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MEMORANDUM FOR: James P. Knight, Assistant Director
for Components and Structures Engineering
Division of Engineering

FROM: Pao-Tsin Kuo, Section Leader
Structural Engineering Section B
Structural and Geotechnical Engineering Branch
Division of Engineering, ONRR

SUBJECT: REPORT ON THE REVIEW OF THE DIESEL GENERATOR
BUILDING AT MIDLAND

- References:
1. Memo from R. F. Wanick, Region III to D. G. Eisenhut
NRR/DE, "Evaluation of Dr. Landsman's Concerns Regarding
the Diesel Generator Building at Midland," dated
July 21, 1983.
 2. Memo from R. H. Vollmer, DE to D. G. Eisenhut, DL
"Evaluation of Dr. Landsman's Concerns Regarding
Diesel Generator Building at Midland," dated
July 21, 1983.

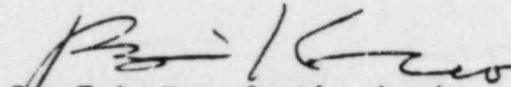
Pursuant to Reference 2 above, a task group, consisting of three members of the Structural Engineering staff and a consultant team of Brookhaven National Laboratory, was formed to re-evaluate the structural design and construction adequacy of the Midland Diesel Generator Building (DGB). The group, headed by P. T. Kuo, reviewed the design review documents and the construction reports; physically inspected the building; interviewed concerned individuals, including Dr. Landsman; and prepared a final report on the adequacy of the Midland NPP Diesel Generator Building. The final report on the adequacy of the Midland DGB is enclosed.

The task group's conclusions and recommendations are summarized as follows:

1. The settlement data indicate that the fill under the DGB is well into the secondary consolidation phase so that large additional settlements are not anticipated;
2. It is judged that there is reasonable assurance that the structural integrity of the DGB will be maintained and its functional requirement fulfilled. However, it is difficult to show that the stresses in the DGB can meet the criteria of the FSAR. The stresses due to settlement were either underestimated or overestimated by the Applicant's previous analyses;

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3. The most reasonable estimate of stresses due to settlement is based on the crack width data. However, the calculations that have been done in this area need to be completely documented;
4. There is evidence that the number of cracks in the DGB is continuing to grow. It is essential that a more accurate and reliable crack monitoring program be established; and
5. The monitoring program should specify an upset crack width level that would reflect a sufficient stress margin available to resist critical load combinations. The monitoring program should mandate structural repairs if the Alert Limit (in crack width) were exceeded.


Pao-Tsin Kuo, Section Leader
Structural Engineering Section B
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Enclosure:
As stated

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