

CONTRACTORS  
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**MORRISON-KNUDSEN COMPANY, INC.**

L-QTS-85-001

EXECUTIVE OFFICE  
TWO MORRISON-KNUDSEN PLAZA  
P. O. BOX 7808 / BOISE, IDAHO 83729 / U.S.A.  
PHONE: (208) 345-5000 / TELEX: 368439

February 14, 1985

James Taylor  
USNRC  
1717 "H" Street  
Washington, DC 20555

Dear Mr. Taylor:

Attached please find supporting documentation concerning a potential reportable 10CFR Part 21 condition discussed this date by Messrs. Ellis Merschhoff of USNRC and Stephen Schuermann of Morrison-Knudsen. The telephone conversation between Messrs. Merschhoff and Schuermann occurred within 24 hours of our receiving information concerning this potential reportable condition from our diesel generator manufacturing facility in Rocky Mount, NC.

We will be forwarding further information as it becomes available. You may contact me at 208-386-5793 if you desire any further information concerning this subject.

Very truly yours,

Murlin D. Grayson  
Quality & Technical Support Manager  
Power Group

MDG/SFS/so  
ATTACHMENT

cc: R. Hicks (w/attachment)  
H. Falter (Rocky Mount w/attachment)  
File

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PDR ADOCK 05000213  
S PDR

IE19  
1/1 Add some Taylor I+E

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CREATORS OF ELECTRICAL  
POWER SUPPLY SYSTEMS



**POWER SYSTEMS**  
A MORRISON-KNUDSEN DIVISION

101 GELD ROAD / POST OFFICE BOX 1928  
ROCKY MOUNT, NORTH CAROLINA 27801  
PHONE: (919) 977-2720 / TWX: (510) 989-0725  
TELEX 988807 PSD-RYMO

FEB 13 2 50 PM '85

SENT/REC. BY TELECOPY	
SENT:	_____
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DATE:	_____
TIME:	_____

**TELECOPY**

DATE: February 13, 1985

COMPANY: MORRISON-KNUDSEN COMPANY

ADDRESS: \_\_\_\_\_

CITY & STATE: BOISE, IDAHO

ATTENTION: MR. STEPHEN F. SCHUERMAN / MURLIN D. GRAYSON

REFERENCE: 10CFR21

TELECOPY NO.: \_\_\_\_\_

SFS 2/14/85

**MESSAGE**

SUBJECT: AFFECT OF LUBE OIL MODIFICATION ON 6 GPM CIRCULATING SYSTEM

PER OUR PHONE CONVERSATION OF TODAY (4:20 PM), ATTACHED IS AN MK/PSD  
INTERNAL MEMO REGARDING A POSSIBLE REPORTABLE DEFECT, ALONG WITH A  
SYSTEM SCHEMATIC DIAGRAM.

WE ARE CONTINUING TO INVESTIGATE AND WILL CONTINUE TO REPORT.

FROM: HARRY W. FALTER, PRINCIPAL ENGINEER

POWER SYSTEMS  
A MORRISON-KNUDSEN DIVISION

TRANSMITTED HERewith ARE (5) PAGES, INCLUDING THE COVER SHEET.

IF YOU DO NOT RECEIVE ALL PAGES LISTED, PLEASE CALL (919)-977-2720,  
EXTENSION NOS. 210 OR 212 FOR VERIFICATION.

**MORRISON-KNUDSEN COMPANY, INC.****INTER-OFFICE CORRESPONDENCE**

DATE: February 12, 1985

TO: Harry Falter & Distribution FROM: Debbie Odom *DO*

LOCATION: PSD LOCATION: PSD

SUBJECT: Affect of Lube Oil Modification on 6 gpm  
Circulating System

For installations that include a DC motor driven pump in standby to the 6 gpm AC motor driven pump, a check valve is located in the pump discharge line. The installation of the L.O. Modification results in the location of the C.O.P. alarm pressure switch between these check valves and the 30 psi EMD/Kepner "relief check" valve. Pressure is maintained in the line, even in the event of a failure of both pumps, preventing the alarm signal. Prior to the installation of the mod., pressure was relieved through the turbo line.

