

TERA

July 2, 1984

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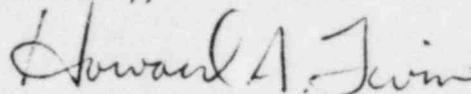
Mr. D. G. Eisenhut
Director, Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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
Meeting Summary

Gentlemen:

The tenth general meeting on Confirmed Items and Findings was held on June 21, 1984. A summary is provided to document items discussed and actions agreed upon by the participants.

Sincerely,



Howard A. Levin
Project Manager
Midland IDCV Program

HAL/sac
Enclosure

cc: (See Next Page)

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July 2, 1984

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Midland IDCVP Service List



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AND CONSTRUCTION VERIFICATION PROGRAM

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SUMMARY OF TENTH GENERAL STATUS REVIEW MEETING
ON CONFIRMED ITEMS AND FINDINGS

June 21, 1984
Midland IDCVP Program

A meeting was held on June 21, 1984 at Bechtel's Ann Arbor, Michigan offices to obtain additional information related to Confirmed Items identified in the April and May IDCVP Monthly Status Reports dated May 16 and June 15, 1984 and to status other outstanding items identified previously. Attachment 1 identifies the attendees of the meeting which included representatives of TERA, CPC, Bechtel, and NRC. Attachment 2 presents the agenda which was issued for the meeting in a notice dated June 13, 1984.

Howard Levin, TERA, opened the meeting with a discussion of the agenda. The items noted on the agenda were discussed in a different order as agreed upon by the participants to optimize resource allocation during the meeting. The meeting then proceeded with its primary objective which is to ensure that all participants have a complete understanding of the technical issues expressed as Confirmed Items and Findings in the April and May Monthly Status Reports. The responsible TERA personnel described each item, followed by discussion by either CPC or Bechtel, who were requested to identify additional information that may have bearing on the issues or to provide clarification which would allow these issues to be dispositioned directly.

The status of previously outstanding Confirmed Items and Findings was also discussed, except for those noted in the meeting announcement. The meeting announcement listed certain OCRs as being on hold or that sufficient information is available for TERA to disposition the item. A summary of the significant aspects of the discussion is provided in Attachment 3 along with any course of action identified.

ATTACHMENT 1

MIDLAND NUCLEAR PLANT - UNITS 1 & 2

INDEPENDENT DESIGN AND CONSTRUCTION VERIFICATION PROGRAM

OCR STATUS REVIEW MEETING

June 21, 1984

<u>NAME</u>	<u>AFFILIATION</u>
ROB BURG	BECHTEL / LICENSING
L. Lampson	Bechtel / Nuclear
D F LEWIS	BECHTEL
RE Whitaker	CPCO / MPQAD
FRED SCHOFER	BECHTEL / NUCLEAR
Viswa S. Kumar	BECHTEL / MECH
K. C. PRASAD	Bechtel (Nuc. Staff.)
A AMIN	Bechtel / Mech.
H. LEVIN	TERA
FA Dougherty	TERA
H. George	TERA
Hai-Boh Wang	NRC / IE / DQASIP
W.A. PARMLEY	CPCO / PROJECT ENGINEERING
L.S. GIBSON	CPCO / " "
P. B. Corbett	Bechtel / Elect.

MIDLAND NUCLEAR PLANT - UNITS 1 & 2
INDEPENDENT DESIGN AND CONSTRUCTION VERIFICATION PROGRAM

OCR STATUS REVIEW MEETING

June 21, 1984

<u>NAME</u>	<u>AFFILIATION</u>
P.V. REGUPATHY	BECHTEL - CIVIL
S. RAO	BECHTEL
A. OUAOU	" - CIVIL
G.E. SETKA	TERA
B. DHAR	Bechtel
V. Verma	"
G. REED	BECHTEL - MECH
D.A. Horvath	Bechtel - Mech

**MIDLAND INDEPENDENT DESIGN AND
CONSTRUCTION VERIFICATION PROGRAM**

**AGENDA FOR JUNE 21, 1984
OCR STATUS REVIEW MEETING
BECHTEL OFFICES
ANN ARBOR, MICHIGAN**

I. Estimated Time

Start: 9:00 AM
Lunch: 12:00 PM to 12:45 PM
Adjournment: 3:00 PM

II. Discussion of Confirmed Items, Findings, Observations, and Resolved Items (Design Verification only)

<u>Item</u>	<u>TERA Lead</u>
A. Mechanical/Systems	
● C-065*	Doughtery
● R-084*	Witt
● C-087, -088, -089	George
● C-145	Witt
● C-167*	Witt
● B-173*	Witt
● B-174*	Doughtery
B. Electrical	
● R-109*	Setka
● C-110	"
● C-133	"
● C-146	"
● C-161	"
● R-162*	"
● R-163*	"
● C-165	"
● C-172*	"
● C-179*	"

C. Civil/Structural*

- | | |
|----------|---------|
| ● F-156* | Mortgat |
| ● F-171* | " |
| ● C-175* | " |
| ● C-176* | " |
| ● C-177* | " |

* Full agenda to be agreed upon during meeting, subject to project's readiness.

