



Midland - Midland

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Secretary
SECRETARIAT RECORD COPY

FEB 13 1981

MEMORANDUM FOR: Chairman Ahearne
(Signed) William J. Dircks
THRU: William J. Dircks, Executive Director for Operations
FROM: Victor Stello, Jr., Director, Office of Inspection
and Enforcement
SUBJECT: POSSIBLE NEED FOR ADDITIONAL ENFORCEMENT ACTION IN MIDLAND

In response to your memorandum dated January 14, 1981, the following background information is provided. Mr. Keppler reported in the enclosed memorandum to me dated August 14, 1980 that on July 30-August 1, 1980 Mr. Gibbon, Legal Assistant to Commissioner Bradford, visited the Region III Office. He accompanied Region III inspectors on an inspection at the Perry site and met with Mr. Keppler and other members of the Region III principal staff to discuss a number of issues confronting NRC and Region III.

One of the subjects brought up by Mr. Gibbon was the NRC Construction Inspection Program. Mr. Gibbon's interest in construction inspection was directed toward the role the Commissioners might play to improve NRC enforcement capabilities that would result in better licensee performance in the construction of nuclear power plants. The potential ex parte contact that was recently brought to the attention of the Midland ASLB and involved parties represented only a few minutes in the overall discussions with Mr. Gibbon, which lasted the better part of the morning.

The recommendation that was discussed with Mr. Gibbon, which resulted in the mention of Midland, was that NRC should consider stopping a specific construction activity in a timely manner, as a matter of policy, when a significant safety-related problem has been identified and when NRC is unable to support the licensee's proposed corrective actions. The focus of this recommendation was aimed at NRC policy for future cases, not at reopening the Midland issue. Mr. Keppler has stated that the reasoning behind this recommendation was obviously based on NRC experiences at Midland. In March 1979, Region III notified Headquarters in writing of the initial concerns on the need to resolve this issue. Specifically, Region III questioned continuation of construction activities when the cause of the settlement problem had not been determined and suggested consideration of an NRR directive or show cause order which would expedite evaluations of the safety significance of the problem. It was Headquarters view, at that time, that a more appropriate action was for NRR to issue a 10 CFR 50.54(f) letter. Subsequently, NRR issued a 10 CFR 50.54(f) letter to the licensee to resolve the issue, but it was not until November 1979 that NRC attention was again focused on the adequacy of the basic design as affected by "random fill" soil. At that time

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Region III recommended that enforcement action in the form of a civil penalty be taken to resolve that concern. I considered such action to be inadequate and, upon my personal initiative, an Order was issued jointly by the Directors of IE and NRR requiring the licensee to show cause why it should not be required to seek an Amendment regarding remedial actions associated with the soils foundation problem or stop further safety-related work in this area. Since the Order was not made immediately effective, the licensee challenged the Order, the Order was stayed, and the licensee has continued to work. Even today, the staff is still not in a position to agree or disagree with the licensee.

The personal view of Mr. Keppler on this subject is that, although construction problems rarely pose a safety-related concern requiring immediate cessation of work, it is not in the best interest of NRC or the licensee to allow questionable work to continue for a long period of time. I differ with this view. I believe that it may be in the best interests of the NRC, the licensee, and the public, especially the ratepayer, to allow construction to continue when, as in the Midland case, the NRC staff most expert in the technical disciplines involved are of the opinion that continued construction will not prohibit an acceptable level of safety being achieved prior to operation. Mr. Keppler also believes that, from a practical standpoint, the degree of construction completion is seemingly bound to influence regulatory action in that reduced, yet acceptable, safety margins may be approved by the staff. My view in this matter is that a lesser margin of safety shown to exist by more rigorous and detailed analytical analysis than that used to justify a larger numerical margin, is often more conservative and is routinely used in the licensing process to assure adherence to requirements.

There are some legal constraints on the Commission's authority to summarily suspend activities under a construction permit. Immediately effective suspensions are lawful only in cases of willfulness or those in which the public health, interest, or safety require such action. In an appropriate case a valid finding to support an immediately effective suspension of work during construction can be made. See, for example, the order to show cause issued to Consumers Power Company immediately suspending Cadwelding activities at the company's Midland construction site. However, language in the United States Supreme Court's PRDC decision should be carefully considered in determining whether a particular circumstance warrants an immediately effective suspension at the construction permit stage. There, noting that the licensee, PRDC, had "been on notice long since that it proceeds with construction at its own risk, and that all its funds may go for naught", the Court rejected the notion that "the Commission cannot be counted on, when the time comes [at the OL stage] to make a definitive safety finding, wholly to exclude the consideration that PRDC will have made an enormous investment". 367 U.S. at 415. It is my position that required regulatory actions will be taken as necessary at the operating license stage.

