

CONTRACTORS  
ENGINEERS  
DEVELOPERS

**MORRISON-KNUDSEN COMPANY, INC.**

EXECUTIVE OFFICE  
MORRISON-KNUDSEN PLAZA  
P.O. BOX 7808 / BOISE, IDAHO 83729 / U.S.A.  
PHONE: (208) 386-5000 / TELEX: 368439

Pt 21 86-028  
Publicly Available

LTR-QTS-85-013

September 6, 1985


Mr. Edward Trottier  
USNRC  
1717 "H" Street  
Washington, DC 20555

Dear Mr. Trottier:

Attached please find supporting documentation concerning a reportable 10CFR Part 21 condition discussed this date by Mssrs. Chauncey Gould of USNRC and Robert Swatek of Morrison-Knudsen. The telephone conversation between Mssrs. Gould and Swatek occurred within 24 hours of our receiving information concerning this reportable condition from our diesel generator manufacturing facility in Rocky Mount, North Carolina.

We will be forwarding further information as it becomes available. You may call me at 208/386-7118 if you desire any further information concerning this subject.

Very truly yours,

  
Murlin D. Grayson  
Quality & Technical Support Manager  
Power Group

MDG/RWS/bkw  
1394q  
Attachment

cc: D. Baden (w/attachment)  
H. Falter (Rocky Mount w/attachment)  
F. Jones (Rocky Mount w/ attachment)  
File

IE19

CREATORS OF ELECTRICAL  
POWER SUPPLY SYSTEMS

URGENT!

PLEASE DELIVER TO  
MURLIN GRAYSON  
IMMEDIATELY. SEP 8 1985

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



**POWER SYSTEMS**  
A MORRISON-KNUDSEN DIVISION

101 GELD ROAD / POST OFFICE BOX 1928  
ROCKY MOUNT, NORTH CAROLINA 27801  
PHONE: (919) 977-2720 / TWX: (510) 929-0725  
TELEX 802507 PSD-RYMO

**TELECOPY**

DATE: September 6, 1985

COMPANY: Morrison-Knudsen Company, Inc.

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

CITY & STATE: Boise, Idaho

ATTENTION: Mr. Murlin D. Grayson (Quality Dept.)

REFERENCE: 10CFR Part 21

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

**MESSAGE**

SUBJECT: TVA-SEQUOYAH  
ENGINE GOVERNOR ACTUATOR ELECTRICAL CONNECTING PLUG

I received a phone call from Glenn Duggin (TVA-Sequoyah) on 9/4/85, who reported that an electrical fitting connection to the electric governor plug adapter became loose. It was found that threads between the plug adapter and the fitting on the flexible hose were not the same.

A 10CFR21 Committee Meeting was held this morning as a result of this phone call. Attached is a copy of this meeting, which concluded that the defect is reportable in compliance with the requirements of 10CFR-21. This report contains the necessary information for your immediate action. We will telecopy a final report later today.

Please acknowledge receipt of this notice and advise us of notification to NRC.  
cc: W. Frank Jones

FROM: Harry W. Falter, Principal Engineer  
POWER SYSTEMS  
A MORRISON-KNUDSEN DIVISION

TRANSMITTED HEREWITH ARE (3) PAGES, INCLUDING THE COVER SHEET.

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

**MORRISON-KNUDSEN COMPANY, INC.**  
POWER SYSTEMS DIVISION

10CFR21-0027

10CFR21 COMMITTEE MEETING HELD SEPTEMBER 6, 1985

Harry W. Falter, Principal Engineer

Harry W. Falter

Jim Rutherford, Manager-Administration

Jim Rutherford

Marc. Cake, Manager-Parts/Service

Marc. P. Cake

Ed Martin, Manager-Contracts

Edward L. Martin

Mike King, Manager-Purchasing

UNABLE TO ATTEND

Tom Iannuzzi, Manager-Engineering

Tom Iannuzzi

Vann Mitchell, Manager-Q.A.

