT THE AIR GAP ON THE PARKING BRAKES. MADE BRAKE ADJU STMENT CHECK MOTOR WINDING SHORT FIELD 61.2 OHMS ARMATURE .41 OHM TALK T O FACTORY THEY SUSPECT SCRS PROBLEM ORDER NEW SCRS MWO 894950 WRITTEN TO REPLACE COMPONENT LPH 6681
COMPLETE 12/06/89		
		WORK DESCRIPTION
895695	FW-HVD	THE AUX SWITCH ON 4160V BREAKER 1A4-4 FOR FW-5C IS A NON CQE PART. REPLA CE EXISTING 1A4-4 BREAKER WITH SPARE1200A BREAKER LOCATED IN CQE CAGE. S TORE DEFECTIVE BREAKER IN CQE CAGE TO AWAIT REPAIR. PERFORM PM ON SPARE BREAKER PRIOR TO INSTALLING IN 1A4-4. LPH (6681) FOR G. WOOD (6877)
1A4-4		
		WORK PERFORMED
CQE: Y	CLASS: N	PERFORMED P.M. AND TEST ON BRK. (SPARE) PER WORK INSTRUCTIONS. TAGGED EXISTING BRK. ABD STORED IN CQE AREA
COMPLETE 12/08/89		

MWO #	SYSTEM EQUIP ID

TOTAL RECORDS SELECTED: 2

MAINTENANCE WORK ORDER

EQID: **HCV-481** MWO NO: **894666**
NAME: **HAND-CONTROL VALVE**

OFFICIAL

SYS: **AC-CCW** LOCATION: **02EE17N5B 1003** MOD **12/13** LEAD DISCIPLINE: **EM**

WORK DESCRIPTION DEF TAG NO: MWR NO: **0003374**
DURING ISI TEST VALVE CYCLED IN PROPER TIME 10-11 SEC.,BUT CONTROL ROOM INDICATION TOOK 45 SEC. SUGGEST THAT OPS CYCLES VALVE AND THEN RE-TIME.I F RESULTS ARE STILL NOT SATISFACTORY,LUBRICATE ,OR ADJUST LIMIT SWITCHES AS REQUIRED. F.G.BUCK/JEV

OPERATIONS REQUIREMENTS

APPLICABLE TECHNICALSPECIFICATIONS LCO DURATION: (HRS)
(1) **2.3** (2) (3)

PRIORITY: **3** PLANT COND: **1** OPER APPROVAL: **GRC** DATE: **09/20/89** TIME: **0627**

TECHNICAL REQUIREMENTS

CODE: **MFG. STAND** CLASS: **3** CQE: **Y** EEQ CLS: **N** FSI: **N** ISI: **Y**

PROCEDURE: **N/A** PROCEDURE RESPONSIBILITY: **N/A**
ADJUST AS NEEDED, CYCLE VALVE,NOTE LOCAL STROKE TIME VS CB TIME, SHOULD BE ≥/=10SEC ≤ 10SEC FGB 11/15/89 1433

TECHNICAL APPROVAL: **FGB** DATE: **09/21/89** TIME: **1320**

PLANNING REQUIREMENTS

DWI REQ	RWP REQ	FLAME PERM	ENTRY PERM	TAGOUT REQ	FIRE WATCH	SEC REQ	RIG REQ	SCAF REQ	AWP REQ	MAINT CLASS
N	Y	N	N	Y	N	N	N	N	N	C

WORK INSTRUCTIONS
OPS TO CYCLE VALVE,OR ELECTRICIANS TO EXERCISE LIMIT SWITCHES USED FOR I NDICATION AND RE-TIME VALVE STROKE.TOLERANCES PER SYSTEM ENGINEER.IF SAT ISFACTORY TIME IS NOT ACHIEVED,ADJUST LIMIT SWITCHES,OR IF REQUIRED,REPL ACE THE INTERNAL ASICWITCH PER MANUFACTURES INSTRUCTIONS.REF TD M302 .0030.

FOR INFORMATION ONLY

POST MAINTENANCE TESTING
CYCLE VALVE AND TIME ACTUAL VS INDICATION TIME.

11 15 89 1434

PLANNER APPROVAL **JEV** DATE: **10/03/89** TIME: **0956** ACCOUNT NO: **530.51**

QUALITY REQUIREMENTS

NOTIFY QC TO WITNESS POST MAINT. TESTING

NO WORK PERFORMED, NO POST MAINT. TESTING REQUIRED.