Within the context of the above, your specific questions are addressed as follows:

FEB 13 1981

Question 1 - What is your position concerning the need to stop construction at Midland effective immediately?

Response - I do not believe there is a need to stop construction at Midland effective immediately. This was my view at the time the show cause Order was issued jointly with NRR in November 1979, and remains my position at this time. Furthermore, NRR was and is the lead Office for evaluation of design acceptability, and I have been informed by NRR that it was in November 1979, and currently is, of the opinion that construction at the Midland site need not be halted.

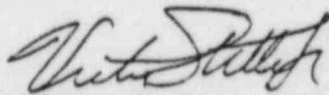
Question 2 - What are Mr. Keppler's concerns and how have they been addressed?

Response - Mr. Keppler has stated that his fundamental concern is that permitting construction to continue may result in safety-related problems associated with subsequently installed systems and equipment (e.g., excessive pipe stresses and questionable seismic response). In addition, he believes that permitting construction to continue after a major unanswered safety question is identified may lead to the natural tendency to "engineer away" expensive modifications by accepting reduced, yet acceptable, safety margins. His concerns will be addressed in the staff analyses and testimony being prepared for the forthcoming hearing.

Question 3 - If you now believe construction should be stopped effective immediately, what steps are you taking to do so and what is the bases for your change in position?

Response - As stated in the response to question 1, it is my position that construction need not be stopped effective immediately.

I hope that these responses are sufficient for your inquiry. Please let me know if I may be of further assistance.


Victor Stello, Jr.
Director
Office of Inspection
and Enforcement

Enclosure:
Memo, Keppler to Stello
dated 8/14/80

cc: Commissioner Gilinsky
Commissioner Hendrie
Commissioner Bradford
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
779 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

ENCLOSURE 1

August 14, 1980

MEMORANDUM FOR: Victor Stello, Jr., Director, Office of Inspection
and Enforcement

FROM: James G. Keppler, Director

SUBJECT: VISIT TO REGION III BY THOMAS GIBBON

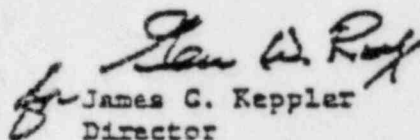
On July 30, 1980, Thomas Gibbon (Commissioner Bradford's Legal Assistant) visited the Region III Office. He then accompanied our inspectors on a construction inspection at the Perry facility on July 31 and August 1, 1980.

While in Region III, Mr. Gibbon met with the Regional Director and members of the principal staff and discussed a number of problem areas confronting the NRC and Region III. Areas of primary interest discussed were as follows:

1. NRC's Construction Inspection Program - of particular interest was our perceived lack of timeliness in identifying problems and what role the Commission should play in improving the Commission's enforcement capabilities to achieve quality in the construction area. Mr. Gibbon requested Region III to provide recommendations to him regarding our thoughts in this matter. Our comments will be coordinated with RCI.
2. Environmental Qualification of Electrical Equipment - Mr. Gibbon indicated that Commissioner Bradford viewed this as a major problem and was interested in our impressions of the effectiveness of the regional industry meetings. We told him that the Region III meeting went well and that a forceful message had been delivered to the industry that the NRC will not tolerate further delays in dealing with this problem.
3. Radioactive Material in the Public Domain - in response to Mr. Gibbon's inquiry into our major problem areas, our experiences with radioactive materials in the public domain in general were discussed. It was pointed out that the number of instances where radioactivity was being found in the public sector was large, the Regions were expending considerable manpower on these problems, and no real progress has been achieved primarily due to lack of policy in this area. The case of West Chicago was discussed specifically and Mr. Gibbon requested details concerning that case. The transmittal of this information will be coordinated with PPMSI.

4. Loss of Personnel - Our concerns for the loss of key inspection personnel were also discussed. In particular, it was pointed out that some of these losses resulted from the inability to pay specialist type inspectors and their supervisors at a rate equivalent to project personnel (both reactor and nonreactor positions). It was emphasized that IE management was very much concerned about this disparity and was actively pursuing the matter with the Office of Administration.

Mr. Cordell Williams, who was with Mr. Gibbon on the inspection accompaniment, believes Mr. Gibbon was impressed with both the scope and depth of our inspection effort. During his accompaniment he raised questions in connection with the inspection program, management support and interface with NRR.