Vann Mitchell

Ken Lewis, Manager-Manufacturing

Ken Lewis

Wes Batchelor, Engineer

Wesley Batchelor

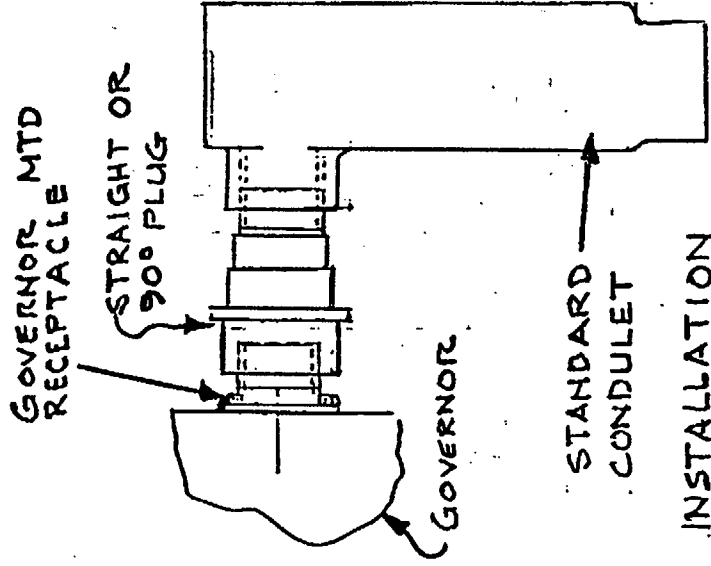
SUBJECT: TVA - Sequoyah  
Phone Call from Glenn Duggin 9/4/85

COMPONENT: Engine Governor Actuator Electrical Connecting Plug

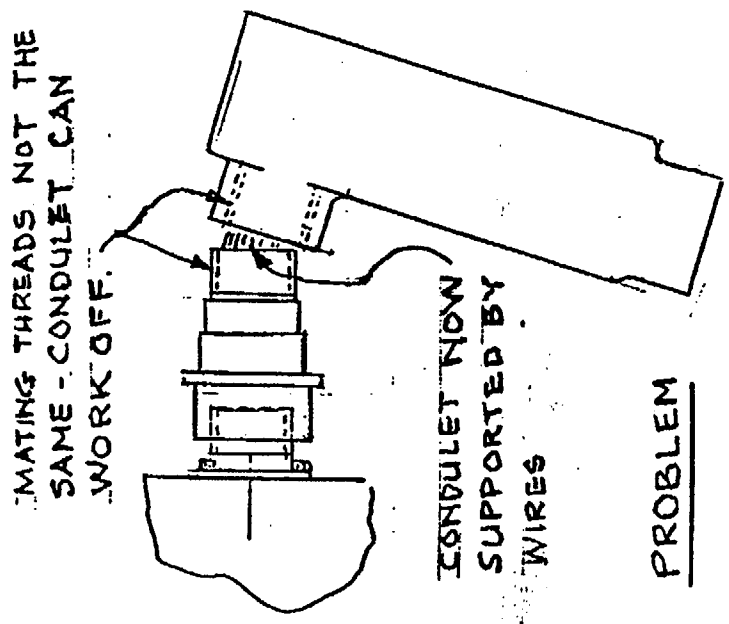
FUNCTION: To furnish all necessary electrical signals for the governor control to the governor actuator.

PROBLEM: Improper threads on electrical thread connectors to flexible conduit.

CONCLUSION: The Committee has concluded that the defect is reportable in compliance with the requirements of 10CFR-21.

