

TERA

November 1, 1983

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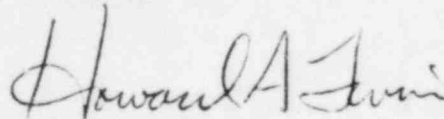
Mr. D. G. Eisenhut
Director, Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket Nos. 50-329 OM, OL and 50-030 OM, OL
Midland Nuclear Plant - Units 1 and 2
Independent Design and Construction Verification (IDCV) Program
Meeting Summary

Dear Sirs:

The third meeting on Confirmed Items was held on October 28, 1983. A summary is provided to document items discussed and actions agreed upon by the participants.

Sincerely,



Howard A. Levin
Project Manager
Midland IDCV Program

cc: Participants
Midland IDCVP Service List
R. Erhardt, CPC
D. Quammy, CPC (site)
B. Palmer, CPC (site)
D. Hood, NRC
J. Taylor, NRC, I&E HQ

Enclosure

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**SERVICE LIST FOR MIDLAND INDEPENDENT DESIGN
AND CONSTRUCTION VERIFICATION PROGRAM**

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SUMMARY OF THIRD MEETING ON CONFIRMED ITEMS
OCTOBER 28, 1983
MIDLAND IDCVP PROGRAM

A meeting was held on October 28, 1983 at Bechtel's Ann Arbor, Michigan offices to obtain additional information related to Confirmed Items identified in IDCVP Monthly Status Reports dated September 20, 1983, and October 17, 1983, and to status other outstanding items identified previously. Attachment 1 identifies the attendees of the meeting which included representatives from TERA, CPC, Bechtel, and NRC. Attachment 2 presents the agenda used for the meeting.

Howard Levin, TERA, opened the meeting with a discussion of the agenda and a summary of the purpose of the meeting. The minimum objective for the meeting was to ensure that all participants gained a complete understanding of the technical issues expressed as Confirmed Items. This is intended to enable Midland project personnel to identify additional information that may have a bearing on the issues at hand. Direct clarification or presentation of additional information by Midland project personnel is also sought so that specific issues may be further dispositioned directly.

Lou Gibson, CPC, discussed recent actions taken by the Midland project to facilitate the flow of information to TERA. These actions have included the revision of certain internal Bechtel procedures for handling the transmittal of information. Levin indicated that these procedures were reviewed by TERA and with representatives of the NRC, and that since their adoption an improvement in turnaround time has been recognized. Gibson indicated that the issue of information flow is on the agenda for management review, and that routine reports are provided to management to enable a verification that turnaround time is not compromised by other priorities.

The status of outstanding Confirmed Items and Findings was discussed next, including a cursory review of Observations and Resolved Items. A summary of significant aspects of these discussions is provided in Attachment 3 along with

any course of action identified. The responsible lead TERA personnel described each item followed by a discussion of either CPC or Bechtel personnel, as appropriate.

During these discussions, the topic of Observations was presented. Observations are items that are not considered sufficiently serious to warrant classification as Confirmed Items; however, these cannot be dismissed directly as Resolved Items because certain review and potential corrective actions may be necessary on the part of the Midland project. A consensus was developed to the effect that Observations would continue to be transmitted via the Monthly Status Reports. Any necessary clarification required by the Midland project could be gained at similar meetings. Without such questions, time will not be consumed in reviewing Observations at these meetings.

The slated topical report on the AFW system performance requirements was discussed. TERA indicated that the original concept for the report was to provide intermediate input that may be useful to the NRC in their efforts associated with the Ford Amendment. It was originally anticipated that while such a topical report is but a piece of the IDCVP scope, it would provide a glimpse into the implementation of the overall IDCVP methodology. TERA indicated that most of the outstanding Confirmed Items and Findings are associated with the AFW system and that in view of this, it is premature to draw substantive conclusions. Accordingly, it has been determined that such a topical report would merely be a topical status report and not a consummate statement on the AFW system performance requirements. The NRC representatives indicated that they would review the situation to assess whether or not the current monthly status reporting would suffice in lieu of the slated topical report.