James C. Keppler
Director

cc: R. C. DeYoung, IE
H. D. Thornburg, IE
J. H. Snierek, IE



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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PRINCIPAL STAFF		
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ENF		File <i>log</i>

Docket Nos. 50-329/330

Mr. James W. Cook
Vice President
Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Dear Mr. Cook:

Subject: Request for Additional Information Regarding Transamerica Delaval
Emergency Diesel Generators - Midland Plant, Units 1 and 2

The enclosed letter from Mr. T. M. Novak to Mr. J. P. McGaughy contains a series of questions that the staff has developed regarding Emergency Diesel Generators manufactured by Transamerica Delaval, Inc. (TDI). Notwithstanding the attention being directed by the TDI owners group to these questions, we request that you ensure that they are answered specifically for your TDI diesel engines. This may be done by reference to an owners group report or by a plant-specific report.

If you have any questions, please contact the Licensing Project Manager, Darl Hood, at (301) 492-8474.

Sincerely,

Elinor G. Adensam

Elinor G. Adensam, Branch Chief
Licensing Branch No. 4
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

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MIDLAND

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Mr. J. W. Cook

- 2 -

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 27 1983

Docket Nos. 50-416/417

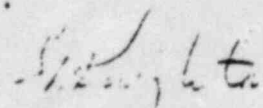
Mr. J. P. McGaughy
Vice President
Nuclear Production
Mississippi Power & Light Company
P. O. Box 1640
Jackson, Mississippi 39205

Dear Mr. McGaughy:

Subject: Delaval Diesel Owners Group Activities

Based on my discussion with you on December 22, 1983, in your capacity as chairman of the owners group for providing a unified response to concerns that have arisen regarding Transamerica Delaval emergency diesel generators, I am enclosing a list of NRC staff questions concerning Delaval diesels. We would expect that the majority of these questions address generic concerns which the Owners Group could most efficiently answer. Plant-specific questions should be addressed by individual applicants. Copies of these questions will also be sent to all affected utilities for their response.

Sincerely,


T. M. Novak, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

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Grand Gulf

Mr. J. P. McGaughy
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Mr. Alan G. Wagner
Resident Inspector
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REQUESTS FOR ADDITIONAL INFORMATION
DELAVAL DIESEL GENERATOR EVALUATION

1. Provide a copy of the procurement specifications to which the standby diesel generators (DG) were ordered.
2. Provide the performance specification and inspections performed upon receiving the DGs to show that the procurement specifications were met.
3. Identify the materials used in the design of the DGs at your plant (specifically limiting components such as crankshafts, camshafts, pistons rocker arms, bearing materials, cylinder blocks, cylinder heads, pumps, turbochargers, etc.). Discuss how you assured yourself that design materials used in the manufacture of your DGs were as stated and in accordance with materials described in the TDI proposal, purchase specifications, and conformance to industry standards.
4. Does TDI have a program where parts/components, etc., are modified (such that design margins are reduced) in order to improve operability and DG reliability? Does this apply to any DG parts at your plant? Provide a list of product improvements made by TDI on your model DG and identify and justify which of these were not incorporated on your diesels.
5. If applicable, provide responses to all NRC open items on standby DGs at your plant.
6. Identify each of your DGs by model number and rating (continuous duty and short time overload) as purchased and discuss all tests (including torsional and other design proof tests) performed on the DGs that were observed (also those not observed) by you at the manufacturer's facilities.
7. In addition to qualifications tests that were performed in accordance with regulatory guides 1.9 and 1.108, and IEEE Std. 387, describe all other onsite tests performed on your DGs.
8. In addition to any deficiency reports already provided to the NRC, summarize and describe problems encountered and resolved during installation and preliminary operation of the DGs. During this period, were any unusual or abnormal operations observed such as excessive vibration, noise, etc., and how were these conditions corrected? Provide a detailed summary of the complete operating histories of your DGs.

9. Tabulate, compare and discuss differences in present actual DG loading to estimated loads included in the procurement specifications. Identify the magnitude of the increased load (if any) on the DGs and describe how the increased loading affects the DG capability with regard to reserve margin.
10. If DG loading has increased from that specified in the procurement specifications, has it been necessary to upgrade the standby DGs to meet the new load requirements? If DG upgrading has been performed, provide a detailed description of the upgrading accomplished on your DGs? What is the revised manufacturer's rating for each upgraded unit for normal continuous duty and short time overload conditions? IS the DG built-in design margin (after upgrading) still within the recommendations of IEEE Std. 387? What is the reserve load carrying capability (margin) of your upgraded DGs?
11. In light of the problems that have been identified to date with Delaval diesels, discuss your plans to perform an internal visual inspection of each standby DG with regard to potential crankshaft and/or web cracks as identified at the Shoreham Station and provide a detailed discussion of your plans to perform any non-destructive testing (NDT) such as dye penetrant testing, etc., as deemed appropriate to assure absence of cracks at these locations or at any other locations where cracks may have been observed. Discuss schedules for such testing.
12. Justify that the standby DGs at your plant are sufficiently reliable that there will be reasonable assurance that the facility can operate without undue risk to the health and safety of the public. Your justification should include, but not be limited to the following: (1) quality assurance program conducted by you during procurement, manufacturing and receipt of your DGs, (2) your assessment of the TDI manufacturing process, inspection, and quality assurance program conducted during manufacture of your DGs, (3) your assessment of TDI responsiveness to problems that have occurred with your engines during installation and preliminary operation including assessment of TDI performance, (4) comparison of your DGs with all other TDI emergency.