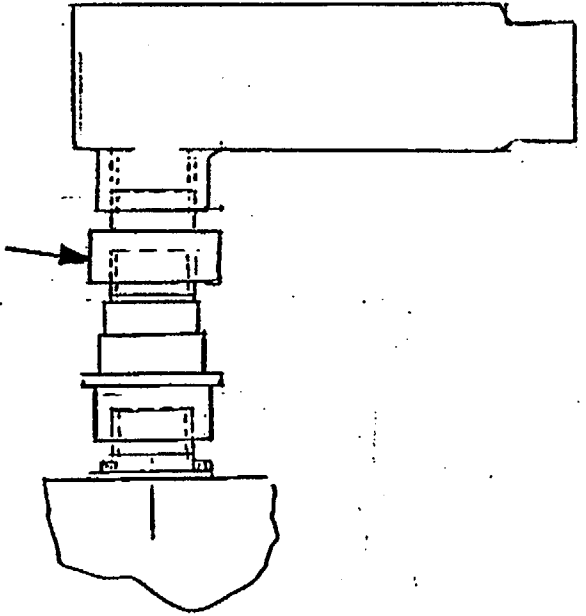


INSTALLATION

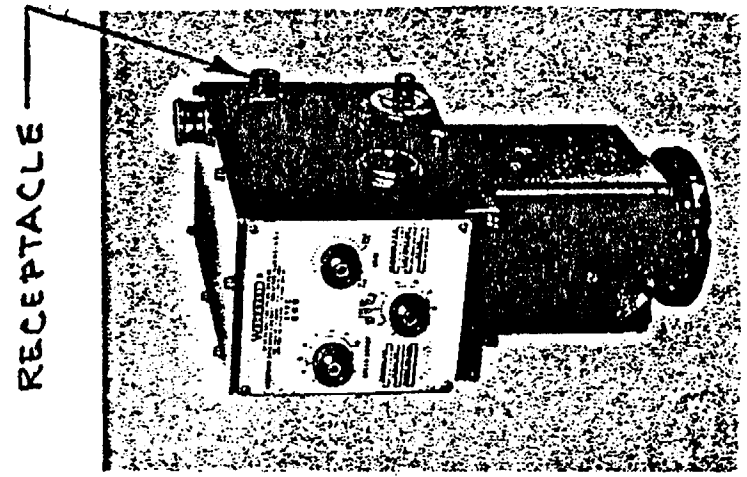


PROBLEM

INSTALL ADAPTER 802020



CORRECTIVE ACTION



VIEW - TYPICAL GOVERNOR ACTUATOR.

FIG-1

CREATORS OF ELECTRICAL  
POWER SUPPLY SYSTEMS



**POWER SYSTEMS**  
A MORRISON-KNUDSEN DIVISION

101 GELB ROAD / POST OFFICE BOX 1928  
ROCKY MOUNT, NORTH CAROLINA 27801  
PHONE: (919) 977-2720 / TWX: (910) 929-0725  
TELEX 802807 P8D-RYMO

SEP 6 2 18 PM '85

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

**TELECOPY**

DATE: September 6, 1985

COMPANY: Morrison-Knudsen Company, Inc.

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

CITY & STATE: Boise, Idaho

ATTENTION: Mr. Murlin D. Grayson (Quality Dept.)

REFERENCE: 10CFR Part 21

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

**MESSAGE**

SUBJECT: TVA-SEQUOYAH  
ENGINE GOVERNOR ACTUATOR ELECTRICAL CONNECTING PLUG

In our earlier telecopy of today, we advised that we would telecopy a final report to you. Attached is the remainder of this report for your review and action.

cc: W. Frank Jones

FROM: Harry W. Falter, Principal Engineer  
**POWER SYSTEMS**  
**A MORRISON-KNUDSEN DIVISION**

TRANSMITTED HERewith ARE (2) PAGES, INCLUDING THE COVER SHEET.

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

**MORRISON-KNUDSEN COMPANY, INC.**  
POWER SYSTEMS DIVISION10CFR21-002710CFR21 COMMITTEE MEETING HELD ON SEPTEMBER 6, 1985DISCUSSION

On the afternoon of 9/4/85, Harry Falter received a call from Mr. Glenn Duggin TVA-Sequoyah (615/870-6548) who reported that an electrical fitting connection between a conduit and the electric governor plug adapter became loose.

After some research, Harry Falter was able to identify the problem that Mr. Duggin described. A committee meeting was then called on 9/6/85 to determine whether the defect was reportable.

Fig. 1 illustrates the problem. The governor actuator is mounted on the diesel engine. A typical governor is shown in Fig. 1 on which an electrical receptacle is identified. All the electrical signals for the electric portion of the governor, the hydraulic governor speed setting motors, the shutdown solenoid and limit switches are supplied through this receptacle.

For diesel-generators furnished prior to 1976, the arrangement as shown on Fig. 1 "Installation" may have been furnished showing the connections to this receptacle. The problem is that the threads in the conduit are not the same as the mating threads on the plug. While the assembly appeared to be tight, there is a potential for the thread joint to loosen, particularly when subjected to engine operating vibration, with the conduit eventually working free. Then the only support for the flexible conduit that connects the plug to the control panel is the control wires inside. The potential then exists for the possible shorting or breaking of wires as a result of operating vibration; thereby, interrupting the signals to the governor and preventing the diesel-generator from performing its safety function.

The corrective action is to install an adapter P.N. B02020 which provides the correct threads for each component.

RECOMMENDATION

1. The Power Systems Division shall issue an M-K/PSD Information Bulletin that describes the defect and the recommended action to correct the defect to all Nuclear Power Plants that have EMD diesel-generators furnished either by Bruce GM or by the Power Systems Division of Morrison-Knudsen Company. The notice will advise that all diesel-generators supplied prior to 1976 are to be inspected promptly.
2. It is the opinion of the Committee that this defect does not render the equipment inoperable but that proper surveillance should be initiated and the corrective action completed as promptly as possible.