MEETING NOTICE

ATTACHMENT 1

BECHTEL JOB NO. 7220
PROJECT Midland Plant Units 1 and 2

SUBJECT OF THE MEETING

Independent Design and Construction Verification (IDCV) Program

DAY Friday - October 28, 1983

TIME 9:00 a.m. TO 3:00 p.m.

LOCATION Bechtel Ann Arbor Office - Conference Room 1B1

ATTENDEES

NAME	ORGANIZATION
HOWARD LEVIN	TEKA CORP.
FRANK DOUGHERTY	TERA Corp.
MARTIN JONES	TERA CORP.
Lucretia Bates	TERA CORP.
RANDY CLELAND	TERA CORP.
Jerry Clements	Bechtel - Project Coordinator
Mark [unclear]	[unclear]
ED KRANZFELDER	BECHTEL CONSTRUCTION
Bob HAMM	CPCO - IIC
Bob Whitaker	CPCO - MPQAD
G.C. Gower	NRC - IE/HQTS
T. Hershman	NRC - IE/HQTS
C. MORTGAT	TERA Corp
Douglas M. Witt	TERA Corp
LORIS S. GIBSON	CPCO - Proj. Eng.
JOHN KOVACH	BECHTEL - Elect.
ANIL JULKA	- Elect.
ED HUGHES	- Project Engineer
SURESH PATEL	- Mechanical
K.C. PRASAD	- Nuclear Staff
BOB TULLOCH	- Plant Design
P. Gupta	-
MIKE HENRY	-
S.K. Rao	- Civil
B.C. McCONNEL	- Civil
BOB HAMM	CPCO

INDEPENDENT DESIGN AND CONSTRUCTION VERIFICATION (IDCV)

AGENDA
for
OCTOBER 28, 1983, MEETING
ANN ARBOR, MICHIGAN

- I. Introduction and opening remarks
- II. Discussion of Confirmed Items, Findings, Observations, and Resolved Items

<u>ITEM</u>	<u>TERA LEAD</u>	<u>CPCo/B&W/BECHTEL LEAD</u>
<u>Construction</u>		
F-045	Tulodieski	B-Construction
F-046	Tulodieski	B-Construction
F-047	Tulodieski	B-Construction
C-049	Tulodieski	B-Construction
C-050	Tulodieski	B-Construction
C-052	Tulodieski	B-Construction
C-053	Tulodieski	B-Construction
C-054	Tulodieski	B-Construction
 <u>Mechanical</u>		(Agar)
C-005	Dougherty	B&W/B-Mechanical
R-017	Dougherty	B-Mechanical
C-018	Dougherty	B&W/CPCo
C-020	Dougherty	B-Mechanical
C-027	Dougherty	CPCo
C-028	Dougherty	B-Mechanical/CPCo
C-048	Dougherty	B-Mechanical
C-043	Dougherty	B-Mechanical/B-Plant Design
C-025	Dougherty	CPCo
C-038	Bates	B-Mechanical
C-066	Witt	B-Mechanical
C-073	Witt	B-Mechanical
C-074	Witt	B-Mechanical
C-075	Witt	B-Mechanical
C-076	Witt	B-Mechanical
B-057	Witt	B-Mechanical
B-067	Witt	B-Mechanical
B-063	Dougherty	B-Mechanical
B-064	Dougherty	B-Mechanical
F-031	Tulodieski	B-Plant Design
F-036	Tulodieski	B-Plant Design

<u>ITEM</u>	<u>TERA LEAD</u>	<u>CPCo/B&W/BECHTEL LEAD</u>
<u>Civil</u>		
R-037	Mortgat	B-Civil
C-015	Mortgat	B-Civil
C-068	Mortgat	B-Civil
C-077	Mortgat	B-Civil/B-L&S
 <u>Electrical</u>		
Z-012	Bates	B-Electrical
C-039	Bates	B-Electrical/B-L&S
C-040	Bates	B-Electrical
C-022	Bates	B-Electrical
 <u>Miscellaneous</u>		
R-041	Bates	B-L&S
R-042	Bates	B-L&S
B-044	Dougherty	B-L&S
B-059	Dougherty	B-L&S
B-061	Witt	B-Control Systems