Reviewed R Hasson 11/15/89 @ 1435

QUALITY APPROVAL: **DWD** DATE: **10/10/89** TIME: **1310**

J L Dyer 12/6/89

WORK RELEASE

TAGOUT ESTBL BY: N/A TAG NO: NA RELEASED TO: BARNA

OPERABILITY OF REDUNDANT EQUIP: NA LAST RUN: NA

SHIFT SUPV RELEASE DATE: 11-15-89 TIME: 1115 SUPV SIG: M Mamma

REQUIRED IN SERVICE DATE(IF LCO): _____ TIME: _____

SO M-101
FC 1173 SH 1 REV 1 ISSUED 08/31/89

MAINTENANCE WORK ORDER

EQID: -481 d1
NAME: HAND CONTROL VALVE

MWO NO: 894666

WORK PERFORMED

WORK PERFORMED

No work Done under this MWO. Operations informed me that the Valve itself was taking 45 seconds to close. There are outstanding MWR's # 219 & 91 to Rebuild, Inspect & Remove temp. mod. to this Valve. I Did have ops. cycle valve & it is presently taking less than 10 seconds to go both Directions. Stroke time & indication time is the same as Near as I can tell. EFR work will be completed per MWR 219 & 91 at a later date (ie Schmidt leaks by).

POST MAINTENANCE TESTING PERFORMED

No PMT Performed

NATURE OF FAILURE

unknown

PARTS QTY	MATLS UNITS	DESCRIPTION	PO/RQST	STOCK NO

FOR INFORMATION ONLY

COMPLETED BY: George F Bowman (DISCIPLINE CRAFTSMAN) DATE: 12-6-89 TIME: 1430

RETD TO SERVICE: W Anderson (SHIFT SUPERVISOR) DATE: 12-6-89 TIME: 1435

WORK REVIEW

DISP SUPV: [illegible] DATE: 12/11/89 SYS ENG: [illegible] DATE: 1/2/90 QC: ____ DATE: ____

REFERENCE DOCUMENT: ____ RELATED MWO: ____

FOR INFORMATION ONLY

MAINTENANCE WORK ORDER

EQID: YCV-8716/H Rev 12-15-89 Rev 12/15/89 MWO NO: 897607
NAME: DAMP - OP

SYS: DG LOCATION: DG-1 ROOM LEAD DISCIPLINE: MM

WORK DESCRIPTION DEF TAG NO: 0000 MWR NO: 0000
DAMPER DID NOT OPEN ON DG RUN, LINKAGE APPEARS BENT
(REFERNCE MWO 897599)

OPERATIONS REQUIREMENTS

APPLICABLE TECHNICALSPECIFICATIONS LCO DURATION: ___ (HRS)
(1) 3.7 (2) _____ (3) _____

PRIORITY: 5 PLANT COND: 1 OPER APPROVAL: CV DATE: 12-14-89 TIME: 0902

TECHNICAL REQUIREMENTS

Rel 12/15/89 01DG-1

CODE: U CLASS: N CQE: Y EEQ CLS: N FSI: N ISI: N

PROCEDURE: N/A PROCEDURE RESPONSIBILITY: N/A

FOLLOWING MAINTENANCE REPAIR ACTIVITIES PERFORM STEPS 6.5.2 TO VERIFY PROPER OPERATION

TECHNICAL APPROVAL: RWP DATE: 12/15/89 TIME: 0900
RWP 12/15/89

PLANNING REQUIREMENTS

DWI REQ	RWP REQ	FLAME PERM	ENTRY PERM	TAGOUT REQ	FIRE WATCH	SEC REQ	RIG REQ	SCAF REQ	AWP REQ	MAINT CLASS
N	N	N	N	N	N	Y	N	N	N	C

WORK INSTRUCTIONS
INSPECT LINKAGE, TROUBLESHOOT CAUSE OF PROBLEM. REPAIR OR REPLACE PARTS AS NEEDED FOR PROPER OPERATION. IFC TO CHECK OPERATOR AND AIR SUPPLY.

