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A B

Roy A Wells
Executive Manager
Quality Assurance Department
Midland Project

Midland Project: PO Box 1963, Midland, MI 48640 • (517) 631-8608

March 29, 1984

Mr J J Harrison, Chief, Midland Section
US Nuclear Regulatory Commission
799 Roosevelt Road
Region III
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER PROJECT - MINUTES OF NRC 2/29/84 MEETING
FILE 0.4.3 & 0.6 SERIAL 28921

Attached is a summary of the meeting between NRC Region III personnel and MPQAD personnel. This is the summary presented for your review in draft and which you found satisfactory.

Roy Wells

RAW/GFE/kw

CC DEBeaudoin, Midland
WRBird, P-14-418A
RLBurgess, US NRC
JTChristy, Midland
JWCook, P-26-336B
RJCook, US NRC
MLCurland, Midland
GFEwert, Midland
DSHood, US NRC
JGKeppler, US NRC
HPLeonard, Midland
JKMeisenheimer, Midland
HPNunes, Midland
DLQuamme, Midland
RCSember, Midland

SUMMARY OF MEETING
BETWEEN MPQAD AND
NRC REGION III PERSONNEL HELD AT
NRC REGION III OFFICERS ON
FEBRUARY 29, 1984

On Februrary 29, 1984 MPQAD and NRC Region III personnel (attendance sheet attached) met from approximately 8:30 AM to 11:30 AM to discuss:

1. Results of NRC HVAC inspections and investigation of allegations;
2. Expansion of MPQAD training, qualification, and certification activities;
3. Audit MSA-83-25 concerning MPQAD training, qualification and certification activities;
4. MPQAD activities relating to failed recertification candidates;
5. Miscellaneous Items.

A summary of these items follows:

1. HVAC

Participants

NRC	MPQAD
RGardner	HPLeonard
JJHarrison	RAWells
RLandsman	
RFWarnick	
WKeyes	
FHawkins	

During this portion of the meeting NRC Region III personnel reviewed the results of inspections and investigation into allegations relating to HVAC work. It was stated that the inspections and investigation was conducted by five (5) Region III and three (3) NRR personnel and included a total of 1142 manhours.

The results of the investigation were that the allegations will be closed out. The NRC will be issuing nine items of noncompliance all at Severity Level 4 and 5.

This portion of the meeting was concluded with Region III personnel stating they were satisfied with the HVAC work and that the QA Program was being effectively implemented. The formal report will follow shortly.

2. Training, Qualifications and Certification

Participants

NRC	MPQAD
RGardner	DEBeaudoin
JJHarrison	GFEwert
RLandsman	HPLeonard
RWarnick	HNunes
	RAWells

During this portion of the meeting HNunes and DEBeaudoin presented expansions planned for the training, qualification, and certification processed within MPQAD. (A copy of the overheads used is attached to this summary as Attachment A).

The presentation was introduced by RAWells who indicated that the expansion is not contrary to the training, qualification, and certification commitments outlined in the Construction Completion Program. During the presentation questions were raised concerning training methods and examination methods. The responses indicated that methods would be used as appropriate as outlined in MPQAD Procedures. Also, that oral examinations would not be used by the Training Branch, but would continue to be part on the on-the-job training and performance demonstration process.

This portion of the meeting was concluded with the understanding that MPQAD would proceed, as long as the expansion met regulatory requirements, CCP commitments and MPQAD Procedure.

3. Audit MSA-83-25

Participants

NRC	MPQAD
RGardner	GFEwert
JJHarrison	HPLeonard
RLandsman	RAWells

During this portion of the meeting the subject audit was reviewed with Region III personnel. GFEwert opened the review by stating that the audit was full scope and gave the status of findings and unresolved items as follows:

Findings	Unresolved Items
18 Total	9 Total
13 Closed	6 Closed
5 Open	3 Open

Each finding and unresolved item was reviewed. Region III personnel indicated they would review Finding 05F closure during a future site visit. MPQAD indicated that the Bechtel Materials and Quality

Services Procedure for NDE personnel certification would be reviewed to assure it does not have an oral waiver provision for qualification requirements. It was agreed to review the need for the DAD Manager to sign Level III Certifications as long as appropriate site personnel do this. This closed out the review with the NRC other than the above noted items.

4. Recertification Candidates

Participants

NRC	MPQAD
RGardner	GFEwert
JJHarrison	HPLeonard
RLandsman	RAWells

RAWells opened this portion of the meeting by stating that MPQAD was essentially complete with the recertification effort. GFEwert reviewed the status and provided status information as indicated on Attachment B.

GFEwert provided copies of the latest Reinspection Tracking Log and MPQAD Procedure B-5M to Region III personnel. The definition of a Recertification Candidate in the procedure was reviewed as well as the provision for sampling inspection of the Recertification Candidates previous inspections. NRC noted that this information could be significant for review of inaccessible items and future consideration of a sampling program.

It was agreed that the Recertification Candidate program as described in the procedure would remain in effect. Personnel who meet the definition of a Recertification Candidate will be tracked. This is approximately 144 personnel.

This closed out this item with the NRC other than for continued implementation.

5. Miscellaneous Items

Participants

NRC	MPQAD
JJHarrison	RAWells

JJHarrision and RAWells reviewed items as follows:

1. NCR M01-9-2-172 is to be closed by the week of March 5. The NRC will obtain a copy when on site that week.

2. Status of FCR/FCN SWO and related NCRs was discussed. RAWells said all SWOs except Soils Mechanical were fully released and that should be released soon. Also noted that only three or four NCRs impacted hardware and that they were minor and might be dispositioned use-as-is. Basis for discussions was SWO Matrix and NCR Summary approved by DAT.

The meeting ended at approximately 11:30 AM.

cc: GFE
For Notes

Attendance Sheet
MPQAD/NRC
2/29/84 Meeting

NAME	ORGANIZATION	POSITION
R. Gardner	NRC RIII	Project Inspect.
R. Landsman	NRC RIII	Inspector
J. Harrison	NRC RIII	Chief, Midland Sec
Roy Wells	CPCo	Ex Mg MPQAD
Gary F Ewert	CPCo	Div. Head
HP LEONARD	CPCo	GEN. SUPT. - MIDLAND P.
HP NUNES	CPCo	GROUP SUPERVISOR - CIVIL PAE
DE BEAUDOIN	CPCo	BRANCH HEAD - TRAINING
RF Warnick	NRC	Director, OSC

GFE

MAR 02 1984

ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

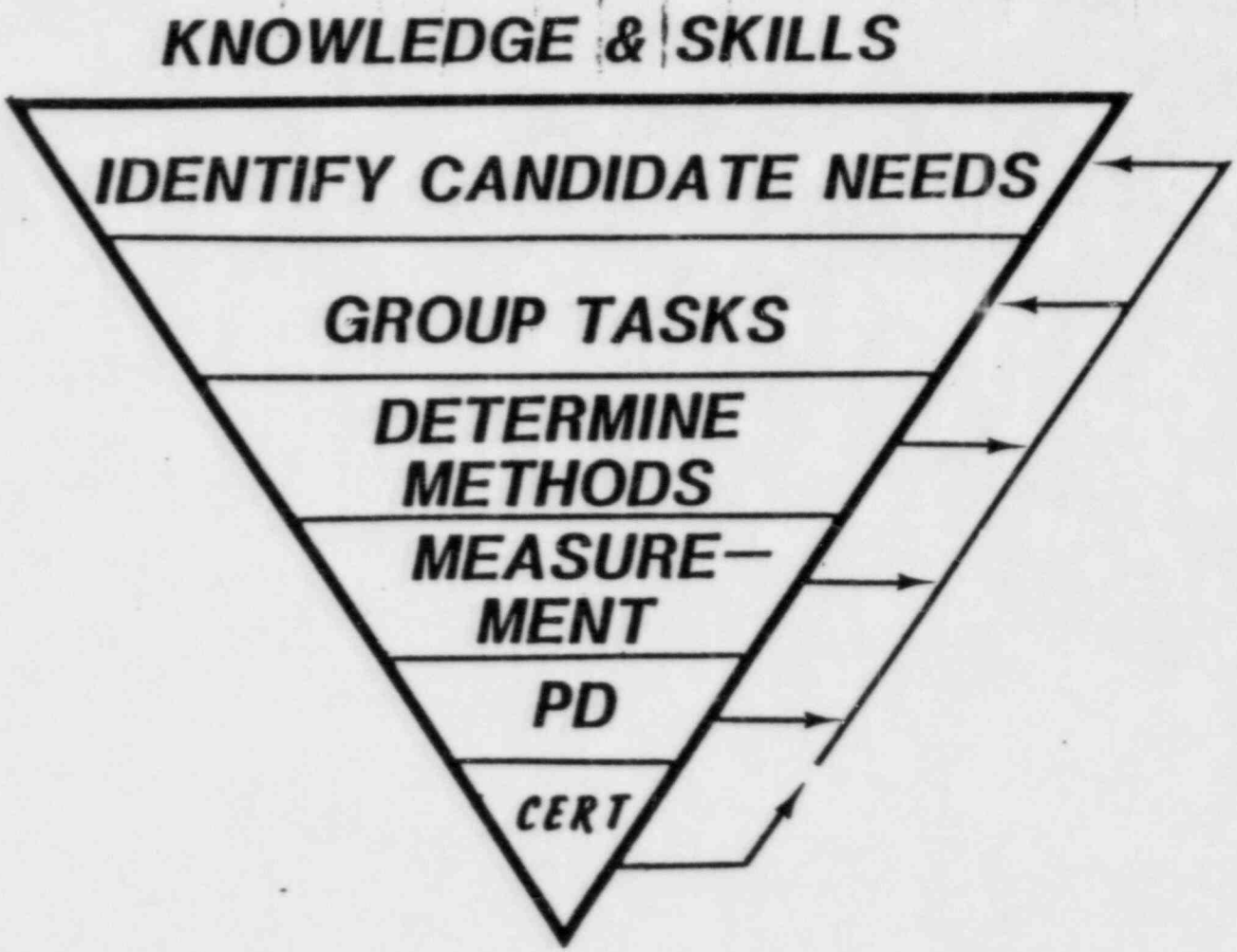
CP CO

MIDLAND ENERGY CENTER CERTIFICATION PROGRAM EXPANSION

PRESENTED TO: U.S. NRC, REGION III
ON: FEBRUARY 29, 1984
BY: CP CO MPQAD

ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

CERTIFICATION PROCESS



CPCo CERTIFICATION PROCESS

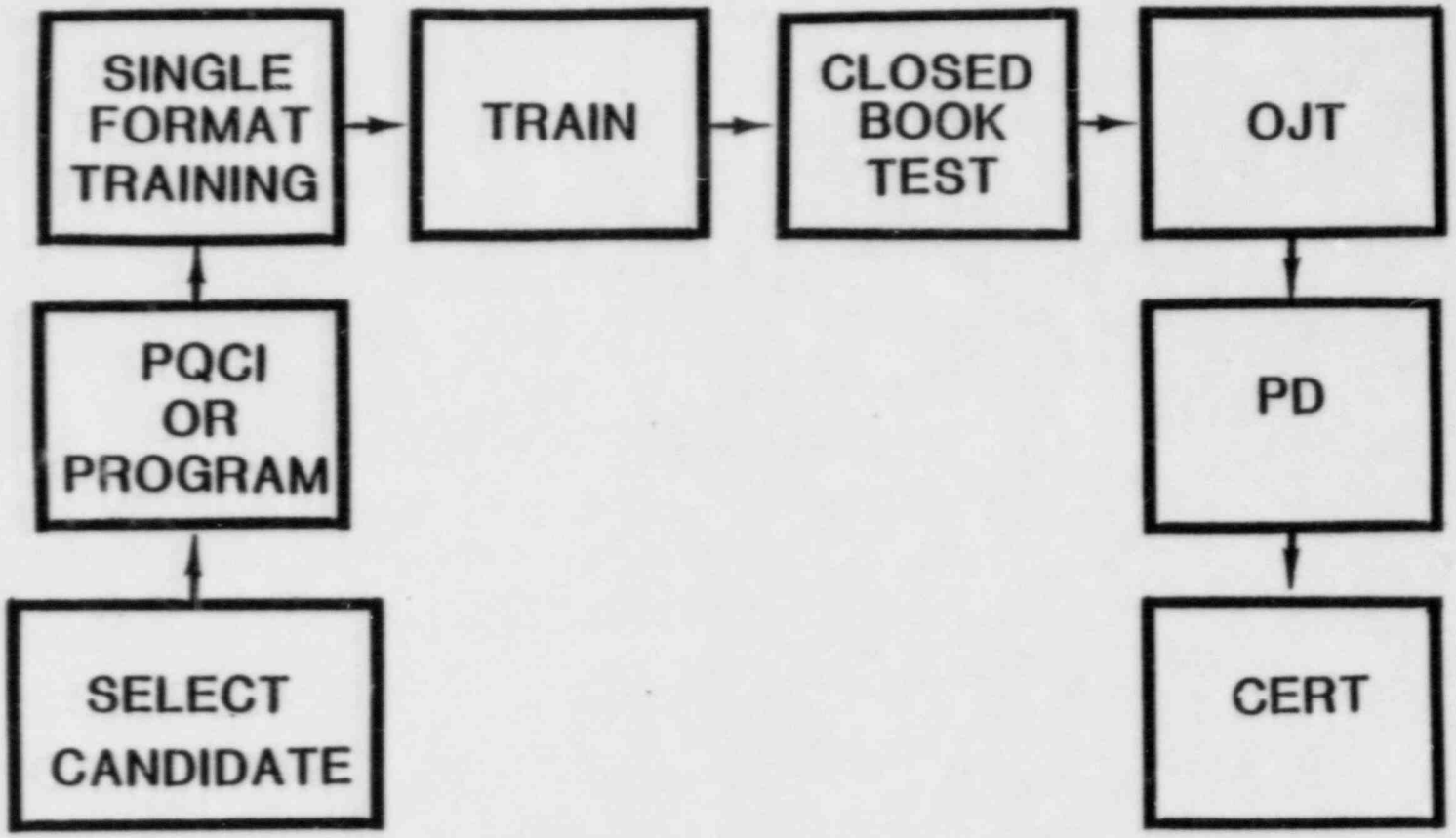
PURPOSE: DESCRIBE ENHANCEMENTS TO THE CERTIFICATION PROCESS

- I. TRAIN AND EXAMINE BY KNOWLEDGE AND SKILL GROUPINGS (INITIAL & CONTINUING)

- II. TRAIN AND EXAMINE BY THE APPROPRIATE METHOD

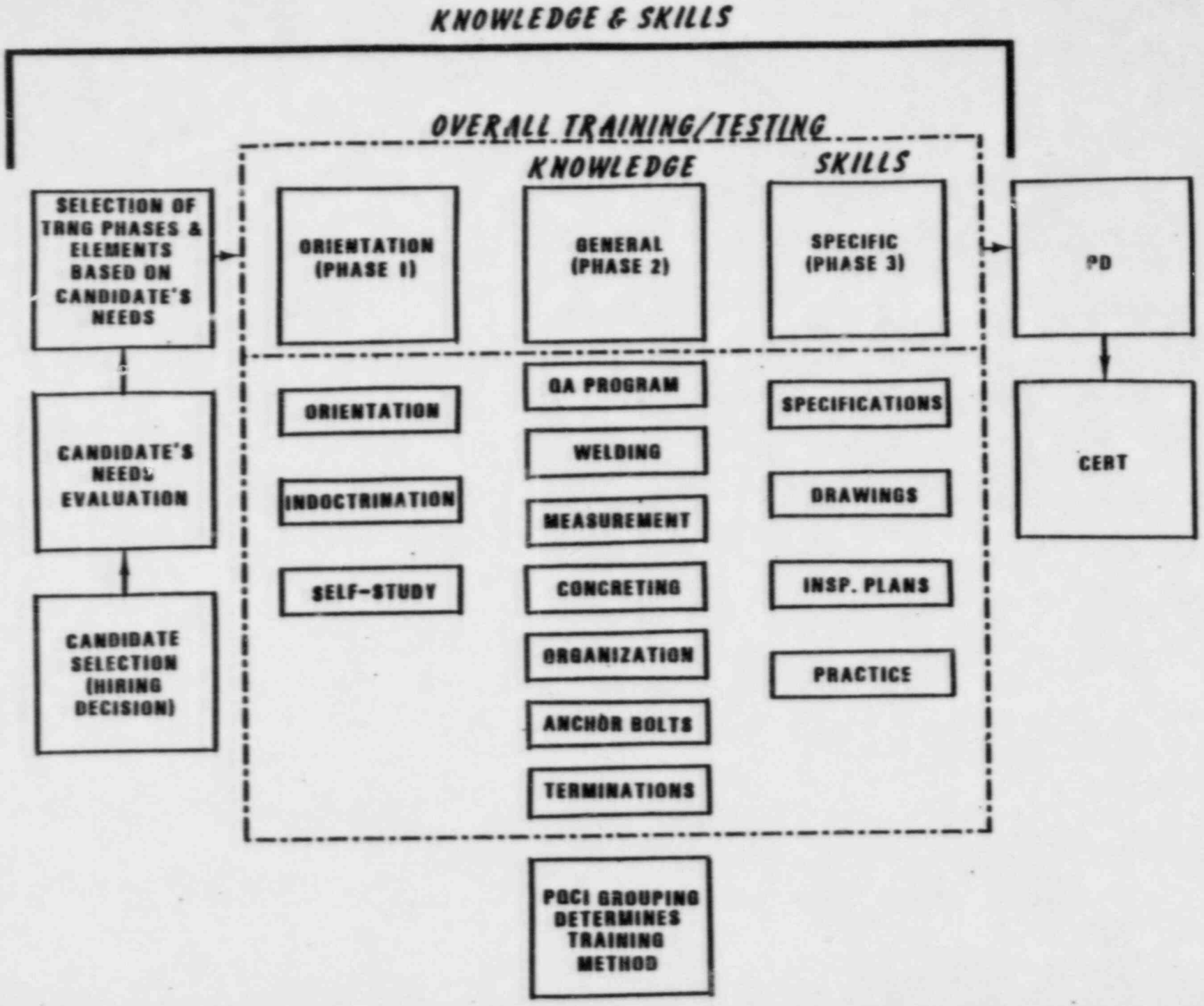
ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

PRESENT FLOW



ENHANCED FLOW

ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary



ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

PQCI-TASK ANALYSIS MATRIX

TASK	P-2.10	P-2.20	CW-1.00	P-1.90	P-2.30	EW-1.00	CATEGORY LEARNING
GENERAL INSTRUCTIONS							
DEFINE THE LIMITS OF THE INSPECTION	●	●	●	●	●	●	K
REVIEW INSPECTION CRITERIA	●	●	●	●	●	●	K
SCREEN INSPECTION CRITERIA	●	●	●	●	●	●	K
ASSEMBLE INSPECTION CRITERIA	●	●	●	●	●	●	K
DOCUMENT INSPECTION CRITERIA	●	●	●	●	●	●	K
REVIEW COMPLETED IR FOR EXCEPTION	●	●	●	●	●	●	K
PROCESS ANY EXCEPTIONS (NCRs) NOTED	●	●	●	●	●	●	K
CONFIRM M & TE USED IS IN CALIBRATION	●	●	●	●	●	●	K
REVIEW OF SUPPLEMENTARY	●	●	●	●	●	●	K
WELDING							
VISUALLY INSPECT BASE METEL SURFACES	●	●	●		●	●	S
VERIFY NDE OF BASE METEL COMPLETE PRIOR TO WELDING		●	●			●	S
INSPECT WELD JOINT FOR FIT-UP	●	●	●		●	●	S
VERIFY PREHEAT BY MEASUREMENT	●	●	●		●	●	S
REVIEW WELDER QUALIFICATION RECORDS	●	●	●		●	●	K
INSPECT STUD BASE AND BASE METAL FOR FIT-UP			●			●	S
VISUALLY INSPECT FOR BACK GOUGING			●			●	S
VERIFY FILLET WELD FOR SPECIFIED SIZE			●			●	S
INSPECT FOR BASE METAL UNDERCUT			●			●	S
VISUALLY INSPECT FOR FUSION BETWEEN WELD METAL AND BASE METAL			●			●	S
INSPECT WELD(S) THAT RUN ACROSS THE FLANGE OF A STRUCTURAL ELEMENT			●			●	S
VISUALLY INSPECT WELD CONTOUR AND SURFACE APPEARANCE			●	●		●	S

ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

TASK	P-2.10	P-2.20	CW-1.0L	P-1.90	P-2.30	EW-1.00	CATEGORY LEARNING
WELDING (CONT'D)							
INSPECT WELD CONTOUR AND SURFACE APPEARANCE BY MEASUREMENT			●	●		●	S
INSPECT WELDS FOR ELECTRICAL, INSTRUMENTATION SUPPORTS AND EQUIPMENT INCLUDING ATTACH TO BUILDING STRUCTURE			●				S
VISUALLY CHECK FOR WELDER IDENTIFICATION SYMBOL			●			●	S
INSPECT SURFACE PREPARATION FOR NDE			●			●	K
VERIFY STATUS OF NON-DESTRUCTIVE EXAMINATION			●			●	K
REVIEW THE WELDING/INSTALLATION RECORDS			●	●		●	K
PROCESS NDE REQUEST	●	●	●		●	●	K
NOTIFY THE LFWE AND SUPERINTENDENT OF THE STATUS OF THE NDE			●			●	S
VISUALLY INSPECT BASE METAL REPAIR			●			●	S
VISUALLY INSPECT WELD LOCATION			●			●	S
VISUALLY INSPECT COATING OF WELDS AND UNCOVERED METAL OF ELECTRICAL SUPPORTS THAT ARE LOCATED OUTSIDE OF THE CONTAINMENT			●			●	S
COMPLETE QCF-3 FORM			●			●	K
MAINTAIN THE QCF-3 AS PART OF THE IR			●			●	K
VERIFY FE ACCEPTANCE OF THOSE ITEMS WHICH REQUIRE THEIR APPROVAL			●			●	K
INSPECT STUD BASE FOR CLEANLINESS			●			●	S
PIPE SUPPORT INSPECTION							
DESCRIBE ANY INACCESSIBLE ITEMS				●	●		K
VERIFY HOT BENDING OF CARBON STEEL	●	●			●		S
VERIFY CLEANLINESS OF FLUOROGOLD /LUBRITE PLATES	●				●		S
VERIFY DRILLED HOLES ON BASEPLATES					●		S

ATTACHMENT A
MTQAD/NRC 2/29/84
Meeting Summary

TASK	P - 2.10	P - 2.20	CW - 1.00	P - 1.90	P - 2.30	EW - 1.00	CATEGORY LEARNING
PIPE SUPPORT INSPECTION (CONT'D)							
MEASURE SURFACE BEARING ON BASEPLATES					●		S
VERIFY BASEPLATE SHIM INSTALLATION					●		S
VERIFY TORQUE REQUIREMENTS					●		S
VERIFY PROPER INSTALLATION OF ANCHORS					●		S
VERIFY THE ORIENTATION, LOCATION AND CONFIGURATION OF THE PIPE SUPPORT	●	●			●		S
REVIEW INTERFACING IR's	●	●			●		K
PIPE INSTALLATION INSPECTION							
VERIFY QCE's CERTIFICATION				●			K
VERIFY MINIMUM WALL THICKNESS				●			S
VERIFY UNSPECIFIED WELDS HAVE NOT BEEN ADDED				●			S
VERIFY TEMPORARY ATTACHMENTS HAVE BEEN REMOVED				●			S
INSPECT PIPE FOR DISTORTION				●			S
REVIEW INACCESSIBLE ITEMS RECORDS FOR ACCEPTABILITY				●			K
INSPECT FLANGED JOINTS FOR UNIFORM CONTACT				●			S
VERIFY THAT BOLTING MATERIAL IS CORRECTLY INSTALLED				●			S
VERIFY MATERIAL TRACEABILITY	●	●	●	●	●		K
VERIFY CONFIGURATION, ORIENTATION AND LOCATION				●			S
IDENTIFY SUPPORTIVE DOCUMENTATION				●			K

MEASUREMENT TECHNIQUE

- *CLOSED BOOK*
- *OPEN BOOK*
- *EXERCISES*
- *OTHER*

ATTACHMENT A
MPQAD/NRC 2/29/84
Meeting Summary

TRAINING METHODS

CLASSROOM

ON-THE-JOB

DIRECTED SELF-STUDY

OTHER

ATTACHMENT B
MPQAD/NRC 2/29/84
Meeting Summary

MPQAD RECERTIFICATION CANDIDATE RECAP
(AS OF FEBRUARY 8, 1984)

144	Total Bechtel QC Certified Inspectors During September 1982
-74	Terminated/Not Identified As Candidates For QC Certification MPQAD
-45	Candidates Completed Assigned Requirements
25	Candidates With Outstanding Certification Requirements

1,176	Total PQCI Certifications During September 1982
-703	Terminated/Not Identified Candidate For QC Certification PQCI's
-8	Cancelled PQCI's
-35	Duplicate PQCI Certifications
-218	PQCI's Not Identified For MPQAD QC Recertification
-165	MPQAD Recertified PQCI's
47	PQCI's Requiring MPQAD Recertification

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

Ron Farr
File
[illegible]

March 27, 1978

DOCKET NOS: 50-329
50-330

LICENSEE: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF MARCH 21-22, 1978 MEETING AND SITE VISIT

On March 21-22, 1978, we met with representatives of the licensee at the Midland site to discuss the scheduling of construction and to observe the construction activities in progress. The meeting notice and agenda for the meeting are attached as Enclosure 1. A list of attendees and persons contacted during the meeting is included as Enclosure 2. As noted in the agenda, the purpose of the meeting and visit was to examine variations in estimated dates for completion of construction of the Midland Plant. We also used the meeting to discuss with the licensee his reasons for the revised earliest and latest construction completion dates provided in Amendment 33 to his application (FSAR).