The foregoing was brought to our attention by the GE-River Bend site, IWO 6933. The failure of the alarm was discovered by River Bend on 2/4/85 when both pumps were removed from service as required in their testing procedure.

To correct the problem at River Bend, GE was provided with a procedure to drill a 1/16 inch hole in 30 psi Kepner "relief check" valve. This procedure is attached. In the event of pump failures, this will allow a sufficient amount of oil to pass to relieve the pressure between the check valves.

It is recommended that we develop an internal procedure to modify this valve and assign an M-K/PSD part number to the EMD/Kepner 30 psi valve for supply on current and future projects, where applicable. It is requested that the design plan be established for current and future projects where the DC standby to the 6 gpm AC is existing or is to be added.

Following is a list of contracts with L.O. Mods with comments. Please advise the writer and/or Harry Falter by 2/13/85 if there are additional comments or projects to be noted. The DC motor driven pumps referenced are those in standby to the 6 gpm AC motor driven pumps.

<u>IWO</u>	<u>PROJECT</u>	<u>COMMENTS</u>
6036	Watts Bar & Sequoyah	No DC
379	Watts Bar	No DC
950	Sequoyah	No DC.
6050	Cofrentes Mods.	Declined the DC.
6908	Duquesne-Beaver Valley	No DC

Continued...

<u>IWO</u>	<u>PROJECT</u>	<u>COMMENTS</u>
157/6910	Toledo Edison-Davis Besse	No DC
990/6911	WPPSS-Hanford	The diesel generator supplied by PSD does not have the DC. On the diesel generators supplied by S&S, the DC motors were relocated to be used in the L.O. Mod. Installation drawings should be reviewed to determine if a check valve remains in the 6 gpm AC pump discharge line. We supplied equipment and installation supervision.
6912	FP&L-St. Lucie 1	Upon installation of the L.O. Mod., in March, 1985, the D.C. will be relocated to be in standby to the 3 gpm A.C. Installation procedures should include instructions to remove check valve from 6 gpm AC discharge line. We supplied equipment and plan to supervise installation.
6913	Niagara Mohawk - NMP1	DC is to be added during installation of L.O. Mod in January 1986. The attached schematic is from 6913 dwgs. Corrective design should be determined and incorporated into drawings and installation procedures. We are supplying the equipment and plan to supervise installation.
6927	Cleveland Elec. - Perry	During installation of L.O. Mod. in Fall 1984, the DC was relocated to be in standby to 3 gpm AC. Installation drawings should be reviewed to determine if a check valve remains in the 6 gpm AC pump discharge line. We supplied equipment and installation supervision.
6932 6933	G.E.-Nine Mile Pt. 2 G.E. - River Bend	Has D.C. same as G.E.-River Bend, previously discussed. We supplied equipment and installation supervision.
115/6939	Ebasco-Chin Shan	No D.C.

Continued...

<u>IWO</u>	<u>PROJECT</u>	<u>COMMENTS</u>
406/6941	Kuo Sheng	No D.C.
6022	Duke-Oconee	Has the DC but a by-pass line with an orifice was included which allows pressure to be relieved.
6049	Zorita	No D.C.

In addition to the foregoing, we supplied supervision only, no equipment, for the L.O. Mod. installation at Maine Yankee and Conn. Yankee. It appears that neither of these sites have the D.C.

Ebasco has supplied the L.O. Mod. to St. Lucie II, IWO 6002. I have not seen the system modification design but the units were originally supplied with the DC in standby to the 6 gpm AC.

Most Stuart & Stephenson nuclear standby diesel generators were supplied with the DC. This should be noted for future L.O. Mod. projects. Bechtel provided the EMD L.O. Mod. for Arkansas' S&S diesels and they may have for the River Bend situation. We are currently providing parts and service to Arkansas.