III. Discussion of programmatic issues - as required.

IV. Discussion of Action Items and Logistics for Information Exchange

- Notes:
1. Items are grouped to the degree practical to facilitate discussion and minimize manpower requirements during the entire meeting.
 2. Items that changed status during the April and May reporting period are denoted with an asterisk.
 3. The following design verification OCRs have not reached a final disposition; however, further TERA or Midland Project actions have been identified during past public meetings. Accordingly, discussions are not contemplated by TERA unless the Midland Project has identified new information that is pertinent to the ongoing activities.
 4. OCRs with sequential numbers greater than -172 will be transmitted in Monthly Status Report No. 13 on June 15, 1984.

- | | | |
|---------|---------|---------------------|
| ● C-005 | ● C-077 | ● C-141 |
| ● C-048 | ● C-085 | ● C-144 |
| ● C-068 | ● C-112 | ● C-148, -149, -150 |
| ● C-069 | ● C-135 | ● F-015 |

ATTACHMENT 3

SUMMARY OF DISCUSSION OF CONFIRMED ITEMS, FINDINGS, OBSERVATIONS, AND RESOLVED ITEMS

B-086

This OCR was classified as an Observation in the October, 1983 Monthly Status Report (MSR). The Observation noted that the actual cable penetration fire seal configuration did not correspond to that tested. The IDVP was subsequently informed that a new design was in development; therefore, making the specific discrepancy insignificant.

At the OCR meeting, TERA requested drawings for fire seals in order to verify that the design and qualification are now in agreement.

B-090

This OCR was also classified as an Observation in the October, 1983 MSR. It was concerned with the qualification for emergency lighting units. The Observation noted the fact that Bechtel had identified that the original qualification report was inadequate and committed the IDVP to verification of closure of this issue by Bechtel. TERA requested information regarding the qualification for emergency lighting units. Bechtel will provide TERA with copies of current qualification test reports.

C-087

This OCR noted apparent inadequate separation in Fire Zone 16 and failure to note the same on a "problem area" list. Bechtel described their ongoing review

process and specifics regarding the noted issues related to F.Z.16. They concur with the noted issues and indicated that at the time the OCR was issued they were in the process of making the same identification. Accordingly, given the stage of their review it was premature for the "problem area" to have been noted on the "problem area" list. TERA requested the appropriate documentation and its revisions.

C-088

This OCR is concerned with the adequacy of fire zone-to-zone separation. When the OCR was written it appeared that an AFW pump room and the adjacent corridor were not separated by a rated barrier. Considerable discussion revolved around whether the FSAR accurately reflected the design and the extent to which the design was still in development at the time the OCR was originally written. Bechtel stated their intent to demonstrate that the barrier now meets three-hour rating requirements although exemptions are required for the water-tight door and the blowout panel. The water-tight door has been discussed previously with the NRC. Both will be included in the January 1985 report with justification provided for an exemption request. A SAR change notice has also been prepared. TERA will review available additional information.

C-089

This OCR was concerned with the adequacy of emergency lighting in areas of access to the auxiliary shutdown panel. Bechtel has provided TERA with documentation showing additional emergency lighting which should further disposition the concern. The project noted that an updated emergency lighting study is now available and that a test has been conducted to demonstrate the adequacy of illumination. TERA will review the new information to determine the disposition of this OCR.

C-148

TERA requested additional information regarding the procedures by which the need for fire seals is identified and installed. Bechtel explained the process by which design documents are updated to reflect "as built" conditions. TERA requested a copy of the A-60 specification which is the technical specification for penetration seals.

TERA also asked whether drill permits are automatically routed to architectural in accordance with a procedure. Bechtel will provide the requested information.

C-149

This OCR is concerned with the application of NFPA-12 to the fuel oil system for the Midland diesel generator. TERA has previously received information which is currently being reviewed. No further information is needed at this time.

C-150

TERA previously received a SAR change notice which changes the design criteria from NFPA 72-D to NFPA 72-A, both of which are concerned with detection systems. Branch Technical Position 9.5-1 requires the use of NFPA 72-D. TERA will review the significance of the change from NFPA 72-D to NFPA 72-A.

Note: The following OCRs related to the SEP system were reviewed at the May 31 public meeting (except C-179). The following provides a discussion of the additional information which was discussed at the June 21 meeting.

C-110

Bechtel has developed a written response to this OCR which is concerned with the voltage drop associated with the initial load step applied to the diesel generator. Bechtel described the approach which was applied to develop the response. The response contains references to backup documentation which TERA also requested.

C-161

This OCR resulted from an apparent discrepancy between the FSAR and the diesel generator qualification test report with respect to minimum voltages. The FSAR states that motor-operated valves require a minimum of 80% of rated voltage whereas the test data when combined with the assumed voltage drop between load centers and devices results in an overall drop in excess of the FSAR statement. Bechtel has developed a response to this OCR. TERA will review the response and determine the action to be taken.