DG models now in use or to be used in other nuclear generating stations (and other non-nuclear facilities) to show that the conditions and/or failure modes present at Shoreham will not occur at your plant and at other nuclear plants; provide any supporting information that may be obtained from non-nuclear installations, (5) independent review or verification of any TDI design calculations for critical components of your DGs, and/or other means used to assure that your DGs are designed to DEMA standards and applicable industry codes and standards, and (6) your overall assessment of the DGs at your plant with regard to TDI system design, operating experience to date, and system

dependability, availability and reliability to warrant operation of your plant.

13. Provide a tabulation of the number of times (including each date of occurrence) voltage was lost at the emergency bus(es) requiring operation of the DG(s) including a brief description of each incident. In the above tabulation, also identify the loss of emergency bus voltage due to loss of offsite power.
14. Shoreham has identified connecting rod bearing materials are not in accordance with design specifications on their engines. This condition may also exist on all other TDI diesels. Provide assurance that correct bearing design and materials have been used in your engines. Should you find that improper bearings have been used in your diesels, state how and when you propose to correct this problem.
15. Most of the piston skirts in the Shoreham diesels were cracked. Because of a common cylinder design for all TDI diesels, it is presumed that this condition potentially exists on all other TDI diesels. Discuss your plans, including internal inspection or other means to determine the potential or actual existence of such cracking. In your response, indicate whether the design and materials are identical to those in the Shoreham units; if not identify differences. Identify any corrective actions you have taken to date or plan to take.

The staff understands that TDI has a piston design modification to correct the above problem. Are you aware of this and has TDI transmitted this service information to you?

16. What maintenance and/or operating practices have you developed to assure optimum reliability of your diesel generators at your plant?
17. What surveillance practices in addition to those required by plant technical specifications have you instituted to assure optimum reliability of your diesel generators at your plant?

Laurie

DIESEL GENERATOR SUMMARY

<u>FACILITY</u>	<u>DIESEL</u>	<u>GENERATOR</u>	<u>PACKAGE/SUPPLIER</u>
Big Rock Point	Caterpillar	Electric Machinery Mfg.	Caterpillar
Braidwood	Cooper Bessemer	Portec, Inc. Electric Products Div.	Cooper Bessemer
Byron	Cooper Bessemer	Portec, Inc. Electric Products Div.	Cooper Bessemer
Callaway	Fairbanks-Morse	Fairbanks-Morse	Fairbanks-Morse
Clinton	Electro-Motive Division of General Motors	Ideal Electric Co.	Stewart & Stevenson
	Electro-Motive Division of General Motors	Ideal Electric Co.	Stewart & Stevenson
	Electro-Motive Division of General Motors	Beloit Power System	Stewart & Stevenson
D. C. Cook	Worthington	General Electric Co.	Worthington
Davis-Besse	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Morrison-Knudsen Co.
Dresden	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Stewart & Stevenson
Duane Arnold	Fairbanks-Morse	Fairbanks-Morse	Fairbanks-Morse
Fermi	Fairbanks-Morse	Fairbanks-Morse	Fairbanks-Morse
Kewaunee	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Western Engine
LaCrosse	1A Allis Chalmer 1B Caterpillar	Allis Chalmer Electric Machinery Mfg.	Allis Chalmer Caterpillar

LaSalle	Electro-Motive Division of General Motors	Ideal Electric Co.	Stewart & Stevenson
Marble Hill	Colt/Fairbanks-Morse	Beloit Power System	Colt
Midland	TransAmerica Delaval	Portec, Inc. Electric Products Divivision	TransAmerica Delaval
Monticello	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors
Palisades	ALCO	Electric Machinery Mfg.	ALCO
Perry	TransAmerica Delaval	GE	On-Site
Point Beach	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors
Prairie Island	Fairbanks-Morse	Fairbanks-Morse	Fairbanks-Morse
Quad-Cities	Electro-Motive Division of General Motors	Electro-Motive Division of General Motors	Western Engine
Zimmer	Electro-Motive Division of General Motors	Ideal Electric Co.	Stewart & Stevenson
Zion	Cooper Bessemer	Ideal Electric Co.	Cooper Bessemer