POST MAINTENANCE TESTING cycle dampers to prove operability.
(PERFORM 1DG-1 EXP-12-14-89)(YCV-8716/H-EXP-12-15-89)

PLANNER APPROVAL: [signature] DATE: 12-14-89 TIME: 0910 ACCOUNT NO: 531.05

QUALITY REQUIREMENTS

QC To witness post maint. testing after repair

Re-Review 12/14/89 1150 [signature] [signature] 12/15/89 1330

QUALITY APPROVAL: [signature] DATE: 12/14/89 TIME: 0920

WORK RELEASE

TAGOUT ESTBL BY: N/A TAGNO: N/A RELEASED TO: Shiftcrew

OPERABILITY OF REDUNDANT EQUIP: DG-2 LAST RUN: 12-14-89

SHIFT SUPV RELEASE DATE: 12-14-89 TIME: 0930 SUPV SIG: [signature]

REQUIRED IN SERVICE DATE(IF LCO): 12-21-89 TIME: 0525

SO M-101
FC 1173 SH 1 REV 1 ISSUED 08/31/89

MAINTENANCE WORK ORDER

EQID: ____________________

NAME: ____________________

MWO NO: 897607

WORK PERFORMANCE

WORK PERFORMED

REMOVED H OPERATOR. TOOK TO SHOP. - REMOVED CYLINDER & CLEANED PISTON - O'RING - & CYLINDER. REASSEMBLED & REINSTALLED H OPERATOR. Restored Air. Cycled Dampers, Both failed to go fully ~~open~~ closed. Both solenoids blew by. Tech caused slight back pressure, solenoids operated correctly. Both air operators operated correctly. Cycled solenoids several times (3) each time solenoids blew by. Rebuilt both solenoids and each performed properly. H air operator failed to close dampers (ie. piston bled by). see attached continuation. DISASSEMBLED ACTIVATOR TURNED PISTON HEAD AROUND to HAVE NEW WORKING SURFACE ASSEMBLED ACTIVATOR AND BENCH TESTED ON 12-13-89 2100. REPLACED OPERATOR ON BRACKET AND ADJUSTED DAMPERS AND LINKAGE TO FUNCTION PROPERLY. 12-15-89

POST MAINTENANCE TESTING PERFORMED

Post maintenance testing will be done under ~~MWO 89...~~ MR-FC-89-085 to satisfy QC requirements. Dampers are failed open at this time. 12-16-89

OI-DG-1 Performed + logged to perform operability of DG-1 ... ≈ 15 min.

NATURE OF FAILURE

air motor piston / solenoids

MR-FC-89-085 is for solenoids

PARTS QTY	MATLS UNITS	DESCRIPTION	PO/RQST	STOCK NO
		N/A 12-16-89		

FOR INFORMATION ONLY

COMPLETED BY: [signature] (DISCIPLINE CRAFTSMAN) DATE: 12-16-89 TIME: 1145

RETD TO SERVICE: Charles A. Carlson (SHIFT SUPERVISOR) DATE: 12/16/89 TIME: 1324

WORK REVIEW

DISP SUPV: MWB DATE: 12/19/89 SYS ENG: _____ DATE: _____ QC: _____ DATE: _____

REFERENCE DOCUMENT: ____________ RELATED MWO: 897599

MAINTENANCE WORK ORDER

EQID: **AC-10C**
NAME: **RAW WATER PUMP**

OFFICIAL COPY
mk 12-15-89

MWO NO: **895821**

SYS: **AC-RW** LOCATION: **1ECC1S104 0994** LEAD DISCIPLINE: **MM**

WORK DESCRIPTION DEF TAG NO: **555** MWR NO: **4953**
AC-10C HAS A HIGH VIBRATION WHEN RUNNING,NEED TO TROUBLE-SHOOT AND REPAI R.

OPERATIONS REQUIREMENTS

APPLICABLE TECHNICAL SPECIFICATIONS LCO DURATION: (HRS)
(1) **2.4** (2) (3)

PRIORITY: **4** PLANT COND: **2** OPER APPROVAL: **GRC** DATE: **12/15/89** TIME: **0822**

TECHNICAL REQUIREMENTS

CODE: **ASME III** CLASS: **3** CQE: **Y** EEQ CLS: **N** FSI: **N** ISI: **Y**

PROCEDURE: **MM-RR-RW-0001** PROCEDURE RESPONSIBILITY: **N/A**
USE APLICABLE SECTIONS OF REF. PROC. AND DWI'S(FGB) AS REQUIRED TO DETERMINE PROBLEM AND CORRECT.