The following nuclear standby units were provided by PSD with the D.C. This information should be noted for future projects:

<u>IWO</u>	<u>PROJECT</u>
392	Knolls Atomic - Electric Boat
6003	Westinghouse - Krsko
6019	Westinghouse - Philippines
6024	Westinghouse - Kori
6062	KAPL

DO:gp

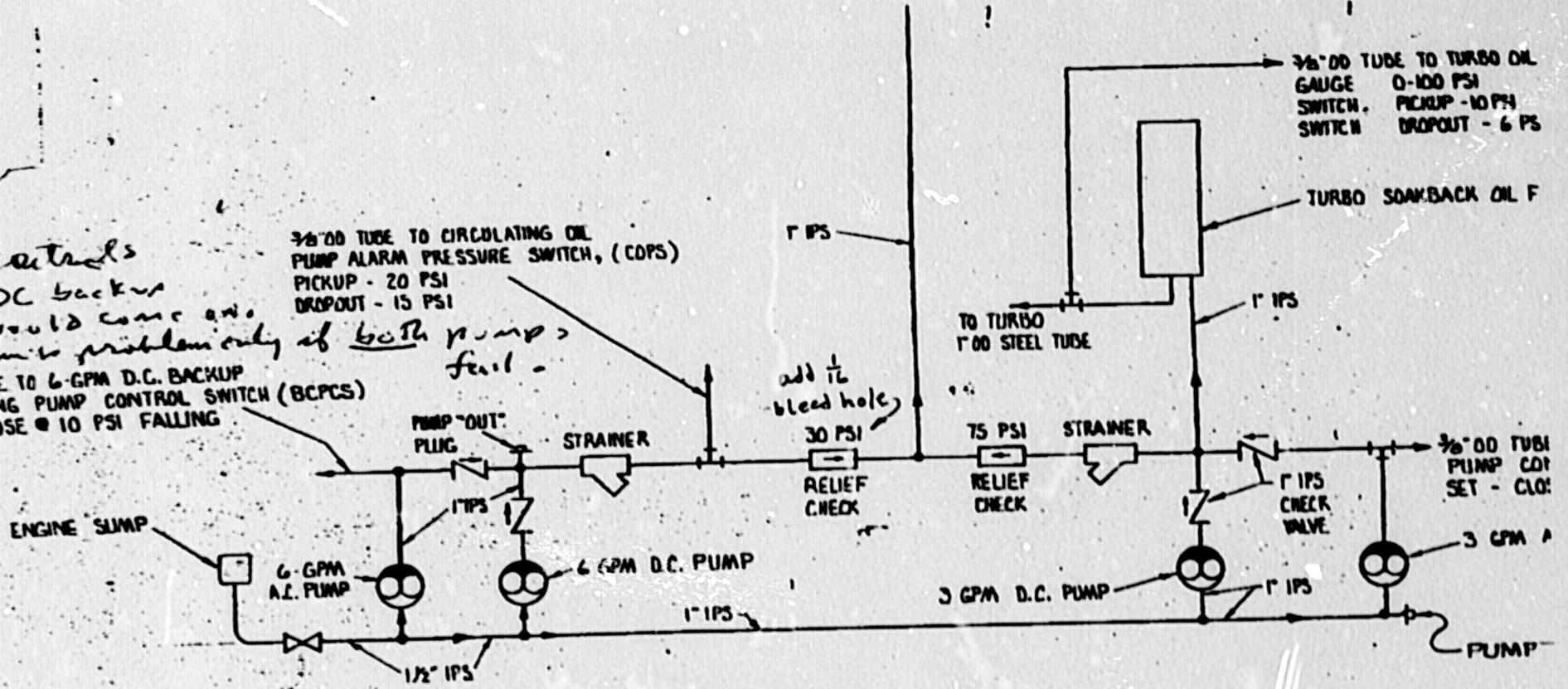
DISTRIBUTION:	T. Iannuzzi	E. Martin	M. Sharpe
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	W. Batchelor	V. Mitchell	
	D. Galeazzi	B. Daugherty	

Attachment

This controls the DC backup & it would come on alarm to problem only if both pumps fail.

3/8" O.D. TUBE TO CIRCULATING OIL PUMP ALARM PRESSURE SWITCH, (COPS)  
PICKUP - 20 PSI  
DROPOUT - 15 PSI

3/8" O.D. TUBE TO 6-GPM D.C. BACKUP CIRCULATING PUMP CONTROL SWITCH (BCPCS)  
SET - CLOSE @ 10 PSI FALLING



Redundant pumps

SYSTEM SCHEMATIC DIAGRAM  
(6913)