We met with representatives of the Licensee at the construction site offices on the morning of March 21, toured the site during the afternoon of March 21, and had followup discussions on the detailed construction schedules during the day on March 22.

The February 1978 issue of the Yellow Book shows Unit 2 at 39% complete and Unit 1 at 35% complete. Earliest and latest dates for completion of construction are shown as October 1, 1980 and October 1, 1981 for Unit 2 and October 1, 1981 and October 1, 1982 for Unit 1. Fuel load dates are shown as November 1980 for Unit 2 and November 1981 for Unit 1. A generically-based forecast recently compiled by MIPC shows estimated fuel load dates of May 1982 and May 1983 for Units 2 and 1 respectively. Inasmuch as the completion dates for the Midland units are significant with respect to the ongoing remand hearing, this meeting was designed to resolve the differences between the Licensee's dates as shown in the Yellow Book, and the forecast dates developed by MIPC.

We discussed with the licensee the methodology used by MIPC to develop the tools for its forecast of fuel load dates. Basically, it consists of an average curve of construction versus time, based on the construction history of 14 different nuclear plants. Using this curve and the reported percentage completion of construction for a particular plant,

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an estimate can be made of the time remaining until completion of construction.

The Licensee bases estimates of construction completion on manhours. The formula uses actual manhours expended in the numerator, while the denominator is the sum of four factors: 1) the estimated total manhours to construct the plant, 2) an allowance to take care of support effort and productivity of labor, 3) a factor to take care of contingencies, and 4) a scope change factor. The first three factors are revised on a six-month interval basis to update to a then current estimate of total labor needed plus allowances and contingencies. The fourth factor is changed each month to take into account efforts estimated to be required to handle changes in project scope. For example, the NRC requirements for fire protection required an additional quantity of manhours to be added to the estimate. In practice, then, use of this formula results in what is thought to be an adequately conservative measure of total manhours expended compared to the total manhours budgeted. The construction completion figures are based strictly on the manhours, which are directly correlatable to work in place. That is, an electrician can pull so many feet of cable per hour or make so many splices per hour, or it takes so many manhours to place a yard of concrete, etc. No credit is taken by the Licensee for value or quantity of materials in place.

It should be noted that the Licensee maintains records and estimates percentage completion on a total project basis. The percentage completion figures reported for the Yellow Book are a simplification of more accurate records maintained for the project as a whole. The Yellow Book figures are derived based on an apportionment of effort on common facilities between Units 1 and 2. Refinement of the reported percent completion values, if applied to the MIPC forecast model, could provide for better agreement with the Licensee's estimated completion dates. This would require considerable additional effort, however, which we do not feel is warranted.

The Licensee's procurement program appears to be in good shape, probably considerably better than would normally be the case for a plant at this stage of construction. The principal reason is that during the 1974-1975 period when construction effort was curtailed due to lack of funds, procurement kept moving, with the result that all major components (reactor vessels, steam generators, pressurizers, reactor coolant pumps and piping, main steam valves, turbine-generators, etc.) either are now on site or are stored off-site and available for placement when needed. Hence, procurement should not pose any big problems to maintaining the current construction schedule.

We did not examine the detailed status of the design effort as compared

to the construction activity, but it appeared to be adequately far advanced so as to avoid costly and time-consuming rework of construction. Of note is the fact that the licensee has maintained close contact with other plants, to take advantage of lessons learned elsewhere so as to avoid mistakes at Midland. The design drawings have been translated into plastic, scale models of some plant areas which proved useful to avoid interferences of equipment and components.

One point of potential schedule impact is associated with union contracts. All craft union contracts except for the electrical workers are up for renegotiation this year. The Licensee does not now anticipate any major problems in this regard, but it is possible that contract negotiations could cause work stoppages which are not specifically provided for in the Midland schedule.

The current work force at the site consists of about 2900-3000 people, of which approximately 600 are on the second shift. The Licensee reported using up to about 8% casual overtime thus far, but it is anticipated that overtime will be increased to as much as 15% on an as-needed basis. A close watch is maintained on all productivity, including second shift and overtime efforts, to assure optimum use of workers.

At the present time, the construction emphasis is changing from a basic structural-civil effort to a mechanical-electrical effort. As such, the relative mix of workers by trades is changing. Minimal problems are anticipated in attaining the correct mix of skills for the job. Specifically, welders have not been a problem and the Licensee runs an in-house welding school to assure an adequate supply of qualified welders.

Work is just now getting underway on preparation of pre-operational test procedures. It appears that the time for procedure preparation may be a bit tight. However, efforts will be based on lessons learned at other plants (e.g. TMI-2) and the Licensee anticipates no delays from this cause. Approximately twenty test engineers are now on site and have begun work on the pre-op test procedures.

A matter of some concern to the staff is the question of hangers and snubbers. These have held up construction at some plants. However, the Licensee is aware of the potential problem and is taking steps to avoid it for Midland. A special hanger fabrication facility has been set up and the Licensee is working with the snubber supplier (ITT Grinnell) to assure that snubbers will be available when needed. The present intent is to install all hangers and snubbers prior to hot functional testing, although some could be left for later installation if necessary.

Overall, the site construction activities appear to be in good shape. The civil-structural effort generally is on-schedule to ahead-of-schedule. Installation of large pipe is ahead of schedule. Both reactor buildings are considerably ahead of schedule on interior concrete. The Licensee intends to start installing NSSS components in Unit 2 in April if the weather permits. The plans for Unit 2 containment should allow rapid installation of piping and cables following NSSS installation without long delays for concrete work. Cable tray and electrical installation is slightly behind schedule at this point, but as noted earlier, the emphasis is just now changing to include greater electrical effort. The Licensee anticipates minimal problems in getting back on schedule in this area.

It is noteworthy that the Licensee's plans call for completion and check-out of all common facilities (e.g. auxiliary building, diesel-generator building, rad-waste facilities, cooling water ponds, grounds, etc.) in conjunction with completion of Unit 2. Thus, nearly 85% of the total effort now is tied to Unit 2 completion, even though much would not be needed until Unit 1 is completed.

Overall, the Licensee's schedule calls for fuel load on Unit 2 to occur 31 months from now (November 1980). Included in this schedule is a three-month contingency, or about 10%, which appears adequate at this stage of construction. It would not be enough to take care of major delays such as could be caused by an extended strike or by other conceivable problems such as financial difficulties. However, it does appear adequate for anything that might reasonably be anticipated.

As noted earlier, we used the meeting for the ancillary purpose of addressing the Licensee's request to slip the construction completion dates as provided in the construction permits for the Midland units. In response to our questions, the Licensee's representatives explained that the construction schedules estimated at the time of construction permit issuance have been delayed for reasons beyond their control. These delays are included in the existing forecasts for completion of the units. Both units were delayed 24 months due to adverse financial conditions in 1974 and 1975. Unit 2 was rescheduled to be completed one year ahead of Unit 1, resulting in a delay of 13 months to Unit 1 and an advance of 11 months to Unit 2. Both units were delayed 9 months due to re-evaluation of construction time because of changing project scope and industry experience. Some of the more significant examples of changing project scope which influenced schedules were identified to be:

(1) A new building for waste processing equipment resulting from 10 CFR Part 50, Appendix 1.

(2) Changes to provide two cable spreading rooms and other space requirements for electrical separation resulting from revisions to IEEE Standard 279.

(3) Plant arrangement changes to equipment and structures to provide improved access to Class 1 piping resulting from the inservice inspection requirements of Section XI of the ASME Code.

(4) Redesign of the Auxiliary Building consistent with spent fuel cask drop guidance of Regulatory Guide 1.13.

(5) Updating of piping and valves from ANSI B31.7 to ASME III.

(6) Requirements for additional analyses and testing to verify seismic requirements.

(7) Changes resulting from OSHA requirements.

Our general conclusion as a result of the visit is that the Licensee has identified possible problem areas and has taken or is taking necessary action to work around these problems without a major schedule impact. The proposed construction schedule, based on the current project status, appears to be realistic and achievable, although it may be a bit on the optimistic side. Barring major, unforeseen problems, any slip in the schedule should be relatively minor. We identified no problem areas that indicated that the current schedule could not be met. Accordingly, we conclude that the November 1980 fuel load date for Unit 2 is a good date for current planning purposes. Further, we are optimistic that the November 1981 date for Unit 1 fuel loading should be achievable, since our perception is that Unit 1 major facilities are significantly ahead of schedule.

L. P. Crocker
Technical Assistant to the Director
Division of Project Management

Enclosures:
1. Meeting Notice
2. Attendance List

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

MAR 16 1978

Docket Nos.: 50-329/330

MEMORANDUM FOR: Steven A. Varga, Chief, Light Water Reactors Branch No. 4, Division of Project Management

FROM: Darl Hood, Project Manager, Light Water Reactors Branch No. 4, Division of Project Management

SUBJECT: FORTHCOMING MEETING TO REVIEW MIDLAND PLANT UNIT 2 CONSTRUCTION COMPLETION SCHEDULE

Date & Time: March 21 & 22, 1978 (Tuesday & Wednesday) 9:00 a.m.

Location: Midland, Michigan

Purpose: To evaluate the schedule for completion of construction and fuel load dates for Midland Unit 2.

Participants: NRC - L. Crocker, DPM; D. Hood, DPM; W. Reinmuth, I&E; W. Lovelace, MIPC; T. Vandel, I&E; et al.

Consumers Power Co. - G. Keeley; Others as may be requested during the review.

Darl Hood

Darl Hood, Project Manager
Light Water Reactors Branch No. 4
Division of Project Management

Enclosure: Agenda

cc: See Next Page

8004010643

AGENDA

The meeting is part of an evaluation being performed by the NRC to determine best estimate dates for completion of construction and fuel loading for Midland Unit 2, the earlier of two units being constructed. On Mar. 8, 1978, the NRC advised the Atomic Safety and Licensing Board of variations in estimates by the NRC's Caseload Forecasting Panel, previous estimates carried by the staff in its "Yellow Book", and estimates by Consumers Power Company in Amendment 33 to the application. Recognizing the variations of these estimates and the fact that these estimates potentially affect certain issues in the Midland hearing, the staff is performing a more detailed plant-specific analysis. The staff also views the evaluation to be relevant to the request by Consumers Power Company for extension of Construction Permits CPPR-81 and CPPR-82 as requested by Amendment 33 to the application.

Consumers Power Company

ccs:
Michael I. Miller, Esq.
Isham, Lincoln & Beale
Suite 4200
One First National Plaza
Chicago, Illinois 60670

Judd L. Bacon, Esq.
Managing Attorney
Consumers Power Company
212 West Michigan Avenue
Jackson, Michigan 49201

Mr. Paul A. Perry
Secretary
Consumers Power Company
212 W. Michigan Avenue
Jackson, Michigan 49201

Howard J. Vogel, Esq.
Knittle & Vogel
814 Flour Exchange Building
Minneapolis, Minnesota 55415

Myron M. Cherry, Esq.
One IBM Plaza
Chicago, Illinois 60611

Honorable Curt Schneider
Attorney General
State of Kansas
Topeka, Kansas 66612

Irving Like, Esq.
Reilly, Like and Schneider
200 West Main Street
Babylon, New York 11702

James A. Kendell, Esq.
Currie and Kendall
135 North Saginaw Road
Midland, Michigan 48640

Louis W. Pribila, Esq.
Michigan Division Legal Department
47 Building
Dow Chemical USA
Midland, Michigan 48640

ccs (continued)
Lee Nute, Esq.
Michigan Division
The Dow Chemical Company
47 Building
Midland, Michigan 48640

ATTENDANCE LIST

March 21-22, 1978

Midland Site Meeting

Licensee

	G. S. Keeley	Consumers Power Company, Project Manager
*	T. C. Cooke	Consumers Power Company, Project Superintendant
	K. R. Kline	Consumers Power Company, Project Control Supervisor
	D. D. Johnson	Consumers Power Company, Construction Control Supervisor
	W. G. Jones	Bechtel, Project Cost & Schedule Supervisor

NRC

	W. H. Lovelace	MIPC
	D. S. Hood	NRR, Midland Project Manager
	L. P. Crocker	NRR, Technical Assistant to DPM
	T. E. Vandel	R:III, Project Inspector
	R. J. Cook	R:III, On-site Inspector (designee)
**	E. W. K. Lee	R:III, Inspector
**	K. R. Naidu	R:III, Inspector

* March 21 only
** Contacted, but did not participate in meeting

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To DLQuamme

From EHPeck, NIReichel/GWRowe

Date February 15, 1984

Subject MIDLAND ENERGY CENTER GWO 7020
USNRC EXIT MEETING
File: 0485.15 UFI: 12*24*25 Serial: CSC-7331
0485.21 42*03*03

Consumers Power Company

INTERNAL CORRESPONDENCE

CC JWCook, P26-336B
RAWells, MPQAD
Attendees
HPLeonard, MPQAD
JLWood, MPQAD

The following is a brief report of the exit meeting concerning cable substitutions held on February 10, 1984.

MEETING NOTES

In 1982, an allegation was made by a former electrician, that indiscriminate cable substitutions were being made. A subsequent overinspection of over 9000 class IE cables revealed six cables of incorrect size. Not only was cable size checked, but routing, color coding and mylar tag information.

Although the overinspection was completed in 1983 with a number of NCR's being generated the NRC requested an exit meeting to further investigate the breakdown.

An exit meeting was held on February 10, 1984, in the Orientation Room between Bechtel, Consumers and NRC officials. Those in attendance were:

CPCO	BPCO	NRC
M. Schaeffer	D. Scott	J. Harrison
D. Cochran	M. McCully	R. Gardner
J. Rowe	R. Heistand	B. Burgess
	D. Newcome	

Mr. Gardner requested any additional information on why two different size wires could be cut from the same reel, why the reel number recorded was an invalid number and why the tags attached to the cable were incorrect (2 of 4 wrong).

Mr. McCully explained that shortly after he arrived on site he found the manufacturer's serial number was being used (in some cases) for the reel number. As to the other two concerns, Mr. McCully nor could anyone else provide a plausible reason for the errors.

A trip to the present "cut-shop" was made to look at the present set-up and how reels are marked to see if a reason for the errors could be found. Only suppositions could be given.

The group then went to the Services Support Building to look at tags that identified cables (made out by "cut-shop"). The tags showed they had been improperly filled out.

Prior to leaving the Orientation Room, Mr. Gardner informed the group this item would be viewed as an "item of non-compliance".

GWRowe
2/14/84

2A2

To DLQuamme, Midland Energy Center

From BHPeck, Midland Energy Center

Date April 9, 1984

CONSUMERS POWER COMPANY

Subject MIDLAND ENERGY CENTER GWO 7020
USNRC EXIT MEETING
File: 0485.15 UFI: 99*04 Serial: CSC-7599

Internal Correspondence

CC JWCook, P26-336B
RAWells, MPQAD
MLCurland, MPQAD
Meeting Attendees

An NRC Exit Meeting was held on April 6, 1984, to discuss recent visits to follow-up open items previously identified by the NRC. The meeting was held in TCValenzano's office with attendees as noted below:

MEETING ATTENDEES

CPCo	Bechtel	BWCC	NRC
FJYanik	GAHierzer	VNAsgaonkar	CScheibelhut
BHPeck			PHiland
REWhitaker			JElsbersgas
DJVokal			BLBurgess
REDruin			
RDDavis			

The following information was discussed:

Item 82-22-04; In progress Inspection Issue; CPCo response to NRC is satisfactory. Considered open pending follow-up by NRC.

Item 80-20-05/21-05; No code for purchase of welding wire. Considered open. Further action required by NRC.

Item 83-12-01/13-01; Hanger deficiencies. Considered open pending rework/veri-fication of hangers.

Item 83-07-01/02; Kelly Building segregation. NRC considers closed.

Item 83-01-01; Untagged Value Issue. NRC considers closed

Item 78-19-02; Nuts on Hangers - Safety wires on shackles not required by vendor. NRC considers closed.

Item 81-20-01; Cable tray dividers. NRC requires additional information. Considered open.

CIRCULARS

81-09; Effluent Monitor Bypass - Closed

81-12; Testing of Power Breakers - Closed

81-14; Main Steam Isolation Valves - Closed

INFORMATION NOTICES

82-13 (Became 84-02 bulletin); Failure of GR relays - Closed

81-15; Inadvertant Isolation of Instrument Lines - Closed

2A2

To DLQuamme, Midland Energy Center

FROM BHPeck, Midland Energy Center

DATE April 16, 1984

SUBJECT MIDLAND ENERGY CENTER GWO 7020
MARCH, 1984 NRC RESIDENT INSPECTOR EXIT MEETING
File: 0485.15 UFI: 12*24*25 Serial: CSC-7632

Consumers Power Company

INTERNAL CORRESPONDENCE

CC JWCook, P26-336B
RAWells, MPQAD
MLCurland, MPQAD
Meeting Attendees

A monthly exit meeting was held on April 9, 1984 with the NRC Resident Inspector.

MEETING ATTENDEES

CPCo	Bechtel	NRC
DLQuamme	GAHierzer	BBurgess
RAWells		PHiland
DDJohnson		

Housekeeping good; however, the project needs to increase efforts as work increases.

Document Control - NRC investigation confirms CIO findings. Project to make presentation to NRC Wednesday, April 11, 1984, on resolution of document control problems.

Status Assessment/Quality Verification Program documents are okay.

NCRs - Philosophy on timeliness of issuance. NCR in one case took a week. Procedure is being changed from 24 hours.

Schedule from Bechtel on CCP for NRC. They are getting the weekly status report. Pat Hiland to verify that this is adequate.

Allegation regarding mechanical snubbers closed.

Presentation on Zack audit prior to formal submittal. Extension to June 1 requested.

DDJohnson/dmh

2-A-1

PUBLIC MEETING
8/11/83 7:00PM
Valley Plaza - Great Hall

NRC ATTENDEES:

Darl Hood
Jim Partlow
Jim Stone
Ron Cook
Tom Novak
Jim Lieberman
Darrell Eisenhut
Jim Keppler
Bob Warnick
Elinor Adensam
Jay Harrison
Ron Gardner
Russ Marabito

Keppler - Opening statement - Thirty people signed up to make statements. Please limit yourself to three minutes and try to speak only on the CCP.

Jay - History and description of CCP and S&W qualifications and duties, TERA qualifications and duties. Points raised by GAP and NRC response.

Keppler - Reverification program requirement by CPCo, third party overview, and overview by NRC versus third party reverification and NRC overview. Point of controversy. Comments would be appreciated.

R. Tomachek - Prepared statement - Industry needs the plant. If license denied, Michigan industry would be at a severe disadvantage. Industries would not build in an area where energy was not available.

F. Bramman - Exec. Dir. Bay Area Ch. Comm. 300,000 people will benefit from completion of plant. Bay Area Chamber of Commerce endorses plant. Position has not changed. Progress is never easy.

G. Foster - Pres., Sag. Labor Council AFL/CIO No distrust in community. Saginaw and Bay County Labor Councils endorse nuclear plant. Only Lone Tree Council wishes to discredit plant. Pamphlets are misleading. Only individual members of groups are against plant - not any unions that he knows of.

S. Long - Business person - Member of Midland Chamber of Commerce. Midland plant needed.

S. Young - V.P. Sag Co. Ch. of Comm. Supports completion of the plant. Putting together tri-county program to support completion of plant. Necessary to future growth of tri-county area. Trust NRC to ensure safe construction of plant.

L. Romo - All need jobs and energy. Based on construction record of CPCo, plant cannot be built safely. Rates will go up at least 30-35%. Businesses will not be attracted to area and homeowners cannot afford it. CCP leaves identification of problems to CPCo. Third party should be identifying problems.