II. Discussion of Action Items and Logistics for Information Exchange

ATTACHMENT 3

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

3201-008-F-045, -046, -047

All three of these items relate to the storage and maintenance area of review. F-045 and F-046 are specific discrepancies noted in the storage and maintenance programs, while F-047 is more generic as it questions the process by which vendor recommended storage and maintenance requirements are reflected in project procedures. TERA is currently reviewing actions taken by the project to improve the storage and maintenance programs. TERA is also currently reviewing the charter for a new organization with full-time responsibility for these issues, as well as interviewing key personnel. The emphasis of these efforts is on how vendor requirements are reconciled and the effectiveness of implementation. TERA will also review specific changes to the in-place maintenance procedure for the AFW pump motor and witness a future overhaul of the AFW pumps and turbine.

3201-008-C-049

TERA indicated that a response was received from Bechtel which addressed physical changes to be made which include placing a cover on the cable tray to create a barrier between the noted channels. It was concluded that this action would address the noted separation issues in the locations covered, but not in the air-lined region as the cables terminate into cabinets. CPC indicated that they had uncovered similar problems and that the EFE staff (team 24) was investigating solutions such as wrapping. CPC is also looking into gaining dispensation from the 3-foot separation requirement in the vicinity of cabinet entries. TERA will factor these actions into the continuing review.

3201-008-C-050

TERA indicated that a response was received from Bechtel which addressed the engineering significance of the noted cable being routed outside of its scheduled via. It was observed that guidelines in the cable overinspection program may not be definitive in establishing criteria for dealing with such a routing. Accordingly, QC personnel may have interpreted such circumstances in different ways. TERA will complete a review of the technical arguments presented in this specific instance and expand the existing sample to verify that the overinspection has been consistently applied.

3201-008-C-052, -053, -054

All three of these issues relate to documentation that TERA was unable to secure. C-052 addresses the completeness of vendor supplied documentation, while C-053 and C-054 address construction/installation documentation. At this juncture it is not clear whether TERA could simply not locate the information, if it is misplaced, in process, or never created. Bechtel will attempt to locate the noted documents. TERA will review the closeout procedure for vendor supplied documentation including site and Ann Arbor activities. Discrepancies between direct spec requirements and 321D requirements will be reviewed further. TERA questioned whether the CCP has a focus on a verification of completeness of vendor supplied documentation. CPC indicated that it did in a peripheral manner, primarily the installation requirements. C-053 and C-054 bear directly on items that are within the CCP scope and are slated to be verified as the program progresses. Accordingly, TERA will review the closeout of these specific items after the CCP has been through and expand the sample at a future date to verify that similar items are caught and resolved.

3201-008-Z-012

TERA described the bases for resolving this Finding and indicated that no further action is contemplated at this time.

3201-008-C-039

TERA has received a letter from Bechtel on this item; however, there is still some discussion of the applicability of the test data to the actual design where aluminized mylar tape is used on some cables and not others. Bechtel will provide further information justifying their position that the qualification test data is applicable.

3201-008-C-040

Bechtel indicated that the lengths shown on the circuit schedule are shop-cut lengths and may not necessarily be actual installed lengths. Notwithstanding this, Bechtel has indicated that for the specific MOV application, calculation QPE-8 is too conservative and not necessarily applicable. They further indicated engineering judgment is the principal means by which cables are sized. TERA indicated that this process would be reviewed along with the methods of QC verification. Additional sampling of sizing under these applications may be warranted pending the process review.

3201-008-C-022

TERA indicated that a preliminary review was made of the startup test procedure and that it was judged that it may not fully exercise the SG level control system to the extent that its performance under all plant conditions may be verified. CPC committed to providing justification addressing why the startup testing and hot functional testing would suffice to qualify the system.

