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February 10, 1984

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Mr. J. G. Keppler
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Mr. D. G. Eisenhut
Director, Division of Licensing
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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket Nos. 50-329 OM, OL and 50-330 OM, OL
Midland Nuclear Plant - Units 1 and 2
Independent Design and Construction Verification (IDCV) Program
Future Direction of the Midland IDCVP

Gentlemen:

The current status of the Midland project is a major factor affecting the planned progress of the IDCVP. A portion of the design and construction products originally selected within the IDCVP scope are still in process, impacting an expeditious completion of a "vertical slice" review of the Midland project considering the "quality of the end product." The existing IDCVP methodology has assumed that items within its scope are complete, placing emphasis on an evaluation of the quality of the end product rather than the process by which the items were designed and constructed. A thorough examination has been made to assess means by which the original stated goals of the IDCVP would be met without a needless delay for all Midland project design and construction activities to be completed. We have determined that a limited modification of the IDCVP methodology is required to accomplish these goals. Our modified approach includes:

- Maintaining the existing vertical slice approach to design verification by:
 - Reviewing end products for majority of sample;
 - Reviewing engineering procedures and action plans and their implementation for the remainder of the sample where items are not complete.

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- Postponement of the construction verification until completion of Phase I of the Midland project Construction Completion Program (CCP), thus, taking advantage of the assemblage of relevant quality documentation by the Quality Verification Program (QVP). During the period of postponement, conduct a verification review of selected QVP documentation processes to allow expedited documentation and physical verification after Phase I of the CCP.
- Focused review of identified process-related issues resulting from existing Findings and ongoing work.

Thus, the principal alteration involves verification of a limited portion of the design verification sample by reviewing engineering procedures and action plans and their implementation for items not currently completed. It is estimated that approximately 10 to 20 percent of our sample would be verified in this manner and that 80 to 90 percent of our sample will continue to be verified with emphasis on the quality of the end product. We believe that this approach is superior to the current IDCVP methodology since the results of the "end product" review will be combined with a review of the design programs to assure greater confidence in the conclusions reached.

The following paragraphs address issues relevant to the design and construction verification efforts and details of how our modified approach will be implemented. We anticipate that this approach would allow the design verification to be bifurcated from the construction verification. The design verification could be completed by July of 1984, at which time the results would be available to external parties and the physical verification may potentially re-commence consistent with the status of the CCP.

Design Verification

Although the design verification program is proceeding with its original plan of reviewing completed products, some design areas in our sample are currently incomplete or are being revised. Often there are sufficient sets of end products to allow adequate review to be made even though certain design areas are not yet complete. In other cases, it has been necessary to put verification work on "hold" pending further progress in design. We have made an assessment of the current status of the IDV program and the status of the plant design. Presented below is an outline of our recommendations for modification of the IDV program to accommodate the areas which are not currently complete.

At this time, IDV programs can be divided into two major subcomponents: the current program for the areas where sufficient end products exist to allow application of the current program and the proposed modifications for other



design areas. The current program includes dispositioning of Findings and Confirmed Items as well as review of design aspects which are complete or substantially complete.

For design areas still in progress or in revision, we recommend that the review use available end products (or intermediate products) combined with a limited review of the engineering action plans and implementing processes by which the design effort will be completed. This would be accomplished by confirming the status of all design areas and dividing them into those which are substantially complete and those which are subject to the modified program. For each incomplete design area the revised program will require identification of the processes to be used to complete the design area. The processes thus identified will then be appropriately grouped and reviewed using available end or intermediate products as a means of verification of implementation. In concept, this approach represents only a small change from the current program. The current program already calls for review of processes where necessary to disposition Findings or Confirmed Items. Rather than limiting such an approach to Findings, we recommend using it to speed completion of our review of the Midland design and enhance our confidence in extrapolating results.

Construction Verification

The ability to bring several aspects of the construction verification program to completion has been, and is in the near term, projected to be influenced by the status of the Midland project CCP. Physical verification reviews and reviews of construction/installation documentation have essentially been suspended or significantly narrowed in scope as a result of CCP status. For the near term, it is suggested that construction verification be suspended until such time as the CCP completes its Phase I activities on IDCVP-selected components and commodities. Proceeding in this fashion allows the CCP to perform the essential "statusing" function and allows the Midland project QVP to assemble and verify pertinent documentation, thus enabling an efficient utilization of IDCVP resources when conducting future documentation and physical verification reviews. To date, significant IDCVP resources have been expended in assembling quality documentation which is used to verify the quality of installed and constructed items and support physical verification. Under the suggested approach, the quality data packages can be verified more efficiently, permitting less IDCVP resources to be devoted to this activity in the future by utilizing the documentation packages assembled by the QVP and focusing resources to end product confirmation. To effect this, we would selectively review the QVP documentation process to enhance verification of the quality of the documentation. This will also permit a more direct focus on the IDCVP physical verification.

The near-term focus of the construction verification review will be on further dispositioning of outstanding items and selective review of the QVP documentation process.



Mr. J. W. Cook
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Mr. D. G. Eisenhut

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If desired, we will discuss the items presented herein during the next scheduled IDCVP Status Review Meeting to be held at Bechtel's Ann Arbor, Michigan offices on February 29, 1984.

Sincerely,



Howard A. Levin
Project Manager
Midland IDCVP

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Midland IDCVP Service List

Attachments

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TERA CORPORATION

SERVICE LIST FOR MIDLAND INDEPENDENT DESIGN
AND CONSTRUCTION VERIFICATION PROGRAM

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