J. Dumlar - Supportive of forum - Serious doubts about viability of plant in community and state. Can justify licensing of plant for presumed benefit of public. Site too close to dense population and is therefore not safe. Evacuation - Construction problems - Silence from licensing board. Divisive atmosphere in community. Adequate health and safety of public must be assured. Plant cost - Plant safety - Citizens confidence.

Darl Hood - Evacuation (Emergency Planning) calls for a drill of evacuation plan for area. Drills are at least one year away. Those factors are taken into consideration. Siting was considered during construction permit stage. Plant was justified for this site and plant was approved.

Eisenhut - Citizen confidence - Reason for meetings - why we're here. Confidence serious question for us, too.

G. Yobst - Pipefitter Midland Resident 4 1/2 years. Read letter from another pipefitter. First-class workmanship. Need plant.

T. Miller - Integrity impugned by previous speaker. Don't have total community support, but our support is not marginal. Do not consider ourselves splinter group. We are an outreach group. What is behind all the problems?

Keppler - Seems to be implementation of the programs. Third party overview will remain until we have confidence in CPCo. Management is ultimately responsible.

Wm. Welch - Exec. V.P. Midland Ch of Comm No single issue more important to our community than the completion and licensing of the plant. Not experts on nuclear safety, but trust NRC to see that plant is built safely. Seems to be a great deal of quibbling between NRC and CPCo of non-substantive issues. Impose reasonable standards on CPCo, but get it done. We all contributed to the cost by allowing the process to drag out for so long. Issues are talked about in irrational terms. Trust NRC to expedite completion of the plant.

A. LaBrose - insulator Quality - can't insulate until all welds are checked. Have been checked, re-checked and re-checked.

G. Wilson - Sag Auto worker Plant wasn't needed. Will be too costly to afford. Plant badly built. Plant should be closed down. If it has to be built, build it safely.

M. Corbett - Last man lied. Men know what they're doing. Men take pride in their job and try to do their best.

L. Hallberg -Jobs are important in area right now. Jobs have been lost because of impact of plant on Dow. NRC pointing finger at CPCo management. CPCo has not earned the confidence of the people. If CCP fails, CPCo can just come up with a new plant.

Keppler - Our view is not whether it should or should not operate, but that it operate safely. Two years ago, I was extremely down on CPCo operating plants, particularly Palisades. They've turned that around. We're hoping they do the same at Midland.

B. Wilson - Don't represent anyone. Member of Lone Tree Council Have heard attacks here on people like Terry Miller. I think their concerns are genuine and they have no ax to grind. Am concerned over cost of nuclear plant. Safety will lose out against almighty buck.

Eisenhut - Program will not be rammed through because of financial considerations. Has been going on for many months much to dismay of CPCo.

R. McCauley -People who are eventually going to live in community are best qualified to inspect the plant.
plant worker

R. Young - Quality of workmanship couldn't be better. Why depend on other countries for fuel. Why not depend on ourselves.
Electrician

E. Ivey - Has interest in economic welfare of this community. Would be economic disaster for community if plant is not licensed.

B. Garde - Soil settlement, cadweld problems not Terry Miller's fault or anyone elses. CCP is plan that a lot of people have put effort into.
GAP

Ms. Rosingard - CCP - Bear in mind that a system of checks and balances does not work very well when it is within one entity. Decision for third party overview a good decision, but may be too late.

G. Carson - Commend NRC for effort to ensure safety of plant. Need the power.
Midland Molecular Institute No acid rain from nuclear plant. Clean energy is needed for this area. No reason to expect why we cannot in time learn to use this energy.

D. Ellis Need to attract new business to Michigan. Completion of plant is
U of M Flint Camp. Econ Prof needed for development of Michigan economy. Some of cost increases are due to hearings such as this. GAP is supported by IPS which is an organization of very far left. GAP may have a hidden agenda.

Sister Platte- Assured us that there would be independent audit - open process.
Sag City Council Read now that after CPCo sights the problems, then there would be a solution to them. Pressure on us is enormous because there are not enough women. Have to be committed to the little people of the community in order to restore credibility. Must assure us that the waste can be disposed of safely.

Keppler - Allegations have been, are being, or will be investigated by the NRC. We believe that the CCP should be a viable program.

Platte - Think you need a more independent process for CCP.

S. Black - Comm. for Jobs & Energy — Need necessary energy for welfare of Michigan. To put Michigan To put Michigan citizens back on the job.

D. Erskine - farmer — We need the safe nuclear power plant in Midland.

J. Tanner - Lone Tree Council — Will employ those people until plant is completed. Atty General says there will be a 65% increase in rates. How will this affect jobs? Decrease after plant is built. Aug. 2 Wall Street Journal says "Nuclear power is twice as expensive as coal-fired plants and can't be operated efficiently". Will have 54% more energy than needed when plant is completed.

Eisenhut - Avg. plant has 50% efficiency rate?

Tanner - Yes - stated in article.

Eisenhut - 54% too much energy? What were you referring to?

Tanner - Mr. Miller says 83% is plant operates.

Eisenhut - Must have enough to cover peak load, so if average is considered, of course, it would be in excess.

Siebert - plant worker - Can hear warning system very well in house with windows closed. Live seven miles from plant.

Cameron - Born and raised in Midland. Want plant completed, built and operated safely.

M. Kearn - Pres., Freeland Area Ch of Comm. — Plant has been constructed under a microscope. Have confidence in safety of plant. Asset to business growth. Get on with the task.

(No name) Hemlock — Plant built by organized labor. No one would be fired for complaining about shoddy work.

V. Castellano - Ingersoll Township goes on record as being against the Midland plant until all safety issues are resolved. Mismanagement. Since Dow has terminated contract, they will continue with their H plume (thermal discharge). We will now have two thermal plumes in the Tittabawassee River. Higher toxicity on aquatic life.

Keppler - Not prepared to respond to this. We will get back to you later.

J. McFarland-Plant worker - Don't worry about cost. I work under tightest rules I've ever worked under. Watched too close to get away with anything. I believe it's safe.

J. Secord - Am relieved to hear a more balanced viewpoint than in the past. There will always be someone who is unhappy. Can't wait to please everyone.

P. Sole - pregnant CPCo worker - Regarding Sister Ardith Platte's comments regarding pregnant women being worried about plant. I'm not worried. I work with these people and know they're qualified. We need this plant.

Eisenhut - Two sides to every argument. Appreciate sincere comments made. Some things are beyond NRC control. A lot of questions inferring that CPCo management is the problem. Would like to ask Jim Cook to comment.

J. Cook - Difficult to give single response. Been a very changing business. Much more sophisticated. Impressed with resiliency of the people who are there. Proud of training center we have built. Same kind of dedicated people on construction site as there are in operations dept.

Keppler - Have been receiving CCP since beginning of the year and have resolved a lot of problems. Would like to hear your articulation of what you believe the problems are at Midland.

J. Cook - Have not met our own expectations. The plant/hardware is as stout as anyone around, but not everyone can know all the ramification of workmanship not <u>exactly</u> matching drawings. Think that is our main problem now. Other problems over the years have been fully addressed and solved as they occurred.

Eisenhut - Regarding comment about people feeling pressure of losing their jobs. Do you feel you have a system in place where the worker can feel comfortable coming forth to management without any reprisals?

J. Cook - I believe we do. Don Miller and his staff have an excellent relationship with the crafts people. Also have a formal system for investigating concerns. Also would like to offer my own telephone number to anyone who feels they are not getting a positive response. Will set up a system and post it around the site.

Keppler - Thank you for coming tonight. Planning to hold working level meetings in the area monthly.

PUBLIC MEETING
8/11/83 2:00 PM
Quality Inn Conf. Room

NRC ATTENDEES:

Darl Hood
Jim Partlow
Jim Stone
Ron Cook
Tom Novak
Jim Lieberman
Darrell Eisenhut
Jim Keppler
Bob Warnick
Elinor Adensam
Jay Harrison
Ron Gardner
Russ Marabito

INTERVENOR ATTENDEES:

B. Stamiris
Lucy Hallberge
Leo Romo
B. Garde
Terry Miller
Kathy -----
Joel Tanner

Keppler - Opening statement - Close to approving CCP. All comments today will be considered.

Jay - Slide presentation

Stamiris - Where are you in CCP approval?

B. Garde - Will want more details on first phase

Keppler - In Mgmt & Review Phase now?

Jay - Yes.

Eisenhut - Schematic laid out by CPCo and added to by NRC?

Jay - Yes.

Eisenhut - These are things to be done to make the CCP acceptable.

Jay - Have proposals which have not yet been made to CPCo and CPCo will have a chance to rebut.

B. Garde - Want time for written comments.

Keppler - If CPCo adopts suggestions, NRC will approve unless substantive comments.

Jay - NRC hold points required:
Training/recertification of QC inspectors
Prior to initiation of Phase I
Prior to initiation of Phase II

Hold points will be in place until were satisfied.

B. Garde - What are you going to look at? Pipe hangers?

Jay - Already started pipe hangers. Will be looking at --- hangers as well.

B. Garde - Hanger reinspection for example - More scrutiny on first than on later?

Jay - Not going to tell them what we're going to do.

B. Garde - How is public going to know your inspection is adequate? If you only spot check?

Jay - Don't know how much will be inspected. Won't know until we reach a confortable point.

B. Garde - Management review or paperwork review?

Jay - Did management review last week. Everything o.k. Found problems with procedures.

Keppler - Will go into this with enough depth to have confidence in CPCo. Hold monthly meetings to give public confidence and be able to assess how things are going.

B. Garde - Perfectly reasonable. Don't like announced inspections, but that's assuming S&W is looking closely at CPCo.

Jay - When we're satisfied - we'll lift the hold points and CPCo will be able to continue. Do not want to have to approve every step such as we are doing in soils.

B. Garde - That's what I would like.

B. Garde - Describe second hold point.

Jay - After completion of all these activities will start on Phase 2.

B. Garde - Saying NRC will take team in on each system?

Jay - No - not 100% inspection. Just want to know system is working. To do what you want would require one on one. Random checks. When confident - will lift hold point and go into normal inspection mode.

Keppler - Will check heavily at first and then back off. Placing a lot of emphasis on third party and very thorough review before lifting hold points.

B. Garde - You trust CPCo. We don't. Don't feel Jay's explanation is adequate.

Keppler - What do you want?

B. Garde - Explained in 6/13 letter. Want to wait until Jay is done.

Keppler - Don't want to argue. Want to hear your views. Maybe comments by S&W.

S. Baranow - We believe it is an adequate program.

B. Garde - Rev. 1?

S. Baranow - Yes. Management Review meetings and training is our involvement now.

S. Baranow - Intend 100% evaluation of inspection training. Adequate so far.

---- How many on staff?

S. Baranow - Nine.

B. Stamiris -Same nine people who are reviewing soils?

S. Baranow - No.

Eisenhut - What will S&W's role be to verify that CPCo has done adequate job?

S. Baranow - Have developed check lists which will be used in each room to physically verify that CPCo did an adequate job.

Eisenhut - What kind of inspections. Give me a flavor.

S. Baranow - Developed addressing all the important points of PQCI.

Eisenhut - Make determination that CPCo has done an adequate job?

S. Baranow - Yes.

L. Hallberg- Will have more than nine? How many.

S. Baranow - As many as necessary. If fifty are needed, will get fifty.

Jay - Next step will be to bring staff up to fifteen.

Baer - No restrictions on budget or personnel.

B. Stamiris - What assurance that HVAC as-built is adequate?

Jay - NRC and TERA and S&W are looking at them.

Keppler - Concerns about Zack date back in time. Assigned group to look at Zack from OSC. Onsite inspection going on right now. Interviews with people who have concerns.

B. Stamiris -Why did it not stop. Why exempted?

Keppler - We found CPCo was controlling it. No basis to stop work on it.

Warnick - Good reports from inspectors. No history of problems.

Keppler - If we need to include it in CCP, we will.

Jay - R. Cook very satisfied with welding procedure.

B. Garde - How much has been ripped out since 1979/80?

R. Cook - Work looked at by CPCo. Guess would be 1/3 torn out and a lot reworked since the 1980 period. CPCo doing QA/QC. Didn't work when Zack did their own. CPCo doing 100% inspection.

B. Garde - How much has had to be redone. Will that be in Zack report?

Warnick - Yes

B. Garde - Going to put procedures checklist in PDR?

Jay - Yes.

Leo Romo - What will be verified under Phase I?

Jay - Reinspection of work already inspected.

L. Romo - S&W?

B. Garde - Does S&W methodology describe how much will look at?

Baer - Not 100% - Random sampling.

B. Garde - Does detail how much to look at?

Baer - No.

---- S&W putting it's reputation on the line.

B. Garde - Think S&W reputation already tarnished by work done at other sites. Will trust because work is adequate not because of reputation.

Eisenhut - If sample not good enough - will increase sample. Difficult to instill confidence once lost.

B. Garde - Pleased with TERA's methodology. Have confidence in Jay and the team. I trust them. Public has lost confidence and wants to know what's out there. Working out problems on methodology will prevent having these meetings.

Eisenhut - Will be heavy amount of overview but process will not work perfectly from the beginning.

Kathy - We are confident in NRC, Midland. When will there be more?

Keppler - Seven more people for Midland and Zimmer working out of Illinois. Maybe one more resident at Midland.

Kathy - Time frame?

Keppler - No.

B. Garde - Battered out over about 6 months the TERA program.

Jay - Seven months on CCP already.

B. Garde - Only three pages on S&W to look at.

Jay - Will give sample procedures for you to look at with S&W approval.

Jay - Correction - Something less than 100% of Zack reinspection by NRC. GAP 2.206 request(1)Don't feel modifying CP is needed at this time. (3) Do not intend to reject either (4) Will not require because would take NRC out of regulatory posture. (5) Will make increase in staff. (6) Issues have been reopened. Task force put together and issues will be reviewed.

Jay - Conclusions

B. Garde - Focus comments around issues raised in 2.206. Major problem with CCP as presented and your review goes back to quality verification of CCP Review. Feel confident of training, team training and statistical sampling plan. Not a lot of rrom for negotiations or presentation you have made. Original request for third party review still needed. Want to know methodology. Will do conscientious review. S&W not adequate. Teams spotcheck o.k.

Keppler - S&W material will be put in PDR.

Terry Miller - Want to thank NRC, etc. Opposed to plant. Unnecessary, costly. Endorsed by mayors of Bay City and Saginaw. This company should not be allowed to verify their own construction. We have no trust in this company.

Keppler - Could comment on overviews?

Miller - Extremely impressed. Many things excellent. Third party should supervise the continuing construction. Public is aware CPCo is under the

gun as far as cost and scheduling. In paper daily. Tri-county community skeptical about program allowing utility to oversee their own construction.

Kathy - Education campaign started in June. Brochures (Cost, Danger in Operation). People feel impotent to fight.

Tanner - Soils settlement problem. Will NRC make their data available to an outside consultant.

Eisenhut - Is all CPCo data.

B. Garde - What kind of input would that expert have if we could raise the money to get him?

Eisenhut - Provided resumes of five individuals who are noted in their field, brought in by Brookhaven Labs., and two other specialists. Will look at all records and information available - go out to the site. Am sure they will be happy to meet with your expert. Cannot commit beyond that.

Tanner - Will he have available to him, every bit of data he will need?

Eisenhut - It's all in the PDR.

B. Garde - Can let us know in a day or so the boundaries of his involvement?

B. Stamiris -Opinion on D. G. Bldg.

Eisenhut - Congressional hearings first time I heard views against D. G. Bldg. Asked everyone else if they disagreed and no one else did.

Romo - People in Tri-cities have lost trust in CPCo. Outline shows why. What about that which is not accessible? How can that be reviewed and what is percentage?

Jay - Can only look at records on some things. Program set up on how to administer.

B. Garde - Outline of CCP is not specific on what is and is not accessible. What plans have CPCo put forth to -----. Why do you think documentation review is acceptable?

Jay - Can't assume everything inaccessible is unacceptable. Will have to see what documents show us.

Keppler - If five of fifteen accessible welds are bad - something would have to be done. If all fifteen were good, assumption would be that inaccessible welds would be good as well.

B. Garde - Have considered a CAT inspection?

Keppler - No. Have other plants that need to be looked at.

Jay - Dedicated staff such as we have is much more effective. Reinforcing steel - many of the problems were way back when. Can't assume whole plant is bad because of what happened in D. G. Bldg.

Lucy - Will we ever know what percentage of problems are inaccessible?

Keppler - Oh sure.

Lucy - How does Zimmer QCP compare to CCP?

Warnick - Both require backward look. Both require work to be done by the utility. Identified over 15,000 nonconforming conditions. Stopping work not related to QCP

Keppler - QCP working so well, it was almost a chaotic situation. Trying to fix things up before -----

Luch - Why not take away QA/QC from CPCo now.

Keppler - Must instill in utility a sense of responsibility to do the job.

Eisenhut - Not in charter to overview or supervise. If it is completed, CPCo will have to operate it and you have to have confidence in them.

Romo - What will happen if CPCo messes up again.

Keppler - Things will come to a halt again.

Eisenhut - Won't get a license if NRC doesn't have confidence.

Stamiris - Isn't the close scrutiny by the NRC and the CCP itself a testimonial to your lack of confidence?

Eisenhut - Not at all. ---------No confidence without third party review.

Stamiris - Don't you feel that allowing CPCo to go in to identify problems that exist poses an inherent conflict due to their financial problems?

Eisenhut - (Couldn't get it)

B. Garde - Summary comments - CPCo shoud not be trusted. Until public and you know what is on that site ---- Not totally comfortable with S&W. Can't make committments to rest of program until we know ----. CPCo developing plan to meet your requirements not to deal with the problem that is out there. NRC hold points were not in first couple of versions of CCP. If plant operates one day, cost can be put in rate base.

Keppler - Jim Cook, do you have anything to say?

J. Cook - Team that is on site is eager to turn opinion around of NRC and public. Will try to show all of you with our actions.

NRC (241)

8/11/83

Quality Assurance

NRC/Intervenor

2 CCP on

Hood

Partlow

Stone

Cook

Novak

Lieberman

Eisenhut

Keppler

Warnick

Denton Adensam

Harrison

Gardner

Marabito

Intervenors

B. Garde

B. Stamiris

Lucy Hallberg

Leo Romo - Lone Tree

Terry Miller - Lone Tree

Kathy

Joe Tarver

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Keppler – Inc Mgmt + Review Phase now?

Jay – Yes

Essenhut – Schematic laid out by CPCo + added to by NRC?

Jay – Yes

Essenhut – Things to be done to make the CCP acceptable. CPCo will have to work

Jay - have proposals which have not yet been made to CPCo + CPCo will have chance to rebut

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Keppler - If CPCo adopts suggestion, NRC will approve unless substantive comments.

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We don't
Don't feel Jay's
explanation adequate

Keppler What do you want?

B. Garde – Explained in 6/13
letter - Want to
wait until Jay
is done

Keppler Don't want to argue
Want to hear your
views. Maybe
comments by S+W

Stan Baranow – We believe it is an adequate progam

B. Garde – Rev. 1 ?

S. B. – Yes. Management Review meetings + training is our involvement now.

S. Baranow – intend 100% evaluation of injection training. Adequate so far

— – How many on staff

S. Baranow – Nine

B. Stamiris – Same 9 people who are receiving soils

S. Baranow – No

Eisenhut – ~~CPCo~~. What will S+W's role be to verify that CPCo has done adequate job?

S. Baranow – Have developed check lists which will be used in each room to physically verify that CPCo did an adequate job

Ecumbent - What kind of injections. Give me a flavor.

S. Baranow - Developed addressing all the important points of PQCI.

Ecumbent - Make determination that CPCo has done an adequate job?

S. Baranow - Yes

Lucy Hallberg - Will have more than nine? How many.

S. Baranow - As many as necessary If fifty are needed, will get fifty.

Long - Next step will be to bring staff up to 15.

Baer (S+W) — No restrictions on budget or personnel.

B. Stamiris — What assurance that HVAC as-built is adequate.

Jay — NRC + TERA + S+W are looking at them.

Keppler — Concerns about Zack date back in time. Assigned group to look at ZACK from OSC. Onsite inspection going on right now. Interviews with people who have concerns.

B. Stamiris — Why did it not stop. Why exempted?

Keppler — We found CPCo was controlling it. No basis to stop Work on it.

Warnick – Good reports from injectors. No history of problems.

Keppler – If we need to include it in CCP, we will.

Jay – R. J. C. very satisfied with welding proc.

B. Gerde – How much has been repaired out since 1979/80 ?

R. J. C. – Work looked at by CPCo. Guess would be 1/3 torn out + a lot reworked since the 1980 period. CPCo doing QA/QC. Didn't work when Zack did their own. CPCo doing 100% inspection.

B. Garde – How much has had to be redone. Will that be in each report?

~~Hopper~~ Warnick – Yes

B. Garde – Going to put procedures checklist in PDR

Jay – Yes

Leo Romo – What will be verified under Phase I

Jay – Reinspection of work already inspected.

Leo Romo – S+W?

–

B. Garde – Does S+W methodology describe how much will look at?

Baer — Not 100% - Random Sampling

B. Garde — Does detail how much to look at?

Baer — No.

— S+W putting it's reputation on the line.

B. Garde — Think S+W up already tarnished by work done at other sites. Will trust because work is adequate not because of reputation.

Eisenhut – If sample not good enough – will increase sample.
Difficult to install confidence once lost

B. Garde – Pleased with TERA's methodology. Have confidence in Jay + the team. Distrust them. Public has lost confidence + want to know what's out there. Working out problems on methodology will prevent having these meetings

Eisenhut – Will be heavy work of overview but process will not work perfectly from the beginning

Kathy – We are confident in NRC Midland. When will there be more?

Keppler – 7 more people for Midland + 2 trainees working out of Rl. Maybe 1 more inspector!

Kathy — Time frame?

Keppler — No

B. G. — Batted out over about 6 months the TERA program

Jay — 7 mos. on CCP

B. G. — Only three pages on S+W to look at.

Jay — Will give sample procedures for you to look at with S+W approval.

Jay — Correction - Something less than 100% of Zack reinspection by NRC
GAP 2.206 Request
Don't feel modifying CP is needed at this time

(3) Do not intend to reject either

~~(4)~~ Feel S+W competent + qualified.

(4) Will not require because would take NRC out of regulatory posture.

(5) Will make increase in staff

(6) Issues have been reopened. Task force put together + issues will be reviewed

Jay – Conclusions

B. Shah – Focus comments around issues raised in 2.206
Major problem with CCP as presented + your review goes back to quality verification of CCP Reviews.
Feel confident of training, statistical team training + Sampling plan.
Not a lot of room for negotiations on presentation you have made.
Original request for 3rd party review still needed.
Want to know methodology.
Will do conscientious review.
S+W not adequate
Teams spotcheck O.k.