Prior to Performing Step 6.28 of MM-RR-RW-0001 QC To perform a Cleanliness Inspection to M-103
FGB 12/20/89 0920

TECHNICAL APPROVAL: **FGB** DATE: **12/15/89** TIME: **0835**

PLANNING REQUIREMENTS

DWI REQ	RWP REQ	FLAME PERM	ENTRY PERM	TAGOUT REQ	FIRE WATCH	SEC REQ	RIG REQ	SCAF REQ	AWP REQ	MAINT CLASS
N	**N**	**N**	**N**	**Y**	**N**	**N**	**N**	**N**	**N**	**C**

WORK INSTRUCTIONS
NEED TO TROUBLE-SHOOT CAUSE OF HIGH VIBRATION.REMOVE UPPER MOTOR SHAFT COVER.CHECK TO SEE IF PUMP SHAFT HASRAISED,IF NOT SEE IF PUMP CAN BE ROTATED FREELY BY HAND.IF PUMP SHAFTHAS MOVED UP RAISING,LOWERING AND ROTATING OF SHAFT BY HAND MAY FREE UP PUMP.RESETING OF PUMP LIFT WILL BE NECESSARY IF PUMP TURNS FREELY.IF PUMP CAN NOT BE FREED UP,REMOVAL OF P UMP AS PER MM-RR-RW-0001 WILL BE NECESSARY.

FOR INFORMATION ONLY

POST MAINTENANCE TESTING
PERFORM ST-ISI-RW-3 TO PROVE OPERABILITY.
(CJC - 12-20-89)

PLANNER APPROVAL **CLC** DATE: **12/15/89** TIME: **0928** ACCOUNT NO: **530.51**

QUALITY REQUIREMENTS

OBSERVE QC HOLDPOINTS IN PROCEDURE &OBSERVE QC HOLDPOINTS IN ST.
QC waived DWI-1 RPB 12/15/89 1355 / Cleanliness inspection to be performed prior to procedure step 6.28. Re-reviewed 12.20.89 0935/RPB

Cleanliness inspection performed by T.C. Moon 12.20.89 RPB 12.21.89

QUALITY APPROVAL: **RPB** DATE: **12/15/89** TIME: **0950**

WORK RELEASE

89-1759

TAGOUT ESTBL BY: Tom TAG NO: ~~89-1952~~ RELEASED TO: Larry Shotkoski

OPERABILITY OF REDUNDANT EQUIP: N/A LAST RUN: N/A

SHIFT SUPV RELEASE DATE: 12-15-89 TIME: 1047 SUPV SIG: Tony M. Medoff

REQUIRED IN SERVICE DATE(IF LCO): N/A TIME: N/A

SO M-101
FC 1173 SH 1 REV 1 ISSUED 08/31/89

MAINTENANCE WORK ORDER

EQID: AC-10C
NAME: RAW WATER PUMP

OFFICIAL COPY

MWO NO: 895821

WORK PERFORMED

WORK PERFORMED

CHECKED PUMP SHAFT IF IT RAISED, IT DID NOT RAISE. PUMP TURNS FREELY CHECKED LST LOWERED SHAFT .020 TO BOTTOM. RAISED SHAFT ALL THE WAY UP. HAS .350 TOTAL TO TOP. LOWERED BACK DOWN & RAISED .027 1ST. TURNS FREELY 12/21/89 RAW PUMP 12-21-89, STUFFING BOX WEAR 5.0 MILLS - MOTOR INBOARD. 10.0 MILLS, OUTBOARD. 22.0 MILLS - REMOVED PUMP P2-18" FOR REPAIR. DISASSEMBLED PUMP. REASSEMBLED PUMP WITH USED AND NEW PARTS. REF. TO MWO # 897630. REINSTALLED PUMP & TEST RAN

FOR INFORMATION ONLY

POST MAINTENANCE TESTING PERFORMED

PERFORMED ST RW-2 & ST 151 RW-3

NATURE OF FAILURE

PUMP HAD SUCKED IN A 3/4" DRIVE [redacted] SOCKET WRENCH EXTENSION. CAUSING DAMAGE TO IMPELLERS & BARRELS.

PARTS QTY	MATLS UNITS	DESCRIPTION	PO/RQST	STOCK NO
1		15 3/8" X 20" grafoil gasket (1/8" THICK)	SO47121	005 6215
32		3/4" A194-2H nuts	So2-7411	621.4301
1		MOTOR CONNECTOR KIT	SO 368444	NMCK8
	2 EA	SHAFT COUPLING -	SO 13446	604.154

COMPLETED BY: [signature] (DISCIPLINE CRAFTSMAN) DATE: 12-21-89 TIME: 1330

RETD TO SERVICE: Charles A Carlson (SHIFT SUPERVISOR) DATE: 12/21/89 TIME: 1407

WORK REVIEW

DISP SUPV: [signature] DATE: 12-22-89 SYS ENG: [signature] DATE: 1/2/90 QC: _____ DATE: _____

REFERENCE DOCUMENT: _____ RELATED MWO: _____

SO M-101
FC 1173 SH 2 REV 1 ISSUED 08/31/89