C-165

This confirmed item is concerned with whether voltages stated in B&W's interface criteria are nominal or absolute minimums. Bechtel will issue a written response for TERA review. Generic concerns regarding operational restrictions will be addressed with the disposition of C-172.

Note: Howard Levin stated that an OCR meeting on civil items has been noticed for June 28 at 1:00 PM in Bechtel's offices in Ann Arbor. At this meeting Bechtel will present information regarding the status of all civil items for which they are pursuing the development of additional information and will describe the technical approach to the development of this information. Accordingly the civil OCRs discussed at the June 21 meeting were limited to those which were first issued in monthly status reports 12 and 13.

F-171

This Finding addresses a failure to properly consider thermal gradients in walls and slabs. The status change to a Finding resulted from the recognition that an error exists in this area although the safety significance cannot presently be determined. Bechtel is evaluating this issue and plans completion of their work by mid-July.

F-156

This issue is concerned with channel imbedments. A design drawing, reviewed by the IDVP, allows for a generic design which could be applied in situations such that acceptance criteria would not be met. This results in potential overstressed embedded channels. This item has now been reclassified as a finding because it is recognized as a design error. Bechtel is preparing a written response to this Finding.

C-175

This OCR is concerned with the appropriateness of the methodology and assumptions used by Bechtel to calculate the natural frequencies of HVAC ducts. The calculation reviewed by the IDVP disregarded a 200-lb damper based upon a rationale of conservatism. The IDVP requested clarification demonstrating that this is the case. Furthermore, the basis for calculation of natural frequencies using the static deflection of a "cantilevered half span" is not clear. Bechtel will review this item and provide a response.

C-176

The FSAR requires the use of a multimode factor of 1.5 in the evaluation of HVAC ducts, duct supports, and cable tray supports. In calculations reviewed by

the IDVP it appears that this 1.5 factor was not used. Bechtel will review this item and provide a response.

C-177

This OCR questions the validity of an assumption that the diesel generator building and the diesel generator pedestals are in phase. Seismic anchor movements of attached commodities may potentially be underestimated. Bechtel will review this item and provide a response.

C-144

Bechtel has drafted a study to respond to this OCR concerned with the assumptions used in piping analysis. The study will be issued for internal review within Bechtel on June 22. The study will receive reviews by Bechtel personnel in both Ann Arbor and San Francisco after which it will be issued to CPC and subsequently to TERA around mid-July.

C-133

Bechtel has developed a new calculation concerning the capability of air system to meet design bases. In particular, the calculation is based upon having a successful engine start rather than starting on the fifth try. On this basis seven days air supply is available with a 100% margin. TERA will review the calculations and determine the disposition of this item.

C-146

It had been previously discussed that a failure modes and effects analysis would

be prepared if the calculation associated with C-133 showed that there was inadequate air. Because the calculations indicate that adequate air is available, Bechtel is not going to develop a failure modes and effects analysis. TERA requested the TDI tasks descriptions as input to the dispositioning of this OCR.

C-179

This new OCR is concerned with the assumptions associated with the determination of whether a seven-day fuel oil supply exists on site. Several questions are raised which potentially affect the demonstration that the plant meets the seven-day criterion. Bechtel stated that they can demonstrate that the fuel oil system meets the seven-day criterion. Bechtel will provide TERA with information concerning the assumptions and bases for their statement.

C-065

OCR C-065 is a generic concern raised by the IDVP concerning the adequacy of the methods used by the project to identify and consistently implement design criteria and commitments. The IDVP is continuing to review the implementation of criteria by the project. CPC described their system design description project which will identify design bases, assumptions, and operating restrictions applicable to each system. CPC will provide TERA with additional information regarding their plans in this area.

C-145

Bechtel has previously provided TERA with additional information regarding discrepancies between an HVAC P&ID and the corresponding duct drawings. This information is adequate to disposition sections of this OCR, but a question remains as to the cause of the discrepancy. Bechtel will provide a response to TERA on this concern.

B-167

This Observation notes several minor calculation and drawing inconsistencies and an inconsistency in the FSAR documented maximum value of control room temperature following a LOCA. A Bechtel calculation and an IDVP confirmatory calculation suggest 80°F while the FSAR states 75°F as the maximum. TERA noted that the original FSAR commitment was very conservative and much more restrictive than technical specification limits for other plants. Thus this item was classified as an Observation. The adequacy of how FSAR commitments are controlled is noted as a concern. Bechtel stated that SAR change notices had been issued.

B-173

This Observation noted differences between a Bechtel calculation and an NUS report which contains Midland-specific information. The observation notes that the report was completed after the calculations were performed, but that over two years have passed without the calculation being updated. Both the NUS report and the FSAR note that eleven chemicals are still being tested.

B-174

This Observation noted that the FSAR clearly gives the impression that the plant (internal) flooding analysis was complete and that as of Amendment 49 no problems existed. This is not correct in that calculation revisions and/or design changes are necessary before the FSAR statements can be considered correct. CPC and Bechtel responded that the FSAR is a statement of the completed design and does not reflect the fact that some design and analysis work is still in progress.