~~Kappler – Are saying that S+W~~

Keppler –	S+W material will be put in PDR
Terry Miller –	Want to thank NRC etc. Opposed to plant Unnecessary – costly. Endorsed by mayors of B.C + Sag. This company should not be allowed to verify their own construction We have no trust in this company.
Keppler	Could comment on overviews?
Terry Miller	Extremely impressed. Many things excellent. 3rd. party should supervise the Continuing Construction Public is aware CPCo is under the gun as far as cost + Scheduling

Miller (cont) - In paper daily Tri-county community skeptical about program allowing utility to oversee their own construction.

Kathy — Education campaign started in June.
Brochures
Cost
Danger in general
People feel impotent to fight

John Tanner - Soil settlement problem
Will NRC make their data available to an outside consultant

Eisenhut - All CPCo data

B. Garde – What kind of input would that expert have if we could raise the $ to get him?

Eisenhut – Provided resumes of 5 individual who are noted in their field, brought in by Brookhaven Labs. + 2 other specialists
Will look at all records + information available – go out to the site. Am sure they will be happy to meet with your expert.
Cannot commit beyond that.

John Tanner – Will he have available to him every bit of data he will need?

Eisenhut – It's all in the PDR

B. G. – Can let us know in a day or so the boundaries of his involvement

B. Stamiris — Opinion on U. C. Bldg.

Eisenhut — Congressional hearings 1st time I heard views against U. C. Bldg. Asked everyone else if they agreed + no one else did.

Romo — People in Tri Cities have lost trust in CC's. Outline shows why. What about that which is not accessible. How can that be received + what is it.

Jay — Can only look at records on some things. Program set up on how to administer.

B. Gorde — Outline of CCP is not specific on what is + is not accessible.

What plans have CPCo put forth to
Why do you think documentation review is ~~[illegible]~~ acceptable.

Jay – Can't assume everything inaccessable is unacceptable. Will have to see what documents show us.

Keppler – If 5 of 15 acceptable welds are bad – something would have to be done. If all 15 were good, assumption would be that inaccessible would be good as well.

B. Gardner – Have considered a CAT inspection?

Keppler – No – have other plans that need to be looked at.

Jay – dedicated staff such as we have & is much more effective. Reinforcing steel – many of the problems were way back when. Can't assume whole plant is bad because of what happened in D. C. Bldg.

Lucy – Will we ever know what % of problems are inaccessible?

Keppler – Oh Sure!

Lucy – How does Zimmer QCP compare to CCP

Warnick – Both require backward look Both require work to be done by the utility. Identified over 15,000 nonconforming conditions.

Warnick - Stopping work not related to QCP

Keppler - QCP working so well, it was almost a chaotic situation. Trying to fix things before

Tucy — Why not take away QA/QC from CPCo now.

Keppler - Must instill in utility a sense of responsibility to do the job.

Ennulat - Not in charter to oversee or supervise. If it exists is completed CPCo will have to operate it + you have to have confidence in them.

Rooney — What will happen if CPCo messes up again.

Keppler — Things will come to a halt again.

Eisenhut — Won't get a license if NRC doesn't have confidence.

B. Stamiris — Isn't the close scrutiny by the NRC + the CP Staff a testimonial to your lack of confidence?

Eisenhut — Not at all. ----- No confidence without 3rd party review

B. Stamiris — Don't you feel that allowing CPCo to go in to identify problems that exist pose an inherent conflict due to their financial problems?

Eisenhut –

B. Garde – Summary comments
CPCo should not be trusted.
Until public + you know
what is on that site – – –
Not totally comfortable with
S+W.
Can't make commitments
to rest of program until
we know – – –
CPCo developing plan to
meet your requirements
not to deal with the
problem that is out there
NRC hold points were not
in 1st couple of versions
of CCP.
If plant operates 1 day,
cost can be put in
rate base.

~~B. Stamico~~ -

Kepple - <Jim Cook, do you have anything to say>

<Jim Cook - Team that is on site is eager to turn opinion around of NRC + public. Will try to show all of you with our actions.

8/1/83

Valley Forge

PUC Mtg

N. PC/Public

Kepple — opening Statement

30 people signed up to make statements - Please limit yourself to 3 min + try to speak only on the CCP

Gay — History — description of CCP + SER qualification + duties
IEEE qualification + duties
Points raised by OPP + NRC response

Kepple — Specification program requirements by PC/third party reviews + reviews by NRC vs. third party specification + NRC reviews
— Point of controversy — Comments would be appreciated

Richard Thonebek — Prepared statement —
— Industry needs the plant. If license denied Rich industry would be at a severe disadvantage. Industries would not build in an area where energy was not available. (Applause)

Mr. Hanson

Mr. Brannen - Because people will benefit from completion of plant

Exec Dir

Bay Area Ch. of Comm. - BACC endorses plant location has not changed Project is necessary Applaud

Mr. Dick Foster, Pres. - No distrust in community. Sac + Bay County Labor Councils endorse nuclear plant. Only one Fed Council wishes to discredit plant Pamphlets are misleading Only individual members of groups are against plant - not any unions that he knows of.

Mr. Gary Long - Business person. Member of Midland Chamber of Commerce. Midland Plant needed.

Steven Young - V.P. Say Co. Ch. of Comm. - Support completion of the plant. Putting together tri-county program to support completion of plant. Necessary to future growth of tri-county area.
Trust NRC to ensure safe construction of plant. (Applause)

Jess Rose - All need jobs + energy. Based on construction record of CPCo, plant cannot be built safely. Rates will go up at least 30-35%. Pensioners will not be attracted to area + homeowners cannot afford it. CCP leaves identification of problems to CPCo. ~~+ the~~ 3rd party should be identifying problems (applause

Dr Dunmire - Inherent?

Expertise of persons
Persons doubts about
viability of plant in
community + State
Can justify licensing
of plant for presumed
benefit of public -
Site too close to dense
population + is
therefore not safe -
Evacuation -
Construction problems -
Silence from licensing
board
Divisive atmosphere
in community
Adequate health +
safety of public must
be assured
Plant cost -
Plant safety -
Casting confidence -
(Applause)

Hard Hats - Evacuation (Emergency Planning) calls for a detail of evac. plan for area Hatch can at least 1 yr away. Five factors are taken into consideration: Siting - was considered during construction permit stage. Plant was justified for this site & plant is approved.

Eisenhut - Citizen confidence - Reason for meeting - Why were here Confidence means question for us, too.

Fuel Cycle Hulet - Midland Res 4½ yrs. Sag. Local Plumbers & Steamfitters - Read letter from another pipefitter, 1st. class workmanship & Fuel plant (Applause

Cmr Tony Wells – statistically unsupported by previous speaker. Don't have total community support, but our support is not marginal. We are not another splinter group like the anti-nuclear group. What is behind all the problems?

Keppler – Seems to be implementation of the programs. 3rd party oversight will remain until we have confidence in CPC. Management is ultimately responsible.

Fr Tom Welch
Exec VP
Midland Area Ch of Comm – It is high time more important to our community than the completion + licensing of the plant. Not experts on nuclear safety, but trust NRC to see that plant is built safely.

Welch (Cont) — Sum 5 Nov 7 — NRC/CPC
Trust dod of quibbling letters of non-substantive issues Impose reasonable standards on NRC - not get it done. We all contributed to the cost by allowing the process to drag out for so long. Issues are latched about in irrational terms. Trust to NRC to expedite completion of the plant. (Applause)

Pres Al LaBrosse — Quality - can't insulate until all welds are checked. Have been checked, re-checked - re-checked. (Applause)
insulator at plant

Ct Rep Nielsen — Plant wasn't needed. Will be too costly to afford. Plant badly built. Plant should be closed down. If it has to be built, build it safely.
Say Auto Workers

Frank Cadwell – Last man said Flint knows what they're doing. Flint has done pride in town got to do their best.

Cor
Susy Hallberg – Jobs important in area right now jobs have been lost because of impact of plant on Dow. DRC pointing finger at CPC mgmt. CPC has not earned the confidence of the people. If CCP fails, CPC can just come up with a new plant.

Keppler – Our view is not whether it should or should not operate but that it operate safely. 2 yrs ago, I was extremely down on CPC operating plants, particularly Palisades. They've turned that around. We're hoping they do the same at Midland.

Con Edison Edison – Don't recruit anyone. Member of Fire Fighters Council. Fire had attacks use on people like Tony Miller & think their concerns are genuine & they have no axe to grind.
Am concerned over cost of nuclear plant. Safety will lose out against almighty buck

Consolidated – Program will not be resumed through because of financial considerations. Has been going on for many months much to dismay of CECo

GE Ed McCauley – plant worker – People outside are eventually going to live in area are best qual. to inspect the plant

Con
Earl Young — Quality of workmanship
Jackson — could be better. Why
depend on other countries
for food. Why not depend
on ourselves

Pro
Ellis Avery — Has intrest in economic
welfare of this community.
Would be economic disaster
for community if plant
is not licensed.

Con
B Wade — Said settlement, cadwell
GCP — problems not Terry Wilkes
fault or anyone elses.
CCP is plan that a lot
of people have put effort
into.

Mrs Rongard — CCP - Bear in mind that
middle-of-road a system of checks +
balances does not work
very well when it is
within one entity.
Decision for 3rd cats previous
2 was decision but may be too late.

For
Gordon Canon — Command & RC for effort
W W S — to ensure safety of plant
Need the power — No coal
rain from nuclear
plant. Clean energy
is needed for this
area. No reason
to expect why we
cannot in time
learn to use this
energy. Applaud

For
Dennis Ellis — Need to attract new
W M Flint — business to which
Ron Lefevre — Completion of plant is
needed for development
of Rich economy. Some
of past increases are
due to hearings such
as this
RFC is supported by
IPS which is an
organization of very for
sight.

Ellis (cont) – CPC may have a hidden agenda

Our Sister Agents Plants – Assured us that there
City Council - Seguin would be independent
audit – open process.
Told now that after CPC
~~else~~ sights the problems
then there would be a
solution to them. Pressure
on us is enormous
because there are
not enough women –
Have to be committed
to the little people of
the community in order
to restore credibility.
Must assure us that
the waste can be
disposed of safely.

Tripplet - Allegations have been
are being or will be
investigated by the NRC
We believe that the CCP
should be a viable
program.

Easton Platt - Think you need a more
independent process for CCP.

For
Sandy Black - Need nuclear energy for
Committee for welfare of Michigan.
Jobs-Energy To put Mich citizens back
on job.

For
Dorothy Eichen - We need the safe nuclear
Midland farmer power plant in Midland.

Con
Joel Tanner - Will employ those people
Ene Fin Council until plant is completed.
Sag. Resident Fifty Men says there will
be a 65% increase in
rate. How will this affect
jobs? Decrease after plant is built

Translant (Eng & Hud Steel) found days nuclear power is same as expense as coal-fired plant & can be operated efficiently". Would have 54% more energy than needed when plant is completed.

Essinhut - Eng plant has 56% efficiency rate?

Tanner - Yes - stated in article

Essinhut 54% too much energy? What were you referring to?

Tanner Platter - ~~54%~~ Mr. Muller says 83% if plant operates

Essinhut ~~Typically~~ Must have enough to cover peak load, ie if average is considered, of course it would be in excess

Pro Siebert — Can hear warning plant-workers live 2 miles from plant — system now used in homes if windows closed.

Pro Cannon — Born + raised in Midland. Want plant completed. Built + operated safely.

Pro Merilyn Kearns — Plant has been constructed Bay Finland under a microscope. Have area Ch. of Com. confidence in safety of plant. Asset to business growth. Let us with the task.

Pro Vic Nanas — Plant built by organized labor. Hemlock Mich. No one would be fired for complaining about shoddy work.

Con Vince Castellano — Lingwall Township goes on record as being against the Midland Plant until all safety issues are resolved. — Mismanagement

Citizens Cont'l – Since Ben has terminated contract they will continue with the # flume (Texas discharge)
We will now have two thirds flume in the Kittatinny River. Higher topicity on aquatic life

Keppler – Not prepared to respond to this. We will get back to you later

Pro Guy Mac Forlend – Don't worry about cost. I work under tightest rules I've ever worked under. Watched to close to get away with anything I believe it's safe.
Fact 1978 – Segmion Plant worker

Pro Jim Edard – Am retained to hear a more balanced response than in the past. There will always be someone with a unhappy Cent want to please everyone.
Wildlife Federation

Sapp Jr. (C'Co employee) - Re Sister Odette Platte
Comment re pregnant
women having would
steal plant. Don't
remind. I work with
these people + know
they're qualified. We
need the plant

Eisenhut - Two sides to every argument.
Appreciate sincere comment
made. Some things are beyond
NRC control.
A lot of questions inferring
that C'Co mgmt is the
problem. Would like to ask
Jim Cook to comment.

Jim Cook - Difficult to give single
response.
Time a very changing business
Much more sophisticated.
Impressed with resiliency
of the people who are there
Proud of training center we have built

Cleveland — Have lots of educated people on construction site as there are no positions left.

Sapphire — Have been running CCP since beginning of the year + have resolved a lot of problems. Would like to hear your articulation of what you believe the problems are at Midland

Jim Cook — Have not met our own expectations. The plant/hardware is as sturdy as anyone around, but not everyone can know all the ramifications of workmanship not "dockets" "sketches drawings. Think that is our main problem now

Other problems over the years have been fully addressed + solved as they occured.

Elizabeth Re Comment about people feeling unsure of losing their jobs. Do you feel you have a system in place where the worker can feel comfortable coming forth to report without any reprisal?

Jim Cook — I believe we do. Don Mathis + his staff have an excellent relationship with the crafts people. Also have a formal system for investigating concerns. Also would like to offer my own telephone number to anyone who feels they are not getting a positive response.

Cockburt – Will set up a system
– post it around the
site.

Kepler – Thank you for coming tonight.
Planning to hold working
level meetings in the area
monthly. ~~Can assure you~~

Cook

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

January 6, 1983

NOTE TO: W. Schultz
J. Keppler
B. Davis
S. Lewis
W. Shafer

FROM: R. Warnick

This is a polished draft of the proposed Midland escalated enforcement package. Bill Schultz is reviewing it to make sure it is in the proper format and that it is a good complete package. We will hold the enforcement conference with Jim Cook and others on January 18 in RIII at 10:00 a.m. If you have any comments or questions, please contact me or Schultz.

RFWarnick

R. F. Warnick

AGENDA

OPENING REMARKS	JAMES G. KEPPLER
REVIEW OF INSPECTION FINDINGS	WAYNE D. SHAFER
RESPONSE IF DESIRED	CONSUMERS POWER COMPANY
WHERE DO WE GO FROM HERE?	JAMES G. KEPPLER
OTHER MATTERS	JAMES G. KEPPLER

Appendix A p 7 - 9

ITEM 1

CRITERION III: DESIGN CONTROL

SIX EXAMPLES OF NONCOMPLIANCE. THE FOLLOWING ARE EXAMPLES:

1. MEASURES WERE NOT ESTABLISHED FOR THE SELECTION AND REVIEW FOR SUITABILITY OF APPLICATION OF MATERIALS ASSOCIATED WITH THE DIESEL GENERATOR EXHAUST MUFFLER. 2a #7.a

2. THE FAILURE TO ANALYZE THE FOUR DIESEL GENERATOR BUILDING MONORAILS AS SEISMIC CATEGORY 1. 2d #9

3. THE LICENSEE DESIGNED AND CONSTRUCTED THIRTY-TWO DIESEL GENERATOR BUILDING EXHAUST SYSTEM HANGERS WITHOUT TRANSLATING THE APPLICABLE REGULATORY REQUIREMENTS INTO DESIGN DOCUMENTS. 2c #8.a
FSAR requirements not incorporated

2f. armor stone

#25

CRITERION V: INSTRUCTIONS, PROCEDURES, AND DRAWINGS

SEVENTEEN EXAMPLES OF NONCOMPLIANCE. THE FOLLOWING ARE EXAMPLES:

1. FAILURE TO INSTALL DIESEL GENERATOR ENGINE CONTROL PANELS IN ACCORDANCE WITH REQUIREMENTS AND DRAWINGS.

2. FAILURE TO IDENTIFY BY YELLOW PAINTED ENDS AND/OR SEGREGATE NON-Q STOCK STEEL.

3. FLAME CUTTING OF DIESEL GENERATOR MUFFLER SUPPORT SLOTS IN VIOLATION OF THE VENDOR DRAWING.

4. THE EIGHT BRACING TOP GUSSET PLATES FOR THE HVAC FAN SUPPORT WERE NOT SIZED ACCORDING TO SPECIFICATIONS.

CRITERION VI: DOCUMENT CONTROL

ONE EXAMPLE OF NONCOMPLIANCE:

MEASURES WERE NOT ESTABLISHED TO ENSURE THAT HANGER ISOMETRIC DRAWINGS WERE DISTRIBUTED TO THE SITE DOCUMENT CONTROL CENTER.

CRITERION VII: CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

ONE EXAMPLE OF NONCOMPLIANCE:

THE FAILURE OF SOURCE INSPECTIONS AT THE SUPPLIER FACILITY AND RECEIPT INSPECTIONS AT THE MIDLAND SITE TO IDENTIFY NONCONFORMANCES OF THE WIRING IN THE DIESEL GENERATOR ENGINE CONTROL PANELS.

CRITERION IX: CONTROL OF SPECIAL PROCESSES

ONE EXAMPLE OF NONCOMPLIANCE:

THE FAILURE TO VERIFY PREHEAT OF EXISTING STRUCTURAL STEEL TO A TEMPERATURE OF 70° F AS REQUIRED BY SITE SPECIFICATIONS AND THE AWS 1974 CODE.

CRITERION X: INSPECTION

TWO EXAMPLES OF NONCOMPLIANCE:

1. THE FAILURE TO ESTABLISH AN INSPECTION PROGRAM TO ENSURE SEGREGATION OF CONTROL AND INSTRUMENTATION CABLES.

2. THE FAILURE OF QC INSPECTIONS TO DETECT AND IDENTIFY NONCONFORMANCES ASSOCIATED WITH THE INSTALLATION OF THE HVAC FAN SUPPORT STEEL.

CRITERION XIII: HANDLING, STORAGE AND SHIPPING

ONE EXAMPLE OF NONCOMPLIANCE:

FIVE DIESEL GENERATOR BEARING MUFFLER PLATES WERE NOT MAINTAINED SINCE THEIR INSTALLATION.

Appendix #
P 14

CRITERION XV: NONCONFORMING MATERIAL, PARTS, OR COMPONENTS

TWO EXAMPLES OF NONCOMPLIANCE:

1. MEASURES WERE NOT ESTABLISHED TO ENSURE THAT NONCONFORMING MATERIALS WERE NOT UTILIZED IN SEISMIC CATEGORY I SYSTEMS. 3b A 14. b

2. TWO NONCONFORMING CONDITIONS IDENTIFIED BY THE NRC AND CONFIRMED BY THE LICENSEE WERE NOT DOCUMENTED ON A NONCONFORMANCE REPORT. 8C A 8a

Exhaust hangers not classified as Q A 9.

Diesel generator monorail not analyzed Seismic Cat I.

ITEM 2

CRITERION XV: NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

8a
A 5, P14-16

ONE EXAMPLE OF NONCOMPLIANCE:

THE FAILURE OF QUALITY CONTROL INSPECTORS TO DOCUMENT ALL OF THE DEFICIENCIES WHICH THEY OBSERVED DURING THEIR INSPECTIONS.

SPECIAL HARDWARE INSPECTION OF THE DIESEL GENERATOR BUILDING OCT. 12 - NOV. 25, 1982

WE ARE CONSIDERING THE ISSUANCE OF TWO MAJOR ITEMS OF NONCOMPLIANCE:

1. THE FAILURE TO IMPLEMENT THE QUALITY ASSURANCE PROGRAM AS REQUIRED BY CRITERION II.

2. THE FAILURE OF QC INSPECTORS TO DOCUMENT ALL OBSERVED NONCONFORMANCES DURING INSPECTIONS. THIS PRACTICE WAS INITIATED AS A RESULT OF MANAGEMENT DIRECTION.

Docket No. 50-329

Docket No. 50-330

Consumers Power Company

ATTN: Mr. James W. Cook

Vice President

Midland Project

1945 West Parnall Road

Jackson, MI 49201

Gentlemen:

This refers to the special inspection conducted by the Office of Special Cases, Midland Section, of this office on October 12 through November 25, 1982, of activities at the Midland Nuclear Power Plant, Units 1 and 2, authorized by NRC Construction Permits No. CPPR-81 and No. CPPR-82. The results of the inspection were discussed with you on November 10 and 23, 1982, at the conclusion of the inspection and on January 18, 1983, during an enforcement conference in the Region III office between you and others of your staff and me and others of the NRC staff.

The results of the inspection indicate a significant breakdown in the implementation of your quality assurance program as evidenced by numerous examples of noncompliance with nine of the eighteen different criteria as set forth in 10 CFR 50, Appendix B. The breakdown was caused by personnel who failed to follow procedures, drawings, and specification; by first line

supervision and field engineers who failed to identify and correct unacceptable work; by construction management who failed to call for quality control inspections in a timely manner, allowing a backlog of almost 16,000 inspections to develop; and by quality assurance personnel who failed to identify the problems and ensure that corrective actions were taken. As a result, you failed to fulfill your primary responsibility as described in Criterion 1 of Appendix B to 10 CFR 50; "to assure the execution of a quality assurance program."

We understand that as a result of our findings you have inspected other areas of the plant and found similar deficiencies. As a result of our findings and your own findings, Consumers Power Company halted certain safety-related work at the Midland site, reduced the work force by approximately 1100 people, committed to building cleanup and system layup, committed to organizing teams of construction and engineering personnel responsible for the completion of one or more plant systems, and committed to re-inspect all safety-related systems.

In order to emphasize the need for CPCo management to ensure implementation of an effective quality assurance program that identifies and corrects construction deficiencies, we propose to impose civil penalties for the items set forth in the Notice of Violation that is enclosed with this letter. The violation in the Notice has been categorized at the severity level described in the General Statement of Policy and Procedure for Enforcement Actions, Appendix C of 10 CFR 50. The base value for the Severity Level II

violation is $64,000. After consultation with the Director of the Office of Inspection and Enforcement, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the cumulative amount of Sixty Four Thousand Dollars.

You are required to respond to this letter and should follow the instructions in the Notice when preparing your response. Your reply to this letter and the results of future inspections will be considered in determining whether further enforcement action is appropriate.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

Sincerely,

James G. Keppler
Regional Administrator

Enclosure: Notice of Violation
and Proposed Imposition of
Civil Penalties

cc w/encl:
DMB/Document Control Desk (RIDS)
Resident Inspector, RIII
The Honorable Charles Bechhoefer, ASLB
The Honorable Jerry Harbour, ASLB
The Honorable Frederick P. Cowan, ASLB
The Honorable Ralph S. Decker, ASLB
William Paton, ELD
Michael Miller
Ronald Callen, Michigan
Public Service Commission
Myron M. Cherry
Barbara Stamiris
Mary Sinclair
Wendell Marshall
Colonel Steve J. Gadler (P.E.)

concurrences:

RIII	RIII	RIII	RIII	RIII	RIII	RIII	IE:HQ
Landsman/jp	Gardner	Shafer	Warnick	Lewis	Davis	Keppler	Axelrad
1/5/83							

NOTICE OF VIOLATION

AND

PROPOSED IMPOSITION OF CIVIL PENALTIES

Consumers Power Company
Midland Nuclear Power Plant
Units 1 and 2

Docket Nos. 50-329; 50-330
Permit Nos. CPPR-81; CPPR-82

As a result of the inspection conducted at the Midland Nuclear Plant on October 12 - November 25, 1982, the violation listed below with multiple examples was identified. The numerous examples of the violation demonstrate your failure to exercise adequate oversight and control of your principal contractor, to whom you had delegated the work of executing the quality assurance program. Your failure manifested itself in a widespread breakdown in the implementation of your quality assurance program and at least in part caused Consumers Power Company to halt some safety related work and take other significant actions to provide assurance that safety-related structures and systems are constructed as designed.

In order to emphasize the need for improvements in your management controls, as related to an adequate quality assurance program, we propose to impose civil penalties in the cumulative amount of Sixty-Four Thousand Dollars. In accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C) 47 FR 9987 (March 9, 1982), and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended ("Act"), 42 U.S.C. 2282, PL 96-295, and 10 CFR 2.205, the particular violation and the associated civil penalties are set forth in Section I below:

10 CFR 50, Appendix B, Criterion II requires holders of construction permits for nuclear power plants to document, by written policies, procedures, or instructions, a quality assurance program which complies with the requirements of Appendix B for all activities affecting the quality of safety-related structures, systems, and components and to implement that program in accordance with those documents.

Contrary to the above, Consumers Power Company and its contractor did not adequately implement a quality assurance program to comply with the requirements of Appendix B as evidenced by the following examples:

1. 10 CFR 50, Appendix B, Criterion V states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Consumers Power Quality Assurance Program Policy No. 5, Revision 12, Paragraph 1.0 states, in part, "Instructions for controlling and performing activities affecting quality of equipment or activities such as . . . construction, installation . . . are documented in instructions, procedures . . . and other forms of documents."

Contrary to the above, the following instances of failure to accomplish activities affecting quality in accordance with instructions, procedures, specifications, or drawing requirements were identified:

a. The licensee failed to ensure that the installation of diesel generator engine control panels 1C111, 1C112, 2C111, and 2C112 was in accordance with the requirements delineated on foundation Drawing 7220-M18-250 in that the foundation bolt washers required by the subject drawing were not installed.

b. The licensee failed to ensure that the unscheduled pull box associated with conduits 2BN006, 2BN007, and 2BDA002 was sized in accordance with the requirements delineated on Sheet 42 of Drawing E-42 in that the 12" x 12" x 6" as-built dimensions of the subject pull box did not conform to the 13 1/2" x 12" x 6" dimension requirements delineated on Sheet 42 of Drawing E-42.

c. The licensee failed to ensure that the 1' 10" wall to support dimension required by raceway support Drawing E-796(Q), Sheet 2 of 2, Revision 5, for hanger No. 86 was correctly translated into the as-built installation of the subject hanger in that the as-built wall to support dimension was 2' 1-1/2" in lieu of the required 1' 10".

d. The licensee failed to ensure that the 6' 6" wall to support dimension required by raceway support Drawing E-796(Q) Sheet 1 of 2, Revision 11 for hanger No. 14 was correctly translated into the as-built installation of the subject hanger in that the as-built wall to support dimension was 5' 5" in lieu of the required 6' 6".

e. Field Instruction FIG-9.600, Revision 1, stated in Paragraph 5.1.2 for Non-ASME, "Q"-listed steel "Steels other than those listed in 5.1.1 must be marked with the material type and grade (e.g., A-516, Grade 55)." Paragraph 5.1.1 referred to A-36 plate shapes and bars or A-500 Tube Steel.

The inspectors identified high strength steel plate (that was not A-36 or A-500) placed in the laydown area which was not marked with the material type and grade.

f. Field Instruction FIG-9.600, Revision 1, stated in Paragraph 5.4.1 for Non-"Q" steel, "The ends of all material shall be painted yellow with segregated storage provided. When Non-"Q" material is withdrawn from storage a continuous yellow strip must be painted down one side."

The inspectors identified various stock steel shapes in the "Q" area with yellow colored paint on the ends and various steel stock shapes in the non-"Q" area without painted ends.

g. Bechtel Vendor Drawing M18-80-4 required the slots in the diesel generator muffler support plate be sized at 7/8" wide by 1 5/8" long to allow for thermal expansion of the muffler. Bechtel Vendor Drawing M18-425(5)-1 also required that the slots be machined.

The slots in the muffler support plates were not machined but were determined to be irregular and flame cut, leaving rough slot edges not in conformance with design Drawing M18-425(5)-1.

h. Drawing M18-250-6 required jacking plates be installed and imbedded in concrete beneath the muffler support jacking screws.

The jacking plates were not installed underneath the center support plates of Bay 1 diesel generator muffler.

i. Procedure FID-2.100, "Outstanding FCR/FCN Retirement," Revision 2 did not require for retired FCR/FCN's, that the design drawing remain annotated indicating that an FCR/FCN had been retired. This resulted in retired FCR C-2103 being lost and not tracable to the design drawing.

j. Field Sketch CY-1035 was not annotated as "Q", nor was there a reference to the affected drawing on the sketch as required by Procedure FPD-5.000, "Preparation of Field Sketches."

k. Procedure FPD-5.000, "Preparation of Field Sketches," Revision 1 did not require the design drawing to be annotated with a reference to field sketches.

l. The eight bracing top gusset plates identified on Drawing C-1004, Revision 10, as 5/16" thick were measured by the inspectors to be 1/4" thick in all four diesel generator bays.

m. The as-built gusset plate connections in Bay 1 were not built as identified on Detail 3 of Drawing C-1004. The angle braces were welded together as opposed to seperate welds for each brace.

n. None of the sixteen 1/4" bracing angles identified on Drawing C-1004 were constructed utilizing 1/4" material.

o. Drawing C-1004, Detail 2, required the W10 beam to beam connection to be welded. In Bay No. 3, a bolted connection was constructed in lieu of the required welded connection.

p. The column cover plate identified on FCR-C4401 was not constructed in Bay No. 3 as required. The plate was slotted instead of solid.

q. A section (approximately 18 x 10 x 4 inches deep) of the primary containment wall in Containment Purge Room 702 was removed (by chipping) without implementing FIG-1-111, Revision 4, Concrete Drilling Permit.

2. 10 CFR 50, Appendix B, Criterion III states, in part, ". . . applicable regulatory requirements and the design basis . . . are correctly translated into specifications, drawings, procedures, and instructions. Measures shall . . . be established for the selection and review for suitability of application of materials, parts equipment, and processes that are essential to the safety-related functions of the structures, systems, and components. Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization."

Consumers Power Company Quality Assurance Program Policy No. 3, Revision 12, Paragraphs 3.3 and 3.5 states, in part, "Each group or organization performing detailed design translates the applicable regulatory requirements, design bases, codes, standards, and design criteria into design documents, such as . . . drawings . . . changes to the design require the same review and approval as the original design by the group or organization delegated lead design responsibility."

Contrary to the above:

a. Measures were not established for the selection and review for suitability of application of materials associated with the Diesel Generator Exhaust Muffler in that design drawings and specifications did not indicate the material identity of the muffler saddle supports and plates. Subsequently, the saddle support and plate materials were selected and installed with no design interface.

b. Design drawing C-147 required bolted bracing connections for the Diesel Generator Building HVAC bracing gusset plates. Field Sketch CY-1035 was used to change the design to welded connections in lieu of the specified bolted connections.

c. Design Drawings C-1004 and C-147 did not specify the sizes of the Diesel Generator Building HVAC fan gusset plates. A "combo" shop work order request was used to design the gusset plates without appropriate review and approval.

d. The licensee failed to analyze the four Diesel Generator Building monorails as seismic Category 1 as required by Regulatory Guide 1.29, endorsed by Appendix 3A of the FSAR.

e. The licensee designed and constructed thirty-two Diesel Generator Building exhaust system hangers without translating the applicable regulatory requirements into design documents.

f. The licensee purchased armor stone for a "Q" portion of the perimeter dike without translating the applicable regulatory requirements into appropriate specifications and design documents.

3. 10 CFR 50, Appendix B, Criterion VII states, in part, "Measures shall be established to assure that purchased . . . equipment . . . conform to the procurement documents. These measures shall include provisions, as appropriate, for . . . inspection at the contractor or subcontractor source, and examination of products upon delivery."

Consumers Power Quality Assurance Program Policy No. 7, Revision 12, Paragraphs 1.0 and 3.4, states, in part, "The Midland Project Office and the Midland Project Quality Assurance Department verify that procurement requirements are met. This is accomplished through . . . source evaluation and inspection . . . receipt inspections are made to verify that the items . . . conform to procurement requirements not verified by source surveillance or inspection . . ."

Contrary to the above, source inspections at the panel supplier facility and receipt inspections at the Midland site failed to ensure conformance of the internal wiring within diesel generator engine control panels 1C111, 1C112, 2C111, and 2C112 to Procurement Specification 7220-G-5, Revision 1. Paragraph 6.0 of Specification 7220-G-5 states, "All electrical wiring . . . within the board enclosure
shall conform to the highest industrial standards of design and workmanship. NRC inspection on October 15, 1982 identified the following examples of defective terminations of internal wiring within the subject panels.

a. The output lead on the Relay Tach device had numerous broken conductors at the termination lug.

b. The K1 lead on the Relay Tach device had two broken strands resulting in a potential short circuit between the K1 lead and an adjacent conductor.

c. The 1- lead on the CB-1 device did not have all strands inserted into the compression lug.

4. 10 CFR 50, Appendix B, Criterion X states, in part, "A program for inspection of activities affecting quality shall be established and executed . . . to verify conformance with the documented . . . drawings for accomplishing the activity."

Consumers Power Company Quality Assurance Program Policy No. 10, Revision 12, Section 1.0 states, in part, "Inspection and surveillance are performed to assure that activities affecting quality comply with documented . . . design documents . . . inspection and surveillance are performed according to written instructions."

Contrary to the above:

a. An inspection program was not established for inspection of cables installed in horizontal trays which used metal dividers to segregate control and instrumentation cables per design requirements.

b. Quality Control (QC) inspections failed to ensure that activities affecting quality conformed to design documents in that QC inspections performed on July 1, 1981 and documented on QCIR C210-172 failed to detect and identify nonconformances 1.(e) through (o) of

this appendix. These nonconformances were associated with installation of the Diesel Generator Building HVAC fan support steel.

5. 10 CFR 50, Appendix B, Criterion XIII states, in part, "Measures shall be established to control the . . . cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration. When necessary for particular products, special protective environments . . . shall be specified."

Consumers Power Company Quality Assurance Program Policy No. 13, Revision 12, Paragraph 3.3, states, in part, "Suppliers provide plans . . . maintain and control items upon arrival at the site."

Contrary to the above, five of sixteen installed diesel generator bearing muffler plates were sufficiently warped to allow the inclusion of dirt and dust and were not maintained since their installation.

6. 10 CFR 50, Appendix B, Criterion IX states, in part, "Measures shall be established to assure that special processes, including welding, heat-treating, and nondestructive testing, are controlled . . ."

Consumers Power Company Quality Assurance Program Policy No. 9, Revision 12, Paragraph 1.0 states, in part, "Where the required level of quality cannot be measured by inspection only of the item . . . accomplish these

processes under controlled conditions in accordance with applicable codes, standards and specifications using qualified procedures, equipment and personnel." Paragraph 3.3 states, in part, " . . . Personnel performing special processes maintain records to verify that the required activities were accomplished in accordance with qualified procedures by qualified personnel."

Contrary to the above, during welding of the Diesel Generator Building exhaust piping hanger support steel, the licensee did not verify preheat of existing structural steel to a temperature of 70°F as required by site specifications and the AWS 1974 Code.

7. 10 CFR 50, Appendix B, Criterion VI states, in part, that "Measures shall be established to control the issuance of documents, . . . including changes . . ."

The Consumers Power Company Quality Assurance Program Policy No. 6, Revision 12, Paragraph 1.0 states, in part, "Measures are included to assure that documents, including changes, . . . are distributed according to a controlled distribution to the user functions,"

Contrary to the above, measures were not established to control the distribution of changes (red lines) to hanger isometric drawings in that changes to Drawing 1-652-2-25(Q) were not distributed to the Site Document Control Center.

8. 10 CFR 50, Appendix B, Criterion XV states, in part, "Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation."

Consumers Power Quality Assurance Program Policy No. 15, Revision 12, Paragraph 1.0, states, in part, "Items, services or activities which are deficient in characteristic, documentation or procedure which renders the quality unacceptable or indeterminate and which is considered significant to safety are identified as nonconformances. Nonconforming items . . . are identified by marking, tagging, segregating or by documentation. Nonconforming items are controlled to prevent their inadvertent installation or use. Nonconforming items and activities are recorded and are considered for corrective action to prevent recurrence . . ."

Contrary to the above:

a. Quality Control inspectors were not identifying as nonconformances all of the deficiencies which they observed during their inspections. Inprocess inspection notices (IPIN's) associated with suspended inspections identified as nonconformances only a portion of the observed deficiencies. Supervisory QC personnel stated that they directed QC inspectors to limit the number of nonconformances documented during an inspection. This directive was verified by discussions with QC

inspectors. As a result, measures were not established to prevent the continued installation and use of these nonconforming items. In addition, corrective actions ~~were~~ were not implemented to prevent recurrence of these nonconformances.

b. Measures were not established or implemented to determine if materials ultimately restricted (per Nonconformance Report No. 3266) from installation or use in ASME Class I systems were actually installed or used in Class I systems. NCR 3266 originally permitted unrestricted use of material that was subsequently restricted from Class I systems.

c. As of November 10, 1982, two nonconforming conditions identified by the NRC on October 12, 1982, and confirmed by the licensee on October 19, and 25, respectively, had not been documented on a nonconformance report, a quality assurance report, or other appropriate report. The two nonconforming conditions were:

(1) The diesel generator exhaust hangers were not classified, designed, or built as Q.

(2) The design of diesel generator monorail was not analyzed using to Seismc Category I design requirements.

This is a Severity Level II violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, Consumers Power Company is hereby required to submit to the Director, Office of Inspection and Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555 and a copy to the Regional Administrator, U. S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, within 30 days of the date of this Notice a written statement or explanation, including for each alleged violation: (1) admission or denial of the alleged violation; (2) the reasons for the violation, if admitted; (3) the corrective steps which have been taken and the results achieved; (4) the corrective steps which will be taken to avoid further violations; and (5) the date when full compliance will be achieved. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, Consumers Power Company may pay the civil penalties in the cumulative amount of $64,000 or may protest imposition of the civil penalties, in whole or in part, by a written answer. Should Consumers Power Company fail to answer within the time specified, the Director, Office of Inspection and Enforcement will issue an order imposing the civil penalties proposed above. Should Consumers Power Company elect to file an answer in accordance with 10 CFR 2.205 protecting the civil penalties, such answer may: (1) deny the violations listed in this Notice, in whole or in part; (2) demon-

strate extenuating circumstances; (3) show error in this Notice; or (4) show other reasons why the penalties should not be imposed. In addition to protesting the civil penalties, in whole or in part, such answer may request remission or mitigation of the penalties. In requesting mitigation of the proposed penalties, the five factors contained in Section IV(B) of 10 CFR Part 2, Appendix C should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate statements or explanations by specific reference (e.g., giving page and paragraph numbers) to avoid repetition. Consumers Power Company's attention is directed to the other provisions of 10 CFR 2.205, regarding the procedures for imposing a civil penalty.

Upon failure to pay any civil penalties due, which have been subsequently determined in accordance with the applicable provisions of 10 CFR 2.205, this mayyer may be referred to the Attorney General, and the penalties, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Keppler

Regional Administrator

Dated at Glen Ellyn, Illinois

this day of 1982

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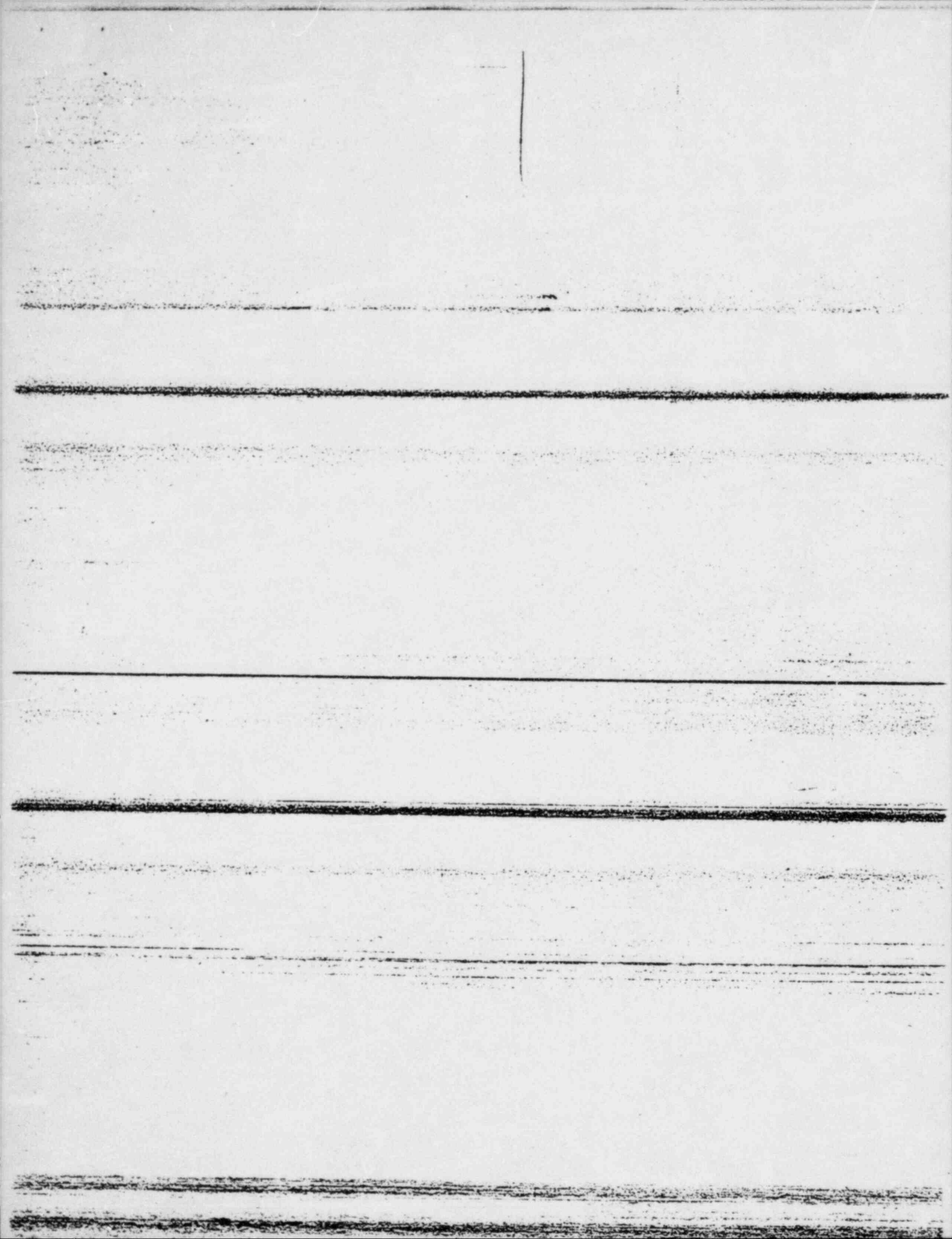

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-329/82-22; 50-330/82-22

Docket No. 50-329; 50-330 License No. CPPR-81; CPPR-82

Licensee: Consumers Power Company
1945 West Parnall Road
Jackson, MI 49201

Facility Name: Midland Plant, Units 1 and 2

Inspection At: Midland Site, Midland, MI

Inspection Conducted: October 12 - November 25, 1982

Inspectors: P. A. Barrett _____

B. L. Burgess _____

R. J. Cook _____

R. N. Gardner _____

R. B. Landsman _____

Approved by: W. D. Shafer, Chief _____
Section 2, Office of
Special Cases

Inspection Summary

Inspection on October 12 - November 25, 1982 (Report No. 50-329/82-22; 50-330/82-22)

Areas Inspected: Licensee actions on previously identified items; special inspection involving electrical, mechanical and civil components of the Diesel Generator Building; control of concrete chipping; control of electrical cable segregation; review of Remedial Soils requalification activities; perimeter dike armor stone activities; prestartup test; ultrasonic testing of hold down bolts. The inspection involved a total of 556 inspector-hours onsite by five NRC inspectors including 72 inspector-hours onsite during off-shifts.

Results: Of the areas inspected, no apparent items of noncompliance or devia-

tions were identified in four areas. Noncompliances identified in the remaining areas were as follows:

Noncompliance	Report Section
Criterion III - Failure to establish adequate design control measures	7.a, 8.a, 9, 10.c.(1), 10.c.(4), 25
Criterion V - Failure to develop adequate procedures and failure to accomplish activities affecting quality in accordance with instructions, procedures or drawings	3.a, 4.a(4), 4.b, 4.c, 6.a, 6.b, 7.b.(1), 7.b.(2), 10.a, 10.b, 10.c.(2), 10.c.(3), 17
Criterion VI - Failure to establish measures to control the issuance of documents, including changes	12
Criterion VII - Failure to conduct adequate component source inspections and receipt inspections	2.b
Criterion IX - Failure to establish measures to control special processes	8.b

Criterion X -	Failure to establish an inspection program and failure of QC inspections to identify nonconformances	10.a, 18
Criterion XIII -	Failure to establish measures to maintain and control the cleaning and preservation of equipment	7.b.(3)
Criterion XV -	Failure to establish measures to control nonconforming materials, parts, or components	5, 8.a, 9, 14.b

DETAILS

Persons Contacted

Consumers Power Company

J. W. Cook, Vice President

R. Welles, Executive Manager

D. B. Miller, Site Manager

M. L. Curland, QA Superintendent

R. L. Akers, MPQAD

J. G. Balazer, Construction Engineer

E. M. Evans, Construction Engineer

L. R. Howell, MPQAD

D. D. Johnson, Construction Engineer

E. Jones, MPQAD

G. B. Johnson, Construction Engineer

J. S. Kreple, Construction Engineer

G. M. Murray, Construction Engineer

B. H. Peck, Construction Engineer

D. W. Puhalla, Construction Engineer

G. W. Rowe, Construction Engineer

M. J. Schaeffer, MPQAD

D. E. Sibbald, Construction Engineer

T. A. Spelman, Construction Engineer

D. J. Vokal, Construction Engineer

R. M. Wheeler, Construction Engineer

R. H. Wieland, Construction Engineer

J. T. Walton, Construction Engineer

R. E. Whitaker, Construction Engineer

Bechtel Power Company

H. Wahl, Vice President and General Manager

K. Vassar, Manager, Division of Project Operations and Services

J. Rutgers, Project Manager

L. Davis, Site Manager

M. A. Dietrich, MPQAD

P. Corcoran, Resident Project Engineer

J. J. Gilmartin, Field Engineer

B. R. Kappel, Resident Engineer

F. H. Schulmeister, MPQAD

E. Smith, PFQCE

Other licensee and contractor personnel were routinely contacted during the course of the inspection.

1. Licensee Actions on Previously Identified Items

(Closed) Deviation (50-329/82-11-01; 50-330/82-11-01): The licensee failed to use approved installation/coordination forms during the

installation of affected underpinning instrumentation. As documented in Inspection Report No. 50-329/82-18; 50-330/82-18, the inspector verified that the licensee was properly documenting the installation of underpinning instrumentation on attached installation/coordination forms. During this inspection the inspector reviewed Bechtel Power Corporation Procedure FPU-1.000, Revision 0, which delineated procedures for the preparation, approval, and use of the subject installation/coordination forms. The inspector determined that the Bechtel procedure was acceptable.

Functional or Program Areas Inspected

2. Electrical Cable Terminations

An inspection of completed Class 1E cable terminations in Diesel Engine Control Panels 1C111, 1C112, and in Diesel Generator Control Panel 1C231 was conducted. During this inspection internal wiring terminations and field terminations were observed. The internal wiring terminations were accomplished by the panel supplier during the manufacture of the panels while the field terminations were accomplished by onsite Bechtel electricians.

a. The following field terminations were observed:

Cable Scheme Number	Location of Termination
1AA0502M	1C231
1AA0502R	1C231

Cable Scheme Number	Location of Termination
1AD1201A	1C231
1AG1101B	1C231
1AG1101C	1C231
1AG1101F	1C231
1AG1102N	1C231
1AG1105B	1C231
1AG1105C	1C111
1AG1113C	1C111
1AA0001L	1C111
1AA0502G	1C111
1AB5311K	1C111
1AD1115A	1C111
1AG1102G	1C111
1AG1102K	1C111
1AG1102L	1C111
1AG1102M	1C111
1AG1102N	1C111
1AG1105C	1C111
1AG1108C	1C111
1AG1108F	1C111
1AG1109B	1C111
1AG1109C	1C111
1AV099E	1C111
1AV100E	1C111

The inspector verified that the above field terminations met the requirements of Bechtel Termination Procedure FPE-7.000 including the use of proper termination lugs and connection to the correct termination board locations.

b. The inspector observed the termination of internal wiring in Diesel Engine Control Panel 1C112. The inspection revealed numerous instances where the internal conductors within the panels were damaged or were not properly terminated. Examples included:

(1) The output lead on the Relay Tach device had numerous broken conductors at the termination lug.

(2) The K1 lead on the Relay Tach device had two broken strands resulting in a potential short circuit between the K1 lead and an adjacent conductor.

(3) The 1- lead on the CB-1 device did not have all strands inserted into the compression lug.

The above conditions were contrary to the procurement requirements delineated in Specification 7220-G-5, Revision 1, Paragraph 6.0 which stated, in part, "All electrical wiring . . . within the board enclosure shall conform to the highest industrial standards of design and workmanship." This failure of source inspections at the panel supplier facilities and receipt inspections at the Midland

site to assure conformance of the internal wiring to procurement requirements was considered an item of noncompliance with 10 CFR 50 Appendix B, Criterion VII as described in Appendix A of the report transmittal letter. (50-329/82-22-01; 50-330/82-22-01)

Subsequent to this finding the licensee initiated NCR No. M01-9-2-139 which contained 19 pages of identified internal wiring deficiencies associated with Diesel Engine Control Panels 1C111, 1C112, 2C111 and 2C112. The licensee on December 3, 1982 identified the poor workmanship within the subject panels as part of a potential 50.55(e) report on Vendor supplied electrical equipment.

c. The inspector determined that the internal wiring within the Diesel Generator Control Panels was not installed in accordance with the separation requirements delineated in the Midland FSAR. Nonclass 1E wiring was routed within six inches of Class 1E wiring and the color coding of the internal wiring did not correctly identify the wiring as being Class 1E or Nonclass 1E. Subsequent to this finding the inspector reviewed Consumers Power Company (CPCo) NCR No. M-01-9-1-075 dated June 19, 1981. This NCR was written by the licensee to document the aforementioned internal wiring separation deficiencies. The NCR stated that the panel supplier was sending a representative to the Midland site on November 15, 1982.

On November 18, 1982 the licensee informed the inspector that panel supplier representatives had arrived onsite on November 16, 1982

and that these representatives had determined that the panels would be modified to correct the internal wiring separation problems. The inspector had no further questions on this matter.

3. Diesel Control Panel Installations

The inspector observed the installation of the Diesel Generator Control Panel and the Diesel Engine Control Panel associated with each of the four diesel generators. The installation requirements for these panels were delineated on Drawings 7220-M18-83 and 7220-M18-250. During this inspection the following was observed:

a. The Diesel Engine Control Panels were not installed in accordance with foundation Drawing 7220-M18-250. This drawing required the installation of bevelled washers and flat washers on the foundation bolts. The flat washers were not installed on any of the four panels. In addition, there was no evidence that the bevelled washers were installed before the panels were grouted. This failure to install foundation washers as required by the pertinent foundation drawing was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V as described in Appendix A of the report transmittal letter. (50-329/82-22-02A ; 50-330/82-22-02A)

Subsequent to this finding the licensee initiated NCR No. M01-9-2-138 to document the missing washers.

b. The Diesel Generator Control Panel base to cabinet hardware installation was not in accordance with Drawing 7220-M18-83. The drawing required that the cabinet be secured to the base utilizing 1/2" hex bolts with threads embedded 2" into concrete. The licensee had installed nuts on the 1/2" hex bolts which were not identified on the subject drawing. In addition, the concrete curb had not been poured at the time of this inspection. The inspector further observed that the drawing details did not clearly describe the base to cabinet hardware configuration. Discussions with the licensee revealed that the incomplete cabinet foundation was documented on an In Process Inspection Notice (IPIN), dated June 14, 1982. On September 21, 1982, the licensee had initiated Field Change Request (FCR) M-6655 which proposed a change to the cabinet to foundation detail located on drawing 7220-M18-83. The inspector had no further questions on this matter.

4. Raceway Support Installations

a. The inspector observed the as-built installation of the type 13 conduit support for conduits 2BN006, 2BN007 and 2BDA002 located in Bay 4 of the Diesel Generator Building. The as-built installation of the support was compared with the requirements delineated on Drawing E-42. During the inspection of this support the following was determined:

(1) The lengths of the support members were determined to be within the tolerances identified on Dawing E-42.

(2) The base plate dimensions were in accordance with the drawing requirements.

(3) The support welds were acceptable.

(4) The size of the unscheduled pull box mounted on the conduit support did not conform to Sheet 42 of Drawing E-42. The as-built dimensions of the box were determined to be 12" x 12" x 6". The dimensions required by Sheet 42 were 13 1/2" x 12" x 6". This failure to install the correct size unscheduled pull box was a further example of noncompliance as cited in paragraph 3.a above. (50-329/82-22-02B; 50-330/82-22-02B)

b. The inspector observed the as-built installation of tray support FSK-E-796, Sh 1-86 installed in Bay 4 of the Diesel Generator Building. The as-built configuration of the support and the as-built support dimensions were compared with the requirements identified on Drawing E-796(Q), Revision 5, Sheet 2 of 2. This inspection revealed that the as-built 2' 1 1/2" wall to support dimension did not conform to the 1' 10" dimension required by the aforementioned drawing. The failure to install the subject support in accordance with the drawing requirements was a further example of noncompliance as cited in paragraph 3.a above. (50-329/82-22-02C; 50-330/82-22-02C)

c. An inspection of the as-built installation of tray support No. 14 installed in Bay 2G11 of the Diesel Generator Building was conducted. The as-built configuration of the support and the as-built support dimensions were compared with the requirements identified on Drawing E-796(Q), Revision 11, Sheet 1 of 2. This inspection revealed that the as-built 5' 5" wall to support dimension did not conform to the 6' 6" dimension required by the aforementioned drawing. The failure to install the subject support in accordance with the drawing requirements was a further example of noncompliance as cited in paragraph 3.a above. (50-329/82-22-02D; 50-330/82-22-02D)

d. The licensee was questioned as to the status of the seismic analysis performed to provide assurance that the plant conduit and tray supports, as installed, met the seismic requirements for the Midland plant. The licensee stated that the seismic analysis was being accomplished at this time and that the results of the analysis would be available when completed. This matter will remain open until the inspector has reviewed the data relating to the seismic analysis. (50-329/82-22-03; 50-330/82-22-03)

5. Review of Quality Control Activities

During the review of Bechtel Quality Control (QC) inspection activities the inspector determined that Bechtel QC inspectors were not identifying as nonconformances all of the deficiencies which they observed during their inspections. The QC inspectors were instructed to suspend an

inspection if an excessive number of deficiencies were observed. In Process Inspection Notices (IPINs) were QC documents utilized by QC inspectors to record nonconformances observed during in process inspections and during inspections of completed items. IPINs associated with suspended inspections identified as nonconformances only a portion of the observed deficiencies. No record was made of the remaining observed deficiencies. In addition, the IPINs did not document the fact that the inspection was suspended due to excessive deficiencies having been observed. Finally, the criteria to be used by QC inspectors in determining whether observed deficiencies were excessive was not defined. As a result of the above, the following was determined:

a. Trend analysis, as identified in Midland Project Quality Assurance Department Procedure M-2, was designed to serve as a management tool to detect changes in the rates of nonconformance. For deteriorations in quality the procedure required the performance of an in-depth analysis to determine the root cause of nonconformance. The failure of QC inspectors to document all observed nonconformances resulted in the Trend Analysis Program, as it relates to IPINs, not addressing all nonconformances. Management's ability to determine the root cause of nonconformance so as to prevent recurrence had been accordingly diminished.

b. An additional function of the in-depth analysis required by Trend Analysis Procedure M-2 was the determination as to whether or not work affected by nonconformance should be stopped. The failure of

QC inspectors to document all observed nonconformances resulted in the continuation of nonconforming work activities which received no stop work considerations, thereby preventing management from performing an indepth analysis.

The failure to establish measures to control materials, parts, or components which did not conform to requirements in order to prevent their inadvertent use or installation was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion XV as described in Appendix A of the report transmittal letter. (50-329/82-22-04; 50-330/82-22-04)

6. Examination of Steel in Laydown Area

a. During the inspection, the laydown area was examined by the inspectors. It was noted that there was stock steel with no markings which would identify the material to a given material heat number. Bechtel Field Instruction FIG-9.600, Color Coding of Field Purchased Pipe, Fittings, Bolting Material, Non-Q Hangers, Stock Steel, and Component Parts, states that "No marking is required for A-36 plate, shapes, and bars or A-500 Tube Steel for Non-ASME, Q-listed Steel." This same specification required that stock steel other than A-36 and A-500 Tube Steel be marked with the material type and grade. High strength steel plate was identified in the laydown area without markings of material type and grade. Failure to not mark high strength steel with the material type and grade was considered an item of noncompliance against 10 CFR 50 Appendix B, Criterion V. (50-329/82-22-05A; 50-330-82-22-05A)

b. Field Instruction FIG-9.600, referenced above, required that the ends of all Non-Q steel material be painted yellow with separate storage provided. During the examination of steel in the laydown area, it was noted that there were Q and non-Q storage areas. However, some steel stock in the Q area was painted on the ends with a paint color resembling faded yellow paint and some of the steel in the non-Q area did not have the yellow paint marking. The licensee stated that the yellow-like color paint noted in the Q storage area had been placed on the material by the manufacturer. The licensee painted the ends of all the material in the non-Q area after this was identified by the inspectors. Failure to mark and/or segregate Q and non-Q material was considered an item of noncompliance with 10 CFR 50 Appendix B, Criterion V. (50-329/82-22-05B; 50-329/82-22-05B)

c. The references above to Field Instruction FIG-9.600 pertain to Revision 1 of this instruction, dated December 2, 1981. Revision 1 superceded Revision 0 which was dated February 1979. Revision 0 referred only to field purchased pipe, fittings and bolting material and made no reference to stock steel identification. The inspectors identified (in the laydown area) a nominal 25 foot length of 12 x 12 WF beam that had no markings but was stored in an area that had ASTM-A-588 steel of similar description and surface color/texture appearance to the unmarked beam. The ability of the licensee to maintain material traceability and identification in accordance with the regulations was considered an unresolved item. (50-329/82-22-06; 50-330/82-22-06)

d. The inspector requested to see QA audits of material traceability. The only audits that could be located during the inspection were of receiving and fabrication of miscellaneous structural steel. No audits of material traceability could be located during this inspection. Subsequent communications with the licensee revealed that an audit had been conducted in September 1982 (M01-332-2). Pending review of this audit, this is an unresolved item. (50-329/82-22-07; 50-330/82-22-07)

7. Diesel Generator Muffler Inspection

The inspectors conducted an inspection of the diesel generator muffler located in the Diesel Generator Building. The inspection included a review of the applicable drawings and documentation associated with installation and modification of the four diesel generator (DG) mufflers.

The DG mufflers were constructed offsite by American Air Filter Co., Inc. (a subcontractor of Transamerica Delaval, the DG system supplier), and installed onsite by Bechtel Power Company (BPCo). After onsite receipt inspection and when construction permitted, the mufflers were installed in their respective rooms in the DG Building. During installation of the mufflers, it was noted that the saddle support baseplate holes and slots would not match anchor bolt locations. FCR M-2283 was written to modify the saddle support base plates to fit the anchor bolt locations.

a. During the inspection the licensee was requested to review documentation of the base plates to determine if traceability was evident. The licensee's review of base plate documentation identified that part numbers could be tracked to a Certificate of Conformance. The Certificate of Conformance was written for purchased "Q" material that was not manufactured to ASME code specifications. The Certificate of Conformance, did not, however, specify the material used during the manufacture of the base plates. The inspector and the licensee reviewed the base plate and muffler saddle support drawings and specifications for identification of plate material. Muffler and saddle support material was not specified on the design drawings and specifications.

FSAR Section 3.2 Table 3.2-1 identifies the Diesel Generator Combustion Air Intake and Exhaust System as Seismic Category 1. To qualify the muffler to Seismic Category 1 criteria, the saddle supports and base plate material requirements must be specified to ensure that the muffler would meet seismic criteria.

10 CFR 50 Appendix B, Criterion III requires measures to be established for the selection and review for suitability of application of materials that are essential to the safety related functions of the structures, systems, and components.

The failure of design documents to specify requirements for the selection and review for suitability of application (in this case

Seismic Category 1) of materials associated with the DG muffler was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion III, as described in the Appendix to the report transmittal letter (50-329/82-22-08; 50-330/82-22-08).

b. In addition to the above, the inspectors identified other noncompliances associated with the installation of the DG muffler as follows:

(1) To allow for adequate thermal expansion of the DG mufflers, slots were specified by Drawing M18-80-4 to be sized at 7/8" by 1 5/8". In addition, Bechtel Vendor Drawing M18-425(5)-1 required that plate slots used for support plate modifications be machined.

The inspectors determined that the slots were irregular and did not conform to design drawings. Slot surfaces appeared rough and discolored, indicating they were torch cut rather than machined as required by design drawings.

Failure to fabricate the slots in accordance with design drawings was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V, which requires that activities affecting quality be accomplished in accordance with drawings as described in the Appendix to the transmittal letter to this report (50-329/82-22-09A; 50-330/82-09A).

Subsequent to the inspection, the licensee generated NCR 4693 to disposition the slots of the support plates for the DG muffler.

(2) Vendor Drawing M18-250-6 required that jacking plates be installed and imbedded in concrete beneath the muffler support jacking screws.

The inspection of the Diesel Generator muffler in Bay No. 1, revealed that the jacking plates had not been installed beneath the center saddle support. The licensee identified that nine of the 48 jacking plates were missing in the four bays.

Failure to install the jacking plates was considered an item of noncompliance with 10 CFR Appendix B, Criterion V, which requires that activities affecting quality be accomplished in accordance with drawings as described in the Appendix to the transmittal letter of this report (50-329/82-22-09B; 50-330/82-22-09B).

Subsequent to the inspection, the licensee wrote NCR 4694 against the failure to install the jacking plates.

(3) Drawing M18-250-6 indicated two slide bearing elements welded to the bottom of the outer saddle support base plates for each

DG muffler to allow for thermal expansion during muffler heatup. During the plate inspection, it was noted that some of the bearing plates were warped sufficiently to allow dirt to penetrate between the bearing plate surfaces which would restrict plate movement.

A review of all bearing plates by the licensee revealed five of sixteen that were sufficiently warped to allow the inclusion of dirt. Failure of the licensee to protect the bearing surfaces from dirt, dust, and other forms of contamination was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion XIII requiring control of cleaning and preservation of material and equipment as described in the Appendix to the transmittal letter of this report (50-329/82-22-10; 50-330/82-22-10).

On December 3, 1982, the licensee verbally committed to implementing a program to identify other material and equipment requiring protection from contamination and to include this identified equipment in a preventative maintenance program.

8. Diesel Generator Exhaust Piping Hangers

a. The inspector selected the diesel generator exhaust piping for review. The latest revisions of applicable design drawings were compared to the actual as-built configuration of the hangers.

From this review, it was determined that the actual configuration of the hangers did not match the design drawings for the following hangers:

(1) 652-1-19; the west support plate was welded to the wall embed on the east side instead of two expansion anchors as illustrated on the redline drawing. The licensee subsequently documented this on FCR M6925 instead of an NCR as required by site procedures.

(2) 652-1-510; the welds connecting the hanger base plates to the support tubes were not constructed as shown on the drawings. The licensee stated that welding on the hanger was not completed.

The licensee's position was that the hangers in question were non-"Q" and their failure would not affect any safety system. The inspector determined that the exhaust pipe was "Q", as documented in the FSAR, the SER and on Drawing M-652, Sh.1, Revision 8, Note No. 19. Therefore, the hangers supporting the pipe were also required to be "Q".

The exhaust pipe hangers were constructed without implementing the program requirements. The failure of the licensee to ensure that quality assurance requirements defined in the FSAR and the SER were translated into the design and construction of the exhaust system hangers was contrary to 10 CFR 50, Appendix B, Criterion III as described in the Appendix of the report transmittal letter (50-329/82-22-11; 50-330/82-22-11).

On October 19, 1982, the licensee informed the inspector that the exhaust system was indeed "Q" and administrative measures were under way to correct the problem; however, these measures were not identified on any document. Site Procedure G3.2 required that an NCR be written for nonconforming conditions. The licensee, as of November 10, 1982, had failed to document this nonconforming condition through issuance of an NCR. The failure to control components which did not conform to requirements was contrary to 10 CFR 50, Appendix B, Criterion XV as described in the Appendix of the report transmittal letter (50-329/82-22-12A; 50-330/82-22-12A)

b. During the review of the as-built hanger details, the inspector observed the welding of hanger stiffeners to existing "Q" structural steel. The stiffeners were being welded to a 36 inch "Q" beam with 1 1/8" flanges without any preheat. The room temperature at the time of the inspection approximated the outside temperature due to no available heating. The welders informed the inspector that there were no preheat requirements for these welds. The inspector determined that Specification FSW Structural-1 and the AWS 1974 Code require a minimum preheat temperature of 70°F. The licensee did not verify the temperature of the existing structural steel during welding. Furthermore, site inspection procedures were inadequate in that they did not require verification of preheat temperatures until they reach 150°F. The failure to verify 70°F preheat temperature requirements was contrary to 10 CFR 50, Appendix B, Criterion IX as described in the Appendix of the report transmittal letter (50-329/82-22-13; 50-330/82-22-13).

9. Diesel Generator Building Monorail

A review of the monorail installed above each diesel generator was performed in order to determine whether the monorail was designed and installed in compliance with the requirements in the FSAR and construction specifications.

The licensee took exception to Regulatory Guide 1.29, Position C.4, resulting in these monorails not being constructed "Q". The licensee's plant wide exception to position C-4 of RG 1.29 has been referred to NRR for review. This item is unresolved pending NRR's response (50-329/82-22-14; 50-330/82-22-14).

Discussions with the licensee on the monorail indicated that not only was the monorail installed non-"Q", but it also was not analyzed to Seismic Category I requirements as required by RG 1.29. The failure to analyze the monorails to Seismic Category I requirements was contrary to 10 CFR 50, Appendix B, Criterion III as described in the Appendix of the report transmittal letter (50-329/82-22-15A; 50-330/82-22-15A).

Subsequent to the inspector's finding, the licensee reported the nonconforming design on a "Proximity-Seismic Category II/I Interaction Identification Sheet" instead of a Nonconformance Report. The identification of this nonconforming item in this manner circumvented the licensee's nonconformance program. As a result, this concern had not been reviewed for generic applicability or for potential reportability as of November 10,

1982. The failure to identify and control this nonconforming condition was contrary to 10 CFR 50, Appendix B, Criterion XV as described in the Appendix of the report transmittal letter (50-329/82-22-12B; 50-330/82-22-12B).

10. Diesel Generator Building HVAC Fan Support Steel

a. An inspection of the as-built structure was made using the latest revisions of applicable design drawings. From this review, the inspector determined the following discrepancies:

(1) The eight bracing top gusset plates identified on Drawing C-1004, Revision 10, as 5/16" thick were measured by the inspectors to be 1/4" thick in all four DG bays.

(2) The as-built gusset plate connections in Bay No. 1 were not built as identified on Detail 3 of Drawing C-1004. The braces were welded together as opposed to separate welds for each brace.

(3) None of the sixteen 1/4" bracing angles identified on Drawing C-1004 were constructed utilizing 1/4" material.

(4) Drawing C-1004, Detail No. 2 required the W10 beam to beam connection to be welded. In Bay No. 3, the inspector observed that a bolted connection was constructed in lieu of the required welded connection.

(5) The column cover plate identified on FCR-C4401 was not constructed in Bay No. 3 as required. The plate was slotted instead of solid as depicted on the FCR.

The failure of the licensee to ensure that work was accomplished in accordance with the drawings was an item of noncompliance with 10 CFR 50, Appendix B, Criterion V as described in the Appendix of the report transmittal letter (50-329/82-22-16; 50-330/82-22-16).

The inspector further determined that QCIR C210-172, Revision 1, which documented the inspection of the fan supports, was closed on July 1, 1981 with no exceptions or nonconformances noted. The QC inspector closed the inspection with a determination that the structure was built in accordance with the drawing. The failure of QC to detect and identify these nonconformances was contrary to 10 CFR 50, Appendix B, Criterion X as described in the Appendix of the report transmittal letter (50-329/82-22-17; 50-330/82-22-17).

b. The inspector determined that Procedure FID-2.100, "Outstanding FCR/FCN Retirement," Revision 2, was inadequate in that it did not require, for retired FCR/FCN's, that the design drawing remain annotated indicating that an FCR/FCN had been retired. As a result, the HVAC structural steel did not conform to identified design requirements. Additionally, as a result of not having adequate measures to control retired FCR/FCN's, the document control vault lost retired FCR C-2103. The failure of the licensee to establish

measures to identify the existence of retired FCR/FCNs on the appropriate design drawings was an item of noncompliance with 10 CFR 50, Appendix B, Criterion V as described in the Appendix of the report transmittal letter (50-329/82-22-18A; 50-330/82-22-18A).

c. The inspector questioned the licensee as to the method in which the bottom bracing connections were made since there were no bottom bracing gusset plate connection details (weld sizes, plate sizes and plate thicknesses) identified on Drawings C-1004 and C-147. There were also no instructions on site to indicate the method or standard practice to be used to design bracing gusset plates. The following concerns were identified:

(1) Design Drawing C-147 required bolted bracing connections for the diesel generator building HVAC bracing gusset plates. Contrary to this design requirement, Field Sketch CY-1035 was used to design welded connections in lieu of the specified bolted connection. As a result, design changes were being implemented without the same review and approval as the original design. The implementation of changes in design in the field without subsequent review and approval was considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion III as described in the Appendix of the report transmittal letter (50-329/82-22-15B; 50-330/82-22-15B).

(2) Field Sketch Number CY-1035 which illustrated the bottom gusset plates was not annotated as "Q", nor was there a reference on the sketch to the affected design drawing. This is contrary to the requirements delineated in Procedure FPD-5.000, "Preparation of Field Sketches," Revision 1. The failure to follow procedures was an item of noncompliance with 10 CFR 50, Appendix B, Criterion V as described in the Appendix of the report transmittal letter (50-329/82-22-18B; 50-330/82-22-18B).

(3) The inspector further determined that the procedure did not require the drawing to be annotated with a reference to the field sketches. There was no procedural requirement or means to ensure that the existence of a field sketch was annotated on a drawing. The failure to develop procedures to adequately control field sketches was in noncompliance with 10 CFR, Appendix B, Criterion V, as described in the Appendix of the report transmittal letter (50-329/82-22-18C; 50-330/82-22-18C).

(4) The inspector determined that the bottom gusset plate sizes were only identified on a Combo Shop work order sketch. As a result, the bottom gusset plates were designed in the field without adequate review and approval. The failure to control the gusset plate design was in noncompliance with 10 CFR 50, Appendix B, Criterion III as identified in the Appendix of the report transmittal letter (50-329/82-22-15C; 50-330/82-22-15C).

d. The inspectors determined that the existing 1/4" gusset plates appeared to be out of ASTM Specification A6 requirements for rolling mill tolerances as identified in Table 1 of the ASTM Specification. Due to the plates having been previously painted, the actual plate thicknesses had not been determined at the time of this inspection. This matter is unresolved (50-329/82-22-19; 50-330/82-22-19).

11. Pipe Installation Activities

The inspector selected for inspection one of the two pipelines which connected an air start tank to Diesel 1B11, and the four support hangers for both pipelines. Diesel 1B11 was located in Bay 2.

Pipeline 1-GCC-1-S-652-2 was specified on Bechtel Drawing No. M-652, Sheet 2, (Q), Revision 3. The drawing specified the pipeline configuration and identified which welds (shop welds) were made at the vendor and which welds (field welds) were made by site craftsmen.

The inspector observed the installed pipeline components and connecting welds for line 1-GCC-1-S-652-2. The pipeline configuration was as specified on the drawing. There were no unacceptable visual deficiencies on any of the pipe welds. The pipe components supplied by the vendor were marked with heat number 32995. The pipe component (pup piece) supplied at the site was marked with heat number 738367. Certified Material Test Reports, CMTR's, were available on site for both of the above heat numbers.

A review of the weld inspection records for the shop welds revealed that the shop welds had passed radiographic and visual examination. The visual examination report included fitup, root, intermediate and final weld passes.

A review of the records for two field welds (M-652-2-7 and M-652-2-11) indicated that only final visual examination had been performed. The licensee stated that no additional nondestructive examination, NDE, was required for those field welds because the pipe was only three inches in diameter. ASME Section III 1971 Code, Summer 1973 Addendum, Article ND-5220 states, "All pressure-retaining welds in piping, pumps and valves greater than four inches nominal pipe size shall be examined by either the magnetic particle, liquid penetrant or radiographic method." This code revision did not specify any NDE requirements for piping diameters of four inches and less. The pipe inspected was less than four inches in diameter.

A review of the Midland Final Safety Analysis Report, FSAR, Section 3.0, revealed that the design code (ASME) for nuclear pipe over two inches in diameter, had not been specified. During a telephone conversation on November 18, 1982, the licensee concurred that the design code had not been specified in the FSAR, but stated the design code was specified in site Specification No. M-324(Q), Revision 1. The RIII inspector confirmed the licensee's statement. This matter has been referred to NRR and is open pending further review (50-329/82-22-20; 50-330/82-22-20).

12. Hanger Design Control

An inspection of four support hangers on Diesel 1G11 pipelines was conducted. The inspector requested the Bechtel Site Document Control Center to provide the latest isometric drawings for the four hangers that supported the two diesel air start pipelines. The control center provided the following drawings:

(1) 1-652-2-25(Q), Revision 0

(2) 1-652-2-26(Q), Revision 1F1

(3) 1-652-2-27(Q), Revision 0

(4) 1-652-2-28(Q), Revision 1F1

Drawing 1-652-2-25(Q), Revision 0, was used to check the actual installation of the respective hanger. The drawing and the actual installation were different. A review of the QC copy and the original work print revealed that the hangers appeared to be installed in accordance with the red line changes.

Field Instruction FIP-1.112 Revision 5, "Field Marking of Prints for Pipe Supports," was used to control red line changes. The procedure essentially defined the method for which support changes that did not require a total redesign could be modified in the field. The procedure

required Resident Engineering approval for all support modification except minor revisions that did not affect the basic design. The procedure appeared to assign Field Engineering the responsibility of controlling (ensuring proper approvals and distribution) red line changes. The procedure also required Field Engineering to number and log the red line changes. Discussions with Field Engineering personnel responsible for the red line log revealed that the log was not controlled. The log appeared to be an ineffective control mechanism because the entries were made chronologically for changes to all drawings and could not readily be used to identify how many changes affected any specific drawing.

The Bechtel Lead Mechanical Field Engineer stated that red line changes were initiated by Field Engineering, approved by Resident Engineering, and returned to Field Engineering for distribution. In addition, the inspector determined that distribution to the Document Control Center was being bypassed.

Adequate measures were not established to control the issuance of these document changes. This was contrary to 10 CFR 50, Appendix B, Criterion VI as described in the Appendix to the report transmittal letter (50-329/82-22-21; 50-330/82-22-21).

Bechtel Project Engineering Procedure, PEP, No. 4.46.9, Revision 0, established the controls for red line changes received by Resident Engineering. The procedure required the cognizant discipline resident engineer to maintain a log of red lines received. The inspector verified

that two red lines identified on isometric drawing 1-652-2-25(Q) were properly controlled by the log.

13. Hanger Installation Activities

The inspector checked the installation of four support hangers against the respective isometric drawings (including changes) and the installation criteria.

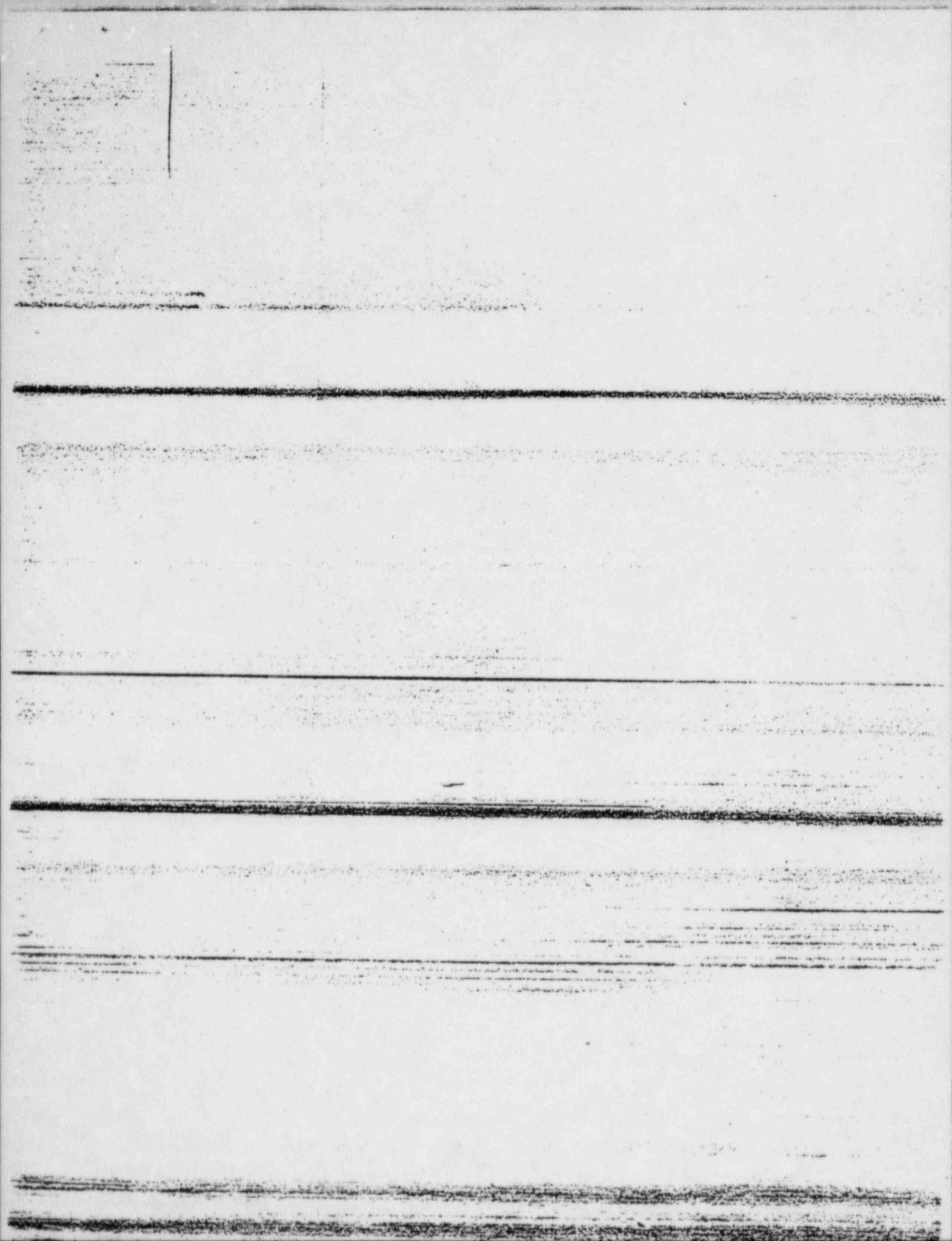
The four hanger configurations appeared to be as specified on the latest revisions to the isometric drawings. The welders identification mark was stamped adjacent to all hanger welds.

All (approximately ten) of the field welds on the two large hangers specified on Drawings 1-652-2-26(Q), Revision 1/F1, and 1-652-2-28(Q), Revision 1/F1, were covered with surface rust. Specification 7220-M-326(Q), Revision 8, paragraph 5.15.1 stated, in part, "All component pipe supports shall have surface preparation and primer applied in accordance with Specification 7220-A-41, Technical Specification for Field Priming and/or Top Coating Steel Surface . . ." Specification 7220-A-41, Revision 9, paragraph 4.2 stated that all protective coating of steel for outside the containment shall be non-"Q". The licensee stated that non-"Q" meant non-safety related and therefore, was not required to maintain the safe operation of the plant.

On November 9, 1982, the Bechtel Resident Engineer stated the cognizant corporate (Ann Arbor, Michigan) engineer's evaluation of the steel surfaces (welds) outside containment concluded that the surface rust would not exceed 20 mils (0.02 inches) deep; that no pitting would result; and that even with the smallest weld (1/8 inch) there would only be a 16 percent reduction of weld size, which would still leave a 2.8 safety margin with maximum corrosion over a 40 year period. Additionally, the site construction personnel provided an established schedule which should assure that the welds were painted before the plant operates. No items of noncompliance or deviations were identified.

14. Hanger Material Traceability

a. Hanger parts, specified on Drawings 1-652-2-26(Q) Revision 1F1 and 1-652-2-28(Q), Revision 1F1, included 1/2" x 6" x 6" and 1/2" x 4" x 4" tube steel (ASTM A-500, Grade B). The installed tube steel was not marked with heat numbers. The inspection records did not identify the heat numbers traceable to the installed tube steel. The installed tube steel had the letter "Q" stamped on the individual sections. The licensee stated that the letter "Q" indicated that the tube steel heat numbers were controlled by procedure up to the time the hangers were fabricated. The licensee also stated that the site procedures did not require any additional traceability controls after fabrication.



The FSAR, Table 3.2-4 states that the design and fabrication code for hangers and supports for nuclear piping is ASME Section III, Subsection NF, 1974 (no addendum). Subsection NF-4122 states that material for component supports shall carry identification markings which will remain distinguishable until the component support is fabricated or installed. Therefore, the site controls for material identification for hangers (component supports) appeared to comply with the ASME code requirements.

b. The inspector reviewed the Hanger Material Log for structural tubing. The log identified the quantity (in feet), size, material type (grade), ASME class, heat number, material receipt number, purchase order number, and relative remarks for the various shipments of tube steel. The log revealed that only type ASTM A-500 Grade B material had been received. The log also revealed that at least 3600 feet of various sizes and lengths of tube steel had been addressed on Bechtel Nonconformance Report, NCR 3266, January 23, 1981. The NCR stated that the "material was procured from subvendors who were not ASME or Bechtel qualified for an NA 3700 quality program at the time of purchase." The NCR stated that no hold tags were applied. The NCR listed 122 steel items (including various qualities, sizes and lengths of tube steel, angle iron, plate, etc.) which had been purchased from 16 different material suppliers/manufacturers. Page 8 of the NCR stated "A conditional release is granted for use of the subject material. The material is traceable to a heat number and corrections or removal can be accomplished without causing damage

or contamination to associated plant equipment or structure." The conditional release was dated February 5, 1981. The conditional release was revised (added page 9 to the NCR) on March 25, 1981 to restrict 37 of the 122 items from use in ASME Section III Class 1 pipe supports. The restricted material was permitted for use in Class 2 and Class 3 hangers. On June 16, 1981, the NCR was revised to apparently reject the above 37 items for Class 1 use again. On July 1, 1981, the NCR was revised to reject 15 other items from installation in Class 1 systems. On July 17, 1981 (amended July 27, 1981) the NCR was revised to accept 42 of the remaining items based on approval of two of the 16 material suppliers, and revised to reject seven additional items from Class 1 use.

On October 28, 1981, the NCR was revised to reject one additional item from Class 1 use. Thus, from the date (January 23, 1981) that NCR 3266 was written, the NCR was revised four times to add restrictions on the use in Class 1 systems of numerous materials.

The Bechtel QC acceptance (page 15) of NCR 3266 stated the resolutions of the 122 items, along with a brief basis for the resolutions. The resolutions were addressed in three categories according to the bases. The bases for the three categories was as follows:

(1) Certified Material Test Reports, CMTR's, were on file for 19 items and the requirements of ASME Subsection NF-2610(c) had been met, therefore, the respective materials could be used in Class 1 systems.

(2) CMTR's were on file for 42 items and the requirements of ASME Subsection NA-3700 had been met, therefore, the respective materials could be used in Class 1 systems.

(3) CMTR's were on file for 61 items and the requirements of ASME Subsection NF-2610(b) had been met; therefore, the respective materials could be used in Class 2 and Class 3 systems. The NCR noted that measures had been taken (heat log changed) to prevent the 61 items from being used in Class 1 systems on July 28, 1982.

Paragraphs (a), (b), and (c) of the ASME Code Section III, Subsection NF-2610 1974 Edition, Summer Addenda 1976 states:

(a) Except as provided in (b) below, Material Manufacturers and Material Suppliers shall have a Quality System Program or an Identification and Verification Program, as applicable, which meets the requirements of NA-3700.

(b) The requirements of NA-3767.4 shall be met as required by NF-2130. The other requirements of NA-3700 need not be used by Material Manufacturers or Material Suppliers for small products, as defined in (c) below, and for material which is allowed by this Section to be furnished with a Certificate of Compliance. For these products, the Manufacturer's or Installer's Quality Assurance Program (NA 4000) shall include measures to provide assurance that

the material is furnished in accordance with the material specification, and the special requirements of this Section.

(c) For the purpose of this paragraph, small products are defined as given in (1) through (3) below:

(1) pipe, tube, pipe fittings, and flanges of 2 inch nominal size and less

(2) bolting material including studs, nuts, and bolts of 2 inch nominal diameter and less

(3) structural material with a nominal cross-sectional area of 2 sq. inches and less.

Subsection NF-2130 states:

(a) All materials used in the construction of component supports shall be certified. Certified Material Test Reports in accordance with NA-3767.4 shall be provided for material in Class 1 plate and shell supports, Class 1 linear supports, and for materials for other types and classes of component supports when impact testing is required (NF-2311).

(b)Certificates of Compliance with the material specification, grade, class, and heat-treated condition, as applicable, may be

provided in lieu of Certified Material Test Reports for materials for all other component supports.

(c)Copies of all Certified Test Reports and Certificates of Compliance applicable to each material used in the component support shall be furnished with the material."

The Bechtel QA Manual (ASME III), Revision 2, dated July 1980, paragraph 4322 states, in part "Quality program demonstration is established through possession of a valid current, ASME Quality System Certificate (Material) or survey of the manufacturer or supplier by other (Bechtel) Procurement Supplier Quality Department."

Based on the ASME Subsection NF-2610(b), the first and third resolution categories to NCR 3266 appeared to be inadequate in that the NCR did not indicate that measures had been taken at the respective suppliers and/or manufacturer, or the installer (Bechtel) to provide assurance that the material was furnished in accordance with the material specification. The measures were required to verify the validity of the suppliers' certificates and the effectiveness of the certification system. Note: Subsection NF-2610(c) which was addressed in the first resolution category, defines small products and does not delete the requirements of Subsection NF-2610(b).

During a telephone conversation on November 29, 1982, the licensee stated that two (i.e., Mills Alloy Steel Company and Carbon Steel Products

Corporation) of sixteen of the material suppliers/manufacturers were actually suppliers. The other fourteen were manufacturers contracted by the two suppliers. The licensee also stated that Bechtel had in fact approved the two suppliers QA programs prior to issuing contracts and that Bechtel had verified that at least one of the two suppliers had sufficient controls to ensure that their subcontractors (i.e., the fourteen manufacturers) had acceptable QA programs.

On December 7, 1982, the inspector received from the licensee copies of a Bechtel Supplier Survey of Mills Alloy Steel Company dated June 10, 1981; copies of two ASME Quality System Certificate (Materials) for Mills Alloy Steel Company; copies of two Bechtel Reports of Audit of Carbon Steel Products Corporation dated June 19-20, 1979 and June 3, 1980 respectively; and one copy of a Bechtel Corrective Action Report (Re-audit) of Carbon Steel Products dated July 30, 1979. The above documents indicated that Mills Alloy Steel Company was an approved material supplier and adequately capable of qualifying their material manufacturers during the effective period of the respective purchase contracts which were addressed on NCR 3266. The above documents indicated that Carbon Steel Products Corporation was an approved material supplier during the effective period of the respective purchase contracts which were addressed on NCR 3266. No documentation was received which indicated that the material manufacturers, contracted by Carbon Steel Products Corporation, possessed an ASME Quality System Certificate (Materials) or were surveyed by the Bechtel Procurement Supplier Quality Department. The Certificate or survey was required by the Bechtel QA Manual (ASME III), revision 2,

paragraph 4322, to demonstrate that the manufacturers had an adequate quality program. The licensee was notified of this inadequacy during a telephone conversation on December 9, 1982. This matter is unresolved pending review of additional documentation which may be supplied by the licensee (50-329/82-22-22; 50-330/82-22-22).

The measures taken in the third category to prevent the items restricted to Class 2 and Class 3 systems from being used in Class 1 systems was inadequate. These measures only controlled the restricted items after July 28, 1982. Nothing was done to verify whether or not restricted items had been used in Class 1 systems prior to July 28, 1982. This verification was necessary, especially since the NCR permitted unrestricted uses based on the conditional releases specified prior to July 28, 1982. The basis for the conditional releases stated that, "corrections or removal (of nonconforming material) can be accomplished . . ." Measures were not established or implemented to determine if Class 2 and Class 3 materials were used in Class 1 systems. Failure to establish measures to control materials which did not conform to requirements and to prevent their inadvertent use or installation in Class 1 systems was contrary to 10 CFR 50, Appendix B, Criterion XV as described in Appendix A to the report transmittal letter (50-329/82-22-23; 50-330/82-22-23).

The second resolution category to NCR 3266 appeared to be adequate in that the applicable code requirements were indicated as being fulfilled.

15. Hanger Weld Inspections

QCIR No. 7220/P-2.10, Revision 9, the hanger inspection record, did not indicate whether or not any in-process weld inspections had been performed during the installation of hangers (pipe supports). The licensee provided Bechtel Quality Control Instruction No. 7220/W-1.60, Revision 2. The scope of the instruction stated that the instruction provided the quality control verification of in-process inspection activities that were necessary to ensure that specified welding process requirements were being achieved. The instruction distinguished between the civil, electrical, component support, and piping (ASME) weld activites. The instruction and/or the instruction supplement required the following in-process inspection of weld activities:

a. Fitup

b. Tack welds

c. Surface Preparation

d. Preheat

e. Welding Technique

f. Interpass Temperatures and Cleaning

g. Welder Qualification

h. Weld Procedure (addressed in W-1.60 supplements)

i. Established the frequency and number of weld activities required to be observed.

With the exception of preheat verification, the instruction appeared to establish suitable controls for the above in-process weld activities. Most of the controls for preheat verification were defined in instructions PQCI CW-1.00, Revision 2, E-2.10, Revision 6, E-1.0, Revision 11, P-2.10, Revision 10, and PW-1.00, Revision 4 for the respective discipline activities (i.e., civil, electrical, component supports, and pipe welding). Inclusively, the PQCI's required verification of preheat requirements in excess of 70°F for all weld activities and verification on a defined sample basis for preheat requirements of 70°F and less. As discussed in Section 8.b of this report, an inadequacy was identified with the preheat controls for civil (structural) welding.

16. Anchoring of Hangers

The hangers identified on Isometric Drawings 1-652-2-26(Q), Revision 1/F1 and 1-652-2-28(Q), Revision 1/F1 were attached to the concrete superstructure with grouted anchor bolts. The nuts on the bolts were not secured. The inspector requested the design requirements for securing anchor bolts. The licensee provided Specification 7220-C-306(Q),

Revision 8, Paragraph 5.8. Paragraph 5.8 appeared to establish adequate methods for securing threaded connections. PQCI No. P-2.00, Revision 6 appeared to establish sufficient controls during inspections to assure that the anchor bolts would be secured.

The type (grade) of bolting materials (including alternatives), was specified in Specification 7220-C-306(Q), Revision 8, Paragraph 5.0. The diameter of the anchor bolts was specified on the isometric drawings. Based on the anchor diameter, the bolt embedment could be determined from Specification 7220-C-306(Q), Revision 8, Appendix B, Table B-2. Since the bolts had already been grouted into place, the inspector reviewed the records (QCIRs) for inspection of grouting and dry packing. The records indicated that the bolting type and size had been properly verified.

The inspector reviewed and discussed with the site Resident Engineering Group, the design calculations for the anchor bolt diameters specified on Isometric Drawing 1-652-2-26(Q), Revision 1/F1. The caluclations indicated that the combined stresses for shear and tensile for the specific hanger required a bolt diameter of 7/8 inch when using ASTM Grade A-36 steel. The Resident Engineering group stated that the calculation sheet concluded by specifying a diameter of 3/4 inch. The Resident Engineer stated that this error would be corrected. The ultimate result was that the correct size bolt (7/8 inch) was actually specified on the drawing.

17. Concrete Chipping

The inspector observed a section of concrete wall which had been chipped away. The chipped section was located on a wall in Containment Purge Room 702, elevation 674' 6". The volume of chipped concrete was non-uniform and approximately 18 inches high, 10 inches wide and 4 inches deep (in some places). There were no markings or tags in the area which would have indicated that the chipped section was controlled.

A Bechtel Field Engineer was responsible for that area of the plant and was aware of the chipped section. The engineer also stated that he planned to put this concern on a punchlist for regrouting.

The licensee stated that the concrete was chipped away in late 1981 to locate drain tubes for tendon sheaths which were inadvertently embedded in the wall. The inspector observed two drains located just above the chipped area.

The inspector asked if measures had been established to control the chipped area since the wall was now in a nonconforming condition. The licensee provided Bechtel Field Instruction No. FIG-1.111, Revision 4, Concrete Drilling Permit. Section 2.0 of this instruction stated, "This instruction discusses the method of initiating, identifying, approving, and controlling concrete drill permits . . ." Section 5.0 stated, "This instruction applies to all concrete drill permits issued by any discipline for core drilling, chipping of concrete, or drilling for

installation of concrete anchors." The instruction defined the administrative process for completing concrete drilling permits. The instruction appeared to address a method of control which could be used for concrete chipping activities, such as the one in the containment purge room. However, the instruction did not establish requirements which stated when or for what activities a drilling permit must be used. A drilling permit was not used to control the chipped concrete in the containment purge room. Therefore, measures were not established to provide controls over concrete chipping activities which affected the quality of structures. The Bechtel construction personnel stated that there were several other areas in the plant in which the concrete had been chipped and was not controlled. Failure of the licensee to provide controls over activities such as concrete chipping which affects the quality of structures was contrary to 10 CFR 50, Appendix B, Criterion V as described in Appendix A of the report transmittal letter (50-329/82-22-24; 50-330/82-22-24).

As a result of this finding, the licensee wrote NCR No. M01-9-2-154 November 14, 1982.

18. Cable Segregation

In Containment Purge Room 702, the inspector observed cable tray sections which contained metal dividers that extended approximately 20 feet along the trays. The dividers were approximately the height of the tray sides. The tray sections were identified with green alpha-numeric markings (i.e., 1BTF01, 1BTF02 and 1BTF03; 1BJS01, 1BJQ02, and 1BJQ03). The RIII inspector

noted that many of the included cables crossed over the dividers or in some cases were stacked higher than the dividers. The purpose of the dividers was to provide a barrier between low voltage control cables and instrument cables.

The barrier/divider was designed to eliminate the possibility of the electromotive forces of the control cables from inducing noise signals into instrument cables. Since the cables crossed over the divider/barrier and were stacked higher than the divider, the cables were therefore misrouted and rendered the barrier ineffective.

PQCI No. E-3.0, Revision 5, Final Area Completion Activities of Electrical Installation, addressed verification of certain cable training (i.e., bundling and redundant channel separation), but did not address verification of cable segregation in horizontal tray runs. Failure to establish a program for inspection of cables installed in horizontal trays which use metal dividers, to ensure conformance with design requirements for cable segregation was contrary to 10 CFR 50, Appendix B, Criterion X as described in Appendix A to the report transmittal letter (50-329/82-22-25; 50-330/82-22-25).

As a result of this finding, the licensee wrote NCR No. MO1-9-2-151 dated November 1, 1982 to correct the specific cable tray installations addressed above.

19. Nonconforming Welds in Structural Steel

During the reporting period, the Resident Inspector was aware that the licensee had overinspected 78 structural beams and that 41 of those beams had nonconforming welds. More definitively stated, 66 weld joints of 146 overinspected were nonconforming. As a result of this overinspection and subsequent findings, Nonconformance Report (NCR) No. M01-9-2-074 was generated. Weld defects noted were undersized welds and undercut welds ranging from 1/16 to 1/8 inch.

Because of the indeterminant state of a large number of beams (nominally 2400 beams), the licensee has generated a Safety Concern and Reportability Evaluation Request to determine the reportability and ultimate safety significance of their findings. This evaluation was intended to be completed by mid-December 1982. The Resident Inspector examined some of the nonconforming welds identified in the NCR and concurred with the findings. This concern was being reviewed and controlled by the licensee's programs.

20. Ultrasonic Testing (UT) of Holddown Bolts

During the reporting period, the Resident Inspectors and a Regional based NDE Inspector measured anchor bolts in the four battery charger rooms, the Diesel Generator Building and the Service Water Building. Additional measurements using other transducers are proposed in the future to accomodate more evaluation. These evaluations will be documented in other NRC Inspection Reports.

21. Prestartup Test

The inspector observed the initial pump run of Component Cooling Water Pump 2P-73B on 10/21/82. The observations included a review of the test procedure OSP-CCW.01, observation of portions of the actual pump test, and a review of test data to ensure that test objectives had been met.

Prior to the beginning of the test, the inspector walked down portions of the system and held discussions with members of the various test groups required to assimilate test data. The following concerns were noted:

a. The Vibration Testing Group initially set up on the wrong pump and had to be told the proper pump locations.

b. Personnel monitoring bearing and oil temperatures were not aware of the maximum temperature limits on the pump being monitored.

c. Minor discrepancies such as broken valve indicators and small leaks were not documented either on the test summary or on a maintenance form.

d. Pump performance curve supplied by the manufacturer referenced only one of the four component cooling water pump serial numbers.

An interim exit interview was held on October 26, 1982, with the Technical Superintendent and his staff to discuss the inspector's testing concerns. The Technical Superintendent acknowledged the inspector's findings and stated the concerns would be addressed.

The inspector observed portions of the initial pump run of Decay Heat Removal Pump 2P-60A. The concerns described in the previous paragraph (except for item d which was not applicable for this test) had been satisfactorily resolved for this test. The test was stopped after 90 minutes of pump run time due to high suction differential pressure (DP) indicating a clogged suction strainer. Oil and bearing temperatures had not stabilized adequately to satisfy test acceptance criteria. The strainers were cleaned and replaced and the test restarted. The test was completed satisfactorily on November 13, 1982.

22. Drawing C-45

The following concerns were discussed with the licensee regarding the staff's review of drawing C-45:

a. The perimeter and baffle dikes adjacent to the emergency cooling water reservior (ECWR) were not included as "Q" on the drawing. The licensee subsequently agreed to define these two areas as Q.

b. The licensee was requested to confirm in writing that no seismic Category I underground utilities extend beyond the "Q" bounds of drawing C-45.

c. The licensee was also requested to put a note on drawing C-45 indicating that the tunnel under the turbine building was "Q".

The above concerns will be reviewed during subsequent inspections.

23. Auxiliary Building Instruments

While reviewing the baseline readings on the auxiliary building instrumentation, the inspectors observed that the Electrical Penetration Area (EPA) outboard wings appeared to be moving upwards while the remaining deep seated absolute vertical readings were downward. The licensee was requested to provide an explanation of the significance of the Auxiliary Building movements. Two meetings on the subject have already been held on site and future discussions are planned.

The upward movement of the EPA outboard wings appeared to be caused by a decrease in the ambient temperature. The licensee was requested to define the correlation between temperature and upward movement and determine if a correction factor should be incorporated into future EPA instrumentation data.

24. Review of Remedial Soils Requalification Activities

During this inspection the inspector reviewed the results of the written examinations administered to 19 QC inspectors. These written examinations, which tested the inspectors on QC programmatic requirements, were administered as part of the requalification program initiated by the licensee in integrating all QC functions under Consumers Power Company control. Of the 19 inspectors who were administered the examination, two inspectors failed the examination. The inspector informed the licensee that all previous inspections performed by these two inspectors were required to be reinspected. The licensee agreed to perform the reinspection.

No items of noncompliance or deviations were identified.

25. Perimeter Dike Armor Stone

During a plant tour the inspectors noted that the licensee was replacing riprap protection for the eastern perimeter dike. The inspectors determined that the new armor stone appeared to have weak clay-shale seams in most of the pieces. This was confirmed by dropping a few pieces and observing them break apart. The licensee was informed of the inspector's concerns.

Subsequently, the inspector was informed by the licensee that the rock did not meet the freeze-thaw and gradation requirements of Specification C-209. The inspector was informed that the nonconforming armor stone would be removed from the site.

The requirement that the perimeter and baffle dikes adjacent to the ultimate heat sink be covered by the QA plan is delineated in the May 25, 1982, NRC to licensee letter and in Section 2.5.6.1 of the SER. The inspectors determined that the licensee had purchased the armor stone without establishing controls over the procurement and installation. The failure to translate applicable regulatory requirements into design documents was considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion III as described in the Appendix of the report transmittal letter (50-329/82-22-26; 50-330/82/22/26).

Subsequent to the inspectors' identification of the matter, the licensee agreed to have all necessary "Q" controls in place before proceeding with additional armor stone placement.

26. Site Tours

At periodic intervals during the report period, tours of essentially all site areas were performed. These tours were intended to assess the cleanliness of the site; storage conditions of equipment and piping being used in site construction; the potential for fire or other hazards which might have a deleterious effect on personnel and equipment; and to witness construction activities in progress. A system walkdown was performed of portions of the Diesel Generator and Primary Makeup System.

27. Independent Assessment of Auxiliary Building Underpinning

The inspectors reviewed the weekly reports (attached) submitted by Stone and Webster Engineering Corporation to document the results of the independent assessment of Auxiliary Building underpinning activities. No significant concerns were identified in these reports.

28. Open Items

Open items are matters not otherwise categorized in the report that require followup during future inspections. Open items disclosed during this inspection are discussed in Section 4.d and 11.

29. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or items of noncompliance. Unresolved items disclosed during this inspection are discussed in Sections 6.b, 6.c, 9, 10.d, and 14.b.

30. Exit Interview

The inspectors met with licensee representatives (denoted under Persons Contacted) on October 15, 22, 26, 28, November 10 and 23, 1982. The inspectors summarized the scope and findings of the inspection. The licensee acknowledged the information.

2B?

12/2/82 QCo Presentation for Get Well Program

No QC work done by Bechtel by Monday until Require ≈1100 Crapt layoff

(45)

QC Organization by maybe Fri 12/3 (20000)

Need to establish the means of document of QC findings.

Post Turn Over - 90500 as on going work

→ What does this mean.

Turn Over Exception work

QC Coordinator under Syst Owner Supt but the same specially if housed in same place.

Jim Mich: You don't have (written) to the division this Wednesday

2827

(48)

12/2/82 NRC Comments on CPCo-CCP

No design changing on turnover stuff

Real Split between QC and the team and let the technical engineer be the QC coordinator.

Independence

Hold Points

8-66

NOTES FROM MEETING WITH NRC ON 11/23/82

- We made a good presentation on individual items, however:
    - Generic approach is a concern to NRC
    - Where do we go now
- Inspection Program is behind where it should be:
    - Open IR's is over 12,000
    - IPIN's concern - big issue
    - D/G Building problems found over last several weeks.
- What about rest of plant?
    - What do we do?
    - How long to find them? Status of the plant.
- Inspectors feel safety related work should be stopped.
- Warnick not sure how much work he could allow to proceed.
- R.S. work should continue, also some other elements of work like HVAC, non-safety related work, B&W work.
- NRC has not really had time to think this through, but they wanted to talk to us.
- Need many more details on open IR's, IPIN's open.
- Issue of recertification of all QC Inspectors:
    - We say we will be done by April, 1983.
- Adequacy of Inspection Program, up-to-dateness and our grasp of the QC program. This is the center of their concern.
- It is hard for NRC to issue an order.

  Time consuming process, including going to the Commissioners.
- They want us to recognize the problem, take the action and take the credit. They would follow up with a C.A.L.
- JWCook reviewed his plan:
    - Go over inspection specifics
    - Get a time readout and response
    - Make a proposal to address NRC concerns, to include

      Statusing of inspections
      Systematic work suspensions - Certain areas
    - Not ready today to go over details.
- We are at a point in Construction where we will have to inspect quality into the job.

- Warnick says they are not fixed in their position today. They need to put thei thoughts together. Strong feelings within his group on stopping all work. We should address the problem (Zimmer did this) in 2 areas:

  1) What are we doing today to control work going forward. Inspectors identify things.

  2) Look at past week, we have performed (backward look). Have problems been addressed?

- We should review our plan and present it to them prior to a 12/7/82 meeting they have with NRR. This is their deadline.

- NRC will be trying to determine if these problems exist in other areas of the plant.

- What are we doing differently from now forward to build quality into the plant?

- NRC lacks confidence that we will address concerns on a generic basis. We do respond well to specifics. We handled the meeting today very well.

- Good turnaround on our efforts to cooperate. Good attitude lately. Since we started communicating with NRC better, things have been good.

- Show NRC how we can address their concerns. They do not want to drop the building on us. We should be responsive.

- Our in process effort is the key to solving the problem.

- We did this before in HVAC - we should repeat the performance.

- We will do everything we can to prevent them from issuing an order to us - JWC. We will meet the NRC timetable to resolve this.

- NRC will put all of their thoughts together and get back to us before we make any presentations to them. This will be done in the next few days.

- IPIN's, design document changes (capricious ones), and material traceability are among Ron Cook's concerns. We didn't do much today to make these concerns go away.

- Attendees at this meeting:

  CPCO: JWCook, RAWells, DBMiller, BHPeck, MLCurland, Consultant from MAC (Vince)

  BPCO: KVassar, JRutgers

  NRC: Shafer, Cook, Warnick, Burgess, Gardner

BHP
11/24/82

2817

8

STONE & WEBSTER MICHIGAN, INC.

P.O. BOX 2325, BOSTON, MASSACHUSETTS 02107

Mr. J. G. Keppler, Administrator, Region III
Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

June 3, 1983
J.O. No. 14509
NRC File#83-05-01

RE: DOCKET NO. 50-329/330
MIDLAND PLANT - UNITS 1 AND 2
OVERVIEW OF THE CONSTRUCTION COMPLETION PROGRAM
REPORT NO. 1

Attached is a chronology of Stone & Webster Engineering Corporation (SWEC) participation in Consumers Power Company, (CPCo) Construction Completion Program. In addition to addressing various meetings attended by SWEC, a status of the development of various phases of the Construction Implementation Overview Program (CIO) is provided. We will advise your office on a weekly basis as to meetings attended and will report on our program development. Currently six members of the CIO Team are on-site and are supported by two writers, from Boston, in the preparation of evaluation and verification checklists.

If you have any questions with respect to this report, please contact me at extension 665 (Bechtel), 517-631-4286.

Very truly yours,

Stanley W Baranow

Stanley W. Baranow
Program Manager

Enclosure

SWB/dmh

cc: RCook, NRC Midland ✓
JJHarrison, NRC Glen Ellyn
DBMiller, Midland
RBKelly, S&W
APAmaruso, S&W

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The initial visit to the site by the undersigned, was made on April 28, 1983 for an introductory meeting with CPCo management personnel. Throughout this period numerous meetings were attended by CIO personnel, listed by dates shown:

1) April 29, 1983 - Management Review of the Construction Completion Program.

2) May 5, 1983 A.M. - Introductory meeting with key members of the Management Review Committee; CPCo, Bechtel and SWEC.

3) May 5, 1983 P.M. - Meeting with R. Wells, B. Palmer, MPQAD. Discussions on Training and CCP, received handouts of electrical NCRs, NRC correspondance, Inspectors Training Program and a copy of the CPCo Nonconformance procedure.

4) May 11, 1983 - Introductory meeting with Mr. R. Cook, NRC site Senior Inspector; briefly discussed the philosophy and implementation of the CIO program. The subject of weekly progress reports and meetings with NRC and CPCo was raised. Mr. Cook advised that weekly reports and meetings would not be required during SWECs development of the overview program, but would commence with the implementation of the CCP.

5) May 12, 1983 - Meeting with the NRC, CPCo, Bechtel and SWEC for discussion of the Construction Training Program FPG-2.000 Rev. 1 Program requires revision to address how "Trainers are trained."

6) May 17, 1983 - Meeting with NRC regional and site representatives. The Quality Verification Program Document was reviewed in its entirety. Numerous areas were judged by the NRC to be unsatisfactory, particularly, the 95/95% acceptability plan. Also addressed were NRC concerns to responses by CPCo in letters dated April 6 and April 22, 1983 which were judged to be inadequate. NRC requested that the CIO perform an overview evaluation of the Interaction System walkdown of Safety Related equipment.

7) May 18, 1983 - Management Review for Preparation and Statusing of Bulk Hangers organization and training of supervision and craft personnel. In attendance were representatives of CPCo, Bechtel and SWEC.

8) May 23, 1983 - Meeting with R. Wells, Executive Director, MPQAD and the undersigned to discuss documentation required by CIO;PQCIs, status of PQCI development, INPO audit findings and responses, training matrix, CPCo commitments to the NRC. Also, discussed was the vehicle to be used to identify CIO concerns noted during reviews of PQCIs where attributes appear to be ambiguous and/or not in compliance with Code requirements. Method of Communication/Notification is under consideration.

9) May 23, 1983 P.M. - Meeting with Roy Wells, Executive Director, to discuss getting on copy for various documents i.e. PQCIs, Inpo Audit findings and status, training matrix, status of PQCI development.

10) May 27, 1983 - Meeting with Bruce Peck, CPCo Construction Superintendent and Bechtel Representatives to discuss Construction Completion Team organization. Topics included background and Philosophy, Bechtel Construction Organization, CCP Organization, Team Organization, Communications between Bechtel, CPCo EC10, CIO Team Organization, Objectives and Philosophy.

STATUS OF PROGRAM DEVELOPMENT

A. CIO Plan transmitted to the site NRC Inspector and CPCo on Thursday, May 19, 1983.

B. Evaluation Plan (software assessment), in rough draft-awaiting comments.

C. Checklists under development:

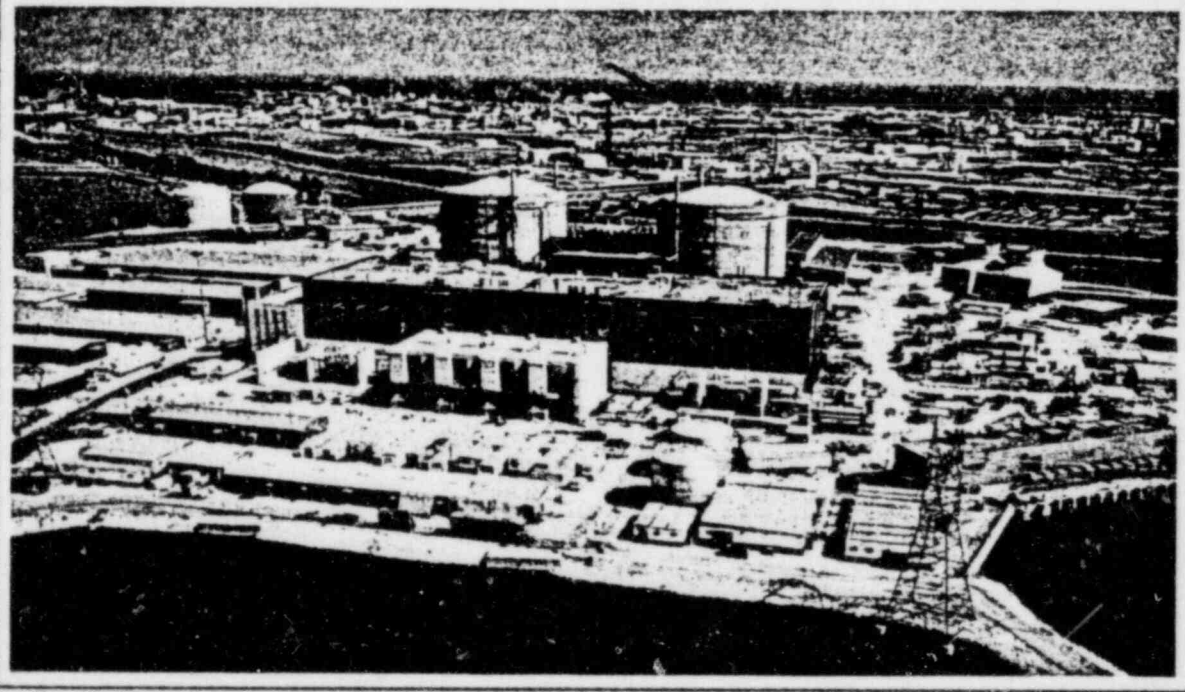
* QC and Construction Training - Evaluation
* Management CCP responsibilities - Evaluation
* Bulk Hanger Organization - Evaluation
* "N" series procedures - Evaluation
* Reinspection of Pipe Component Supports P119/P129 walkdown - Evaluation and Verification

12B13

United States Nuclear Regulatory Commission
Docket Numbers 50-329 & 50-330

Midland Independent Design and Construction Verification Program

Structural Evaluation of the Diesel Generator Building



TERA CORPORATION