3201-008-C-025

TERA has received a rate calculation for SG fill and is currently reviewing it. DCAR 731 has been written which addresses changes to switching hardware associated with FOGG inversion. This information will be transmitted to TERA for review.

3201-008-R-017

TERA indicated that full clarification was received and the issue is resolved.

3201-008-C-005, -018, -020, -027, -028

TERA indicated that each of these issues have been outstanding and that Bechtel's September 30, 1983 letter is anticipated to be sufficient for TERA to effect further disposition. No further Midland project action is required at this time.

3201-008-C-048

Bechtel indicated that the original spec required qualification to a 120° F environment; however, conservative treatment of the blackout condition dictated raising the qualification temperature to 150° F. Later calculations established pump room temperatures to be 121° F. The vendor is currently qualifying to this level. Documentation will be available in early spring, 1984 at which time it will be forwarded for TERA's review. This item will be placed on "hold" and not discussed at future meetings until the documentation is received.

3201-008-C-038

Bechtel indicated that additional information in addition to the vendors previous telex was being forwarded by the vendor. CPC questioned whether the 100 gpm AFW flow would be maintained under a station blackout condition with a low decay heat load. TERA indicated that resolution of this item will require evaluating scenarios such as blackout with low decay heat load to determine whether 100 GMP can be maintained. TERA will review the later vendor submittal upon receipt.

3201-008-C-066

Bechtel indicated that after three hours the air intake can be opened manually and that calculations assume that this is done at three hours after isolation, followed by continuous operation in that mode thereafter.

3201-008-C-073

Bechtel indicated that LOCA is the limiting case for external heat loads to the control room because high energy line breaks do not affect adjacent areas.

3201-008-C-074

Bechtel indicated that the station blackout event is not a design basis event and, therefore, the 75° F control room temperature does not have to be maintained under these conditions. Bechtel estimated that under design basis assumptions, the maximum temperature that could be reached in the control room could reach 110° F, two hours into the station blackout. Bechtel has documented this in a calculation.

3201-008-C-075

Bechtel indicated that they assume that the double control room doors are an airlock. They referenced p. 6.4-7 of the FSAR.

3201-008-C-076

The 2000 cfm is documented on flow diagram M-765. The 104° F is a reference design basis in many areas of the FSAR. The 96° FDB and 79° FWB are based upon Saginaw meteorological data. Accordingly, Bechtel will clarify these references in the subject calculation.

3201-008-F-031

TERA indicated that review was continuing to assess the process by which field changes are reconciled with the design. As elements of the CCP are directed at related issues, TERA will factor this input into the overall evaluation. In view of similar issues recently identified by MPQAD associated with the FCR/FCN process, additional emphasis will be placed in this review area.

3201-008-F-036

TERA indicated that additional information had been received from Bechtel which will enable a further disposition of this item.

3201-008-C-043

Bechtel indicated that the M-480 Piping Class Sheets provide the classification criteria for various seismic and quality categories for piping. They indicated that while the subject piping was not subject to QA requirements, it was installed according to the M-327 spec. Bechtel will eventually walkdown all piping in this category to verify general arrangement and quality of installation. TERA will review this information and note any required additional clarifications.

3201-008-C-015

Bechtel indicated that the vertical floor flexibility study was not the only basis which supports the statement in the C-501, Civil/Structural Design Criteria document that floor flexibility need not be considered in the seismic analysis of the Midland plant structures. Reference was made to a study by SMA which includes this behavioral effect. Bechtel could not comment on the results of this study. TERA reiterated the issues documented in C-015. It was determined that the subject study alone was insufficient and that the SMA study should be reviewed to further disposition the item.

3201-008-C-068

Bechtel will further investigate the noted discrepancy and document the results in a letter to TERA.

3201-008-C-077

Bechtel indicated that Sections 3.9 and 3.10 of the FSAR were purged at the request of the NRC to be replaced by NRC's "short form." CPC has recently taken responsibility for the SQRT issue and should be consulted for further information regarding the status of the SQRT review and